

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**California Independent System)
Operator Corporation) Docket No. ER19-____-000**

**TARIFF AMENDMENT TO IMPROVE THE
RELIABILITY MUST-RUN FRAMEWORK**

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April 22, 2019

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

**Re: California Independent System Operator Corporation
Docket No. ER19-_____-000**

**Tariff Amendment to Improve the Reliability Must Run
Framework**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) submits this tariff amendment to implement numerous revisions to improve its Reliability Must Run (RMR) program and further differentiate it from the capacity procurement mechanism (CPM) backstop procurement framework.¹ The CAISO will continue to use CPM procurement to backstop for Resource Adequacy (RA) showing deficiencies, Significant Events, and Exceptional Dispatches. The CAISO will use RMR procurement to address resource retirement and mothball notifications and retain resources it needs for reliability. All retirement-related procurement authority, including what currently is called risk of retirement CPM, prospectively will be addressed solely through the revised RMR tariff. The proposed tariff revisions will also “modernize” the 20-year-old RMR contract and related tariff provisions to better align them with the CAISO’s current operating framework and needs. The revised backstop procurement framework will enhance the CAISO’s ability to maintain grid reliability and resilience, while allowing for the orderly retirement and mothballing of resources.

For Commission action on this filing, the CAISO discusses in Section IV which elements of the filing it believes are standalone and are severable from other elements, and which elements are interrelated.

The CAISO respectfully requests that the Commission issue an order by July 19, 2019 accepting the proposed tariff revisions effective July 22, 2019.

¹ The CAISO submits this filing under Section 205 of the Federal Power Act, 16 U.S.C. § 824d, Part 35 of the Commission’s Regulations, 18 C.F.R. § 35, *et seq.*, and rules 207 and 602 of the Commission’s Rules of Practice and Procedure, 18 C.F.R. §§ 385.207 and 385.602. The capitalized terms not otherwise defined have the meanings as specified in the CAISO tariff.

I. EXECUTIVE SUMMARY

This tariff amendment filing is the culmination of an extensive effort by the CAISO to review and consider certain improvements to its RMR and risk of retirement CPM backstop procurement mechanisms. The CAISO initiated this process based on its experience in 2017 implementing three new RMR agreements and two annual CPM designations and to address issues identified by the CAISO and stakeholders associated with such backstop procurement. The Commission's April 12, 2018 order rejecting the CAISO's tariff amendment to make incremental changes to its risk of retirement CPM tariff provisions² informed the CAISO's efforts to develop a holistic package of RMR and risk of retirement CPM reforms.

Three important drivers for the proposed tariff amendments are: (1) the existing RMR construct and *pro forma* RMR Contract date to CAISO start-up and must be "modernized" to align with current (and expected) operations and needs; (2) stakeholders sought greater distinction regarding when the CAISO will use RMR and when it will use CPM; and (3) a more effective and orderly approach to address resource retirements and the potential need for backstop procurement is needed in an era where conventional resources are facing financial pressure due to an influx of resources with low marginal costs. Regarding the first driver, the RMR tariff provisions are approximately 20 years old. The current RMR construct and RMR Contract were developed before the resource adequacy (RA) program, the must offer obligation, CPM, implementation of the CAISO's current market design based on locational marginal pricing (also called the Market Redesign and Technology Upgrade (MRTU)), California's renewable portfolio standards (RPS), and the CAISO's need for flexible capacity. The time has come to update RMR to align it with the current operating paradigm and ensure critical resources are available to meet the CAISO's changing operational needs.

Regarding the second driver, when the CAISO was making RMR and CPM designations in 2017, some stakeholders argued to the CAISO Governing Board that greater clarity was needed regarding the circumstances when the CAISO will use RMR and when it will use CPM. These stakeholders also objected to certain provisions of the *pro forma* RMR contract that hardwired a rate of return that was 20-years old and may not reflect current market conditions. Stakeholders also expressed concerns that the existing RMR construct did not provide ratepayers the full benefit of what they were paying for, namely the full cost of service (e.g., RMR units did not have a must offer obligation (MOO)).

Regarding the third driver, the risk of retirement of generation needed for reliability has been, and remains, a significant concern to the CAISO. Having the tools to maintain reliability in the face of changing system conditions is essential to

² *Cal. Indep. Sys. Operator Corp.*, 163 FERC ¶ 61,023 (2018) (ROR CPM Order).

the CAISO's core responsibilities. The number of resources interconnecting to the CAISO controlled grid has increased dramatically and is expected to grow further, largely due to adding resources to meet California's RPS requirements and clean energy goals. At the same time, market prices and the revenues available to cover the costs of existing conventional resources have decreased, a trend the CAISO expects to continue. These developments, and the risks they present, have been well-documented by the CAISO and other entities in the region. Under these circumstances, it is important that the CAISO's retirement and backstop procurement provisions be effective and efficient to ensure that resources the CAISO needs to maintain system reliability and integrate renewable energy resources remain operational and that retirement requests are processed in a timely, orderly, and efficient manner that recognizes the significant business and financial decisions resource owners must make in deciding whether to retire or continue operating.

The stakeholder process for this tariff amendment was at times contentious, and the comments submitted in response to this filing likely will reflect those types of diverse views. However, the CAISO developed the proposed tariff revisions with the range of the differing stakeholder positions and the needs of the CAISO as system operator, in mind, and the CAISO made changes to its proposal based on stakeholder feedback where appropriate and consistent with the CAISO's reliability needs. The tariff revisions constitute a set of just and reasonable changes that balance these various considerations, while producing a more effective, efficient, and fair backstop procurement framework for retiring and mothballing resources.

The CAISO is retaining both its RMR and CPM procurement mechanisms. The revised tariff sheets set forth clear rules for when the CAISO will use RMR and when it will use CPM to procure backstop capacity. The CAISO will continue to use CPM to backstop the Resource Adequacy (RA) program (*i.e.*, address deficiencies in annual and monthly RA showings) and for Significant Events and Exceptional Dispatches. The CAISO will use RMR procurement to address reliability needs arising from formal resource retirement and mothball requests. Before issuing an RMR designation to a retiring or mothballing resource, the CAISO will conduct a reliability technical study and must find that the retiring/mothballing generating unit is needed to meet applicable Reliability Criteria. The CAISO will not use RMR to backstop mere RA deficiencies and will not offer CPM designations to retiring or mothballing resources. CPM designations will occur through the CPM competitive solicitation process. The CAISO also proposes to "update" the RMR construct to streamline it and align it with current conditions.

Key elements of the revised framework are:

- All retirement/mothball-related procurement authority, including what currently is called "risk of retirement" CPM procurement authority, prospectively will be addressed solely through the RMR tariff provisions. All

retiring and mothballing resources will be required to submit a formal retirement/mothball notification and attestation to the CAISO. Thus, a resource that wants to be considered for an RMR designation must first submit a formal notice of retirement/mothball and attestation to the CAISO. The CAISO will eliminate the risk of retirement CPM tariff provisions and incorporate aspects of its risk of retirement CPM procurement authority into the RMR construct.

- The retirement/mothball notice requirement includes a notarized attestation from an officer with authority to bind the resource owner attesting to the reason for the retirement/mothball (including whether it is uneconomic for the resource to continue operating) and attesting that the decision to retire/mothball is definite unless the CAISO procures the resource, the resource is sold to a non-affiliated entity, or the resource enters into an RA or some other contract. These are all legitimate business opportunities that a resource owner should not be required to forgo if they arise after the resource owner has submitted a retirement/mothball notice. Also if the owner of a resource that has mothballed seeks to return to service, the resource owner must attest that one of these condition has occurred or that it is now economic to return the resource to service.
- The CAISO provides two paths for assessing retirement/mothball notices. Under the first path, a resource without an RA contract for all or part of the current year can submit a retirement/mothball notice at any time consistent with the notification requirements of the Participating Generator Agreement (PGA), and the CAISO will promptly assess the request. This reflects the traditional retirement construct that exists today.
- Under the second path, a resource without an RA contract in the upcoming calendar year that desires “a longer runway” to make important retirement or continued operation decisions for the upcoming calendar year can submit a retirement/mothball notice by February 1. Resource owners stressed that an early determination of need for a generating unit to plan for the upcoming year facilitates timely planning, major maintenance, staffing, and potential decommissioning decisions. Under the enhancements proposed in this filing, the CAISO will study the reliability need for the resource and will inform stakeholders of the reliability study results by May 15. The CAISO will post its study results and provide stakeholders an opportunity to comment. The resource would receive an RMR designation at the next feasible CAISO Governing Board meeting, conditioned on the resource not being procured by a load serving entity (LSE) as an RA resource prior to the deadline for the annual RA showings in late October. This will allow sufficient time to finalize an RMR Contract for filing by November 1 if no LSE procures the resource. This also allows LSEs to first procure the resource to satisfy their RA obligations before the CAISO procures it as an RMR resource, while proving

adequate time for a filing, and Commission action on, an RMR agreement. Compared to the current framework that allows a generating unit owner to request an RMR designation for the upcoming calendar year at any time, CAISO's proposal produces a more orderly and structured process on upcoming year RMR designations than exists today and facilitates opportunities for LSEs first to procure resources as part of their RA compliance efforts. Providing an earlier signal regarding a resource's reliability need can prevent unnecessary over-procurement. If the owner of an RA resource provides notice after February 1, the only commitment the CAISO has is to inform the resource of the study results within 60 days prior to the expiration of its current RA contract (if it has one) or 90 days of the request, whichever is later.

- The CAISO's two paths allow the CAISO to study the reliability need for a retiring/mothballing generating unit in the current year and the upcoming year, and the CAISO *may* study the reliability need for the generating unit in the following year.³
- The CAISO proposes to eliminate the Condition 1 RMR option (under which RMR resources receive partial cost of service and also retain all market revenues). The revised RMR construct will follow the same approach as today's Condition 2 form of RMR (full cost of service recovery with market rents netted from cost of service payment).
- RMR resources will have a must offer obligation (MOO) like RA and CPM resources, subject to the rules in CAISO tariff Section 40.6. RMR resources must submit market bids at a specified, marginal cost-based price that includes all applicable bid components, including opportunity costs. As it does for non-use-limited resources, the CAISO will submit bids for non-use limited resource that do not submit bids. The CAISO will also have authority to Exceptionally Dispatch RMR resources to meet reliably needs. The CAISO is paying the full annual cost of service of an RMR resource and will have access to all of the RA-type attributes of the RMR resource, *i.e.*, system, local, and flexible capacity, and the resource's full participation in the markets based on the resource's marginal costs. Imposing a MOO on RMR resources also recognizes that increasing variability and unpredictability on the CAISO system require all capacity resources (RA, CPM, and RMR) to be available when needed to meet reliability needs that can arise at any time. RMR resources with Effective Flexible Capacity will be expected to submit economic bids just like flexible capacity RA and CPM resources. An RMR resource in a local capacity area will be treated as Listed Local RA Capacity

³ Under the existing risk of retirement CPM framework the CAISO studies the reliability need for a resource in the "following" year. Under the proposed framework, studying reliability needs in the following year will be at the CAISO's discretion, not mandatory.

under existing provisions of the CAISO tariff and consequently must provide substitute capacity from the same local capacity area when on outage to avoid non-availability charges. The CAISO's proposal will align dispatch of RMR resources with the dispatch of RA and CPM capacity, allowing the market software to select the optimal resources to meet grid operational needs, as opposed to the CAISO having to manually dispatch RMR resources, which is sub-optimal and can distort prices and impose unnecessary burdens on CAISO operators. No undue price suppression will occur under the CAISO's proposal because, as the Commission has recognized, in a competitive market resource bids should closely track their marginal costs. An RMR resource's energy market bids will be based on its full marginal costs. Some other independent system operators (ISOs) and regional transmission organizations (RTOs) impose similar bidding requirements for their RMR resources and comparable reliability resources.

- RMR resources will be subject to the Resource Adequacy Availability Incentive Mechanism (RAAIM) just like RA resources. This will incent compliance with the RMR resource's MOO, just like RA and CPM resources. The RAIM penalty price applicable to RMR resources will be the RMR Contract price.
- The CAISO will no longer allocate RMR costs to Responsible Utilities or Participating Transmission Owners. Consistent with the practices of other ISOs and RTOS, the CAISO proposes to allocate RMR costs not recovered from market revenues to load. Specifically, the CAISO will allocate RMR costs to the scheduling coordinators of LSEs that serve load in the transmission access charge (TAC) areas(s) in which the need for the RMR arose base on the percentage of actual metered demand of each LSE in the TAC area(s) to the total metered demand in the TAC Area(s) as recorded in the CAISO's settlement system for the actual days of any settlement month in which the RMR agreement was in effect. This proposed allocation methodology also follows with the Commission-approved methodology for allocating similar CPM reliability costs, including risk of retirement CPM. The proposal recognizes that LSEs, not Participating Transmission Owners, are the primary beneficiaries of these costs, and the CAISO will allocate these costs to the proximate load, *i.e.*, load in the TAC area where the reliability need exists. Also, the CAISO's proposal will effectively account for any intra-year load migration and will increase the visibility of RMR costs to LSEs by allocating such costs directly to each LSE's scheduling coordinator, rather than through the PTOs.
- The CAISO's RMR cost allocation proposal has another beneficial feature. Because the CAISO is allocating RMR costs to LSEs, the CAISO will allocate system, local, and flexible capacity RA credits, based on an RMR resource's capacity attributes, to LSEs to offset their RA requirements.

- To align the RMR Contract with the current RMR tariff provisions, the CAISO will remove provisions in the RMR Contract that limit dispatch to meeting local reliability needs or managing congestion on non-competitive paths.
- The CAISO proposes to streamline and automate the RMR settlement process by leveraging existing systems and processes. The automated process will replace the CAISO's current practice of performing RMR settlement manually outside of the CAISO settlements system, improving efficiency.

Two proposals in particular -- the revised retirement, mothball, and RMR designation process and RAIM -- generated significant stakeholder discussion and polarized stakeholder positions.

The Path 2 retirement/mothball notification process and requirements reasonably balance the concerns of suppliers who desire fewer restrictions and a "longer runway" to make business decisions regarding retirement or continued operation and certain stakeholders who express some concern about potential "front running" of the RA process for the upcoming calendar year. Stakeholders raising "front running" concerns ignore that under the current RMR framework, resources can come in at any time to request an RMR designation for an upcoming calendar year. Resource owners have indicated they were considering retiring and asked the CAISO to assess the reliability need for their generating unit more than 12 months before the expiration of their RA contracts. Thus, the possibility of "front running" already exists today; the CAISO's proposal does not create it. Today, resource owners are not required to submit a formal notice of retirement under the PGA for the CAISO to study their reliability need and potentially offer an RMR Contract. Also, under the current RMR and retirement framework, resources submitting retirement/mothball notices to the CAISO do not have to submit a notarized attestation to the CAISO stating the reason for the retirement/mothball and that the retirement/mothball is definite (unless certain specified events occur). The CAISO's proposed framework adds more structure, process, and stricter requirements than exist today. The attestation also places robust, yet reasonable, limitations on a resource owner's ability to rescind a retirement/mothball notice or return from mothball. By having to submit a notarized attestation, resource owners face potential referral to the Commission if they submit false or misleading information, a risk that does not exist today.

Further, identifying needed resources that are seeking to retire or mothball in the upcoming calendar year early in the process will prevent LSEs from paying twice for capacity, once for the cost of the needed RMR resource and again for the "redundant" resource that an LSE procured bilaterally. The proposed process enhancements will establish a more orderly and efficient RMR designation process and facilitate more efficient resource procurement and retirement.

There are additional reasons why circumstances surrounding the proposed revised RMR and retirement/mothball framework proposal differ significantly from the circumstances surrounding the CAISO's risk of retirement CPM filing. The instant filing represents the holistic approach to RMR and risk of retirement CPM reform that the Commission strongly encouraged in its ROR CPM order.⁴ First, the CAISO's proposal incorporates risk of retirement CPM into RMR, thus establishing only one backstop procurement framework for retiring/mothballing resources (which the Commission suggested the CAISO evaluate). Second, since the ROR CPM Order, the California Public Utilities Commission (CPUC) has adopted multi-year procurement requirements for local capacity (100 percent in years 1 and 2 and 50 percent in year three). Because RMR procurement is most likely for local capacity needs, multi-year RA procurement for local capacity greatly diminishes any potential for any front-running. The *pro forma* RMR Contract is for a calendar year. Third, unlike risk of retirement CPM resources under the CAISO's 2018 proposal, RMR resources do not retain all market revenues in addition to recovering their full annual cost of service. The CAISO credits back all above-cost revenues earned by RMR resources and credits them against RMR fixed-payment costs. Fourth, under the CAISO's proposal, LSEs will receive a significant benefit because RMR resource's will have to submit marginal cost bids into the CAISO's energy markets. The CAISO's risk of retirement CPM proposal did not contain a similar requirement. Thus, the compensation for RMR resources differs significantly from the compensation risk of retirement CPM resources would have received under the CAISO's 2018 proposal the Commission rejected.

Some stakeholders (1) sought a stricter affidavit requirement that requires resource owners to state under oath it is uneconomic to continue operating their generating unit, and/or (2) desired that the CAISO assess a resource's finances and first determine that it is uneconomic for the resource to continue operating before it can receive an RMR Contract. In response to the first concern, the CAISO modified the attestation to require generating unit owners to state the reason for retiring or mothballing the generating unit (including whether it is uneconomic to continue operations). The generating unit owner must also state that the decision to retire/mothball is definite unless one of the specified events occurs. Resource owners submitting the attestation are subject to referral to the Commission if they submit any false or misleading information. The Commission has found that an attestation requirement of this nature will deter resource owners from making false or misleading claims and that also requiring them to submit financial information to demonstrate that they are uneconomic before they can receive a backstop procurement designation is unnecessary. The Commission has required no other ISO or RTO to assess a retiring/mothballing resource's finances and to find a resource uneconomic before exercising any backstop procurement authority to retain a resource needed for reliability.

⁴ ROR CPM Order, 163 FERC ¶ 61,023 at PP 46-48.

Some stakeholders recommended that mothballing generating units should not be eligible for RMR designations or that the CAISO should adopt stricter measures for granting RMR designations to mothballing generating units. Both the New York Independent System Operator Corporation (NYISO) and the Midcontinent Independent System Operator, Inc. (MISO) tariffs permit the RMR-type procurement of generating units that have filed mothball notifications. If the CAISO needs a generating unit for reliability it must have the authority to order a mothballing generating unit to remain in service or return from a mothball outage. The attestation requirements and restrictions the CAISO places on resource owners seeking to mothball their generating units – including the limitations on a resource owner’s ability to rescind a mothball notice or return from a mothball outage -- are both reasonable and sufficiently robust to prevent resource owners from submitting mothball notices simply to “fish” for RMR designations. Also, a CAISO finding that a mothballing resource is not needed for reliability does not benefit the resource owner, particularly because the CAISO posts the status of resources that have submitted retirement and mothball notices.

Regarding the RAIM proposal, certain stakeholders argued that the RAIM assessment hours are insufficient for RMR resources and that RAIM should be assessed based on 24 x 7 availability. They suggest that reliability might be jeopardized absent a 24 x 7 availability metric. On the flip side, one stakeholder argued that the existing Commission-approved RAIM tolerance band may be too stringent for resources nearing end of life and that may run more than they have previously.

There is no need to assess RMR resource bidding and impose penalties based on a 24 x 7 assessment period. Even the existing *pro forma* RMR Contract does not assess RMR resource performance on a 24 x 7 basis. RMR generating units can be on outage at any time with an outage rate equal to their five-year average to avoid any impact to their fixed cost payment and there is no requirement to submit bids to offer capacity into CAISO markets. Whereas under the proposed RMR Contract, resources the CAISO expects to receive RMR designations will have a 24 x 7 MOO and an effective flexible capacity (EFC) value. RAIM for such resources is based on an assessment of 17 hours per day, seven days a week. The Commission has recognized that a resource’s failure to comply with its MOO could be deemed a tariff violation and/or violation of the Commission’s market behavior rules. In conjunction with the Commission’s market behavior rules, RAIM plus a MOO are more than sufficient to incent RMR resource availability to maintain reliability, especially given the CAISO will insert bids for non-use-limited RMR resource if necessary. The CAISO has successfully maintained reliability relying on RAIM and the MOO for RA resources, more than 20,000 MWs of which meet local reliability needs similar to the needs typically met by RMR resources. There is no reason the CAISO will be unable to maintain reliability by applying RAIM and MOO to a few RMR resources. Finally, in response to comments of its

Market Surveillance Committee, the CAISO added a provision to the revised *pro forma* RMR Contract that allows it to offer a performance metric other than the default RAAIM if it believes RAAIM is not adequate given the CAISO's specific reliability needs and the characteristics of the generating unit. Thus, ample measures exist to ensure that reliability will be maintained.⁵ As discussed *infra*, the availability metrics other ISOs and RTOs apply to RMR (and similar) resources further highlight the reasonableness of the CAISO's proposal.

The CAISO's proposal also includes several measures to protect owners of older, use-limited RMR resources from unfairly being exposed to RAAIM penalties. First, RMR resources with use limitations under the CAISO tariff or RMR Contract must submit bids with opportunity cost and major maintenance cost adders, which will help manage the dispatch of the resource limited start-ups, run hours, or MWhs depending on the limit across the month and year. Second, consistent with the treatment of use-limited RA resources, use-limited RMR resources can submit an outage card to manage their use-limits. Such outage cards exempt the resource from RAAIM for the period of the outage. Finally, the CAISO proposes to "modernize" the existing RMR tariff provision that permits it to direct an RMR resource not to participate in the market to ensure the CAISO can meet reliability needs at other times of the year. To align with today's operating paradigm, the CAISO is revising that provision to permit it to direct an RMR resource to submit an outage card so it will not impair the CAISO's ability to meet reliability needs later in the year.

The CAISO is retaining (and not modifying) several important features of its existing Commission-approved RMR construct. First, acceptance of an RMR contract or an RMR contract extension by a resource will continue to be mandatory. Second, consistent with today's Condition 2 RMR option, the CAISO will continue to pay RMR resources their full annual cost of service, and all above cost market revenues will be clawed back and credited against the CAISO's fixed cost payments to the RMR resource. Some stakeholders urged the CAISO to pay RMR resources their going forward fixed costs (possible with some adder). The CAISO's RMR compensation scheme follows Commission precedent that where accepting a backstop procurement offer is mandatory, the ISO or RTO must pay the resource's full cost of service, not merely its going forward costs. Third, the CAISO is retaining the Commission-approved anti-toggling measures in the RMR agreement. Because accepting RMR designations and RMR Contract extensions is mandatory, generating unit owners cannot voluntarily toggle back-and-forth between RMR status and cost recovery through the market. The CAISO alone holds the option to extend an RMR Contract, and if the CAISO does not extend the contract, it is because the resource is no longer needed for reliability. Unlike other ISOs and

⁵ As explained in greater detail below and in the March 21, 2019 opinion of the CAISO's Market Surveillance Committee (MSC) provided as Attachment D to this filing, the MSC agrees with the general framework of the proposed RMR and CPM enhancements.

RTOs, the CAISO does not upfront fund an RMR resource's capital improvement costs. Rather, under the CAISO's RMR Contract, the RMR owner upfront funds such costs, and the CAISO only compensates the owner annually for a one-year portion of its capital addition costs based on the depreciation schedule for such costs approved by the Commission. Also, the CAISO will apply all above market revenues the unit earns towards the fixed cost recovery under the RMR Contract. Once the RMR agreement terminates, the CAISO's contribution towards any balance of unpaid capital costs terminates if the unit returns to the market.

The primary focus of the underlying stakeholder initiative was on modernizing the RMR Contract and related tariff provisions, clarifying when the CAISO will use its RMR authority and when it will use its CPM authority, and addressing backstop procurement associated with resource retirements and mothballs (which implicated both RMR and risk of retirement CPM). Certain stakeholders requested far-reaching changes regarding CPM compensation, e.g., changing the level of the CPM soft-offer cap, adopting a three-pivotal supplier test for CPM bids, and changing the CPM pricing for annual CPM designations to cure RA procurement deficiencies. Considering these types of changes to the CPM was beyond the scope of the CAISO's stakeholder initiative and are not within the scope of the CPM tariff provisions the CAISO proposes to revise in this proceeding (which are limited to removing all risk of retirement CPM provisions). Further, the tariff changes the CAISO proposes to make do not affect the existing tariff provisions certain stakeholders seek to overhaul. The CAISO notes that tariff section 43A.4.1.1.2 requires the CAISO (or the California Energy Commission) to conduct a cost of generation study and the CAISO to convene a stakeholder process to consider the study results in determining whether to change the CPM soft offer cap. Under the existing Commission-approved CAISO tariff, a cost of service study is a prerequisite to holding a stakeholder process to assess changes to the CPM soft offer cap. No study has commenced, and there are no study results to consider. At the March 27, 2019 Governing Board meeting, the CAISO committed that it would commence the cost of service study under tariff section 432A.4.1.1.2 and corresponding stakeholder process this year. In that stakeholder process, the CAISO will assess changes to the CPM soft offer cap. Any CPM compensation-related changes certain stakeholders seek are best addressed with the discussion of the cost of service study results so that any changes can be considered based on current cost data and market conditions.

II. BACKGROUND

The CAISO tariff includes resource adequacy provisions to ensure that sufficient resources are available when and where needed to serve load, meet reserve requirements, and support reliable operation of the CAISO controlled grid.⁶

⁶ Existing tariff section 40, *et seq.* For the sake of clarity, this filing distinguishes between existing tariff sections (*i.e.*, sections in the existing CAISO tariff), revised tariff sections (*i.e.*,

There nevertheless may be circumstances in which the resource adequacy capacity procured by LSEs may be inadequate to fulfill the CAISO's operational needs and enable it to meet reliability criteria. The CAISO tariff provides the CAISO with authority to designate backstop capacity to meet reliability needs under its CPM and RMR mechanisms, as described below.

A. CPM

1. CPM Tariff Authority Generally

The CPM, as set forth in Section 43A of the CAISO tariff, serves as a backstop mechanism to allow the CAISO "to procure capacity to address a deficiency or supplement resource adequacy procurement by load serving entities, as needed, to maintain grid reliability."⁷ Resources designated under the CPM essentially are treated as resource adequacy resources and are subject to a must offer obligation.⁸ The CPM supplements the resource adequacy program rather than supplanting or interfering with it. The CAISO may designate CPM capacity only under certain specified circumstances in CAISO tariff Section 43A:

- (1). Insufficient Local Capacity Area Resources in an annual or monthly Resource Adequacy (RA) Plan;⁹
- (2). Collective deficiency in Local Capacity Area Resources;¹⁰
- (3). Insufficient Resource Adequacy Resources in an LSE's annual or monthly Resource Adequacy Plan;¹¹

sections in the existing tariff that the CAISO proposes to revise in this filing), and proposed tariff sections (*i.e.*, new tariff sections that the CAISO proposes to add in this filing).

⁷ *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,001, at P 2 (2015).

⁸ CAISO tariff section 43A.5.1.

⁹ *Id.* at 43A.2.1.1 and 43A.2.1.2, respectively.

¹⁰ *Id.* at 43A.2.2. A collective deficiency occurs when the local capacity resources procured by LSEs and reflected in their annual RA showings fail to ensure compliance in one or more local capacity areas with the Local Capacity Technical Study provided in tariff section 40.3.1.1, even if no there is no overall deficiency in the amount of local capacity area resources that LSEs procure. In other words, no LSE may be deficient in procuring local capacity resources to meet its RA obligations, but the specific resources LSEs have procured are insufficient to meet reliability in certain local areas or sub-areas. This can occur because the RA program has only required LSEs to procure their allocated quantity of local capacity resources within a broader Transmission Access Charge (TAC) area. The RA program currently does not require LSEs to procure a *pro rata* share of resources in each local capacity area (or sub-area) within a TAC area; although, this will change for the PG&E TAC area starting in 2020.

¹¹ CAISO tariff section 43A.2.3.

- (4) A CPM Significant Event;¹²
- (5) A reliability or operational need for an Exceptional Dispatch CPM;¹³
- (6) Resources at risk of retirement;¹⁴ and
- (7) A cumulative deficiency in the total Flexible RA Capacity included in the annual or monthly Flexible RA Capacity Plans, or in a Flexible Capacity Category in the monthly Flexible RA Capacity Plans.¹⁵

There were no annual designations of CPM capacity for 2019 to fill RA deficiencies.

With one exception, resources designated under the CPM are compensated based on their bids into a competitive solicitation process with a soft offer cap (\$6.31/kW-month),¹⁶ or they can cost-justify a higher resource-specific rate by making a filing with the Commission based the formula in Schedule F of the *pro forma* RMR agreement in Appendix G of the CAISO tariff.¹⁷ The latter option allows CPM resources to recover their full, annual fixed cost of service. CPM resources retain all revenues they earn in the CAISO markets.¹⁸

A resource owner may not propose – and will not be compensated based upon – an offer price higher than the price submitted in its bid in the competitive solicitation.¹⁹ The resource will receive the price that the Commission finds to be just and reasonable for the remainder of the calendar year in which it is approved and for the next two calendar years, unless superseded by a subsequent

¹² *Id.* at 43A.2.4. As defined in Appendix A of the CAISO tariff, a Capacity Procurement Mechanism Significant Event is a “substantial event or a combination of events determined by the CAISO to either result in a material difference from what was assumed in the resource adequacy program for purposes of determining the Resource Adequacy Capacity requirements, or produce a material change in system conditions or in CAISO Controlled Grid operations, that causes, or threatens to cause a failure to meet Reliability Criteria absent the use of a non-Resource Adequacy Resource(s) on a prospective basis.

¹³ *Id.* at 43A.2.5.

¹⁴ *Id.* at 43A.2.6.

¹⁵ *Id.* at 43A.2.7.

¹⁶ The CPM soft offer cap is based on going forward fixed costs (*i.e.*, fixed operations and maintenance costs, ad valorem taxes, and insurance) of a merchant constructed, mid-cost, 550 MW combined cycle with duct firing, plus a 20 percent adder.

¹⁷ The competitive solicitation process does not apply to risk of retirement CPM designations.

¹⁸ CAISO tariff section 43A.7.3.

¹⁹ *Id.* at 43A.4.1.1.1.

Commission-approved CPM capacity price during that period.²⁰

The CAISO treats CPM resources like RA resources. The tariff sets forth availability (and other) obligations for CPM resources, including the obligation for CPM capacity to meet the day-ahead and real-time availability requirements specified in section 40.6 of the CAISO tariff and any applicable obligations under section 40.10 (regarding flexible capacity).²¹ Like RA resources, CPM resources are also subject to the Resource Adequacy Availability Incentive Mechanism (RAAIM). The RAAIM price applicable to a CPM resource is the higher of its CPM price or the RAAIM price applicable to RA resources.²²

The CAISO allocates the costs of CPM designations to Scheduling Coordinators representing LSEs.²³ For Significant Event, Exceptional Dispatch, and risk of retirement CPM designations, the CAISO allocates based on the percentage of load served by each LSE in the TAC area(s) in which the need for the CPM designation arose based on the percentage of actual Load of each LSE represented by the Scheduling Coordinator in the TAC Area(s) to total Load in the TAC Area(s) as recorded in the CAISO Settlement system.²⁴

The tariff requires the CAISO to credit certain CPM designations against the resource adequacy obligations of scheduling coordinators for LSEs.²⁵ These tariff provisions include the requirement to credit ROR CPM designations to the resource adequacy obligations of scheduling coordinators for LSEs if the term of such a designation is for more than one month.²⁶ The LSE receives a credit toward its Demand and Reserve Margin requirements determined under tariff section 40 equal to the LSE's *pro rata* share of the designated CPM capacity.

Finally, CPM participation is voluntary on the part of resources.²⁷ The CAISO does not require resources to submit bids into a CPM competitive solicitation. However, if a resource does submit a bid, and the CAISO accepts the bid, the resource must accept the CPM designation. If a resource does not submit a bid into a CPM competitive solicitation, and the CAISO offers the resource a CPM designation, the resource may decline the CPM designation, but it still remains available to respond to CAISO dispatch instructions.

²⁰ *Id.*

²¹ *Id.* at 43A.5.1.

²² *Id.* at 43A.5.4.

²³ *Id.* at 43A.8.

²⁴ *Id.* at 43A.8.5, 43A.8.6, and 43A.8.7.

²⁵ *Id.* at 43A.9.

²⁶ *Id.* at 43A.9(d).

²⁷ *Id.* at 43A.5.2.

2. Risk of Retirement CPM

The risk of retirement CPM tariff provisions permit the CAISO to procure the capacity of a non-RA resource that has attested that it plans to retire because it will be uneconomic for the resource to remain in service because it has not been procured for the current or imminent (*i.e.*, upcoming) resource adequacy compliance year, but whose operation the CAISO needs to meet operational or reliability needs by the end of the calendar year following the year in which the resource is at risk of retirement. For example, if in 2019 a resource requests a risk-of-retirement CPM designation for 2020, the CAISO would assess whether the resource is needed for reliability before the end of calendar year 2021. If it is, the CAISO would issue the resource a risk-of-retirement CPM designation for 2020.²⁸ Risk-of-retirement CPM essentially serves as a “bridge” until the year the generating unit is needed for reliability. The ROR CPM backstop mechanism enables the CAISO to maintain capacity on-line that is otherwise uneconomic and at risk of retirement in the current or upcoming year, but is necessary to meet reliability needs in the following year.

Capacity procured under the risk of retirement CPM framework is not designated based on offers submitted into the CPM competitive solicitation process. Instead, risk of retirement CPM capacity is compensated based on the resource’s requested compensation, up to the CPM soft offer cap, or based on a resource-specific rate based on Schedule F of the *pro forma* RMR Contract.

The separate process for seeking, processing, and awarding a risk of retirement CPM designation is in tariff section 43A.2.6. A resource owner seeking a risk of retirement CPM designation must submit an affidavit signed by an executive officer of the company with the legal authority to bind such entity, that it will be uneconomic for the resource to remain in service and that the decision to retire is definite unless CPM procurement occurs. RMR does not have a similar requirement.

The term of an ROR CPM designation is a minimum of one month and a maximum of one year, based on the number of months for which the capacity is to be procured within the resource adequacy compliance year.²⁹ Risk of retirement CPM designations do not carry over into the next calendar year.

²⁸ In such a circumstance, the resource does not meet current RMR eligibility requirements because, under the RMR framework, the CAISO would only study whether the resource is needed for reliability in calendar year 2020.

²⁹ Existing tariff section 43A.3.7. The CAISO will rescind the CPM designation for any month during which the resource is under contract with an LSE to provide resource adequacy capacity. *Id.*

In approving the risk of retirement CPM framework, the Commission recognized that risk of retirement CPM was carefully designed to address the reliability need for a resource beyond the current or imminent resource adequacy compliance year.³⁰ The Commission rejected protesters' assertions that the risk of retirement CPM duplicated the CAISO's RMR authority. The Commission noted that the risk of retirement CPM assesses reliability needs in the following year; whereas, RMR authority assesses needs in the previous year.³¹ The Commission recognized that a situation could arise where a resource at risk of retirement but needed for reliability would not be eligible for an RMR contract.³² Therefore, the Commission found that the "CAISO has demonstrated a need for the risk of retirement category that is not met by CAISO's reliability must-run procurement authority."³³

The Commission found that the risk of retirement CPM category would not duplicate or interfere with the CPUC's or other local regulatory agencies' jurisdiction.³⁴ Consistent with the intent of the tariff provisions, the Commission directed the CAISO to clarify in the tariff that the risk of retirement CPM designation would not be used to circumvent existing capacity procurement mechanisms that could adequately address reliability needs.³⁵

The Commission also rejected arguments that offering risk of retirement CPM designations would create significant market distortions or opportunities for gaming.³⁶ The Commission noted that the CAISO's proposal contained multi-layer safeguards and stringent requirements that would adequately protect against the possibility that resource owners would manipulate the system to receive CPM designations. The Commission rejected the CAISO's proposal to review and assess a resource's financial condition as a deterrent against gaming.³⁷ Because

³⁰ *Cal. Indep. Sys. Operator Corp.*, 134 FERC ¶ 61,211 (2011) (2011 CPM Order). The Commission explained that "[w]hile the resource adequacy program provides the primary means for CAISO to ensure that needed resources are available, we believe that the risk of retirement category will provide CAISO with an additional, last resort tool to address reliability needs, particularly as the makeup of generation resources changes over time." *Id.* at P 124.

³¹ *Id.* at P 128. Building on the example from the previous page, if the resource seeking backstop procurement in 2019 was needed for reliability in 2020 it would be eligible for an RMR contract for 2020; if the resource was not needed for reliability until 2021, it would be eligible for a risk of retirement CPM designation in 2020, but not an RMR contract.

³² *Id.*

³³ *Id.*

³⁴ *Id.* at P 126.

³⁵ *Id.* at P 130.

³⁶ *Id.* at P 131.

³⁷ 2011 CPM Order at P 132.

market participants are prohibited from submitting false or misleading information, the Commission found that the required affidavit stating that it will be uneconomic for the generating unit to remain in service was sufficient to establish that a resource cannot continue to operate economically. The Commission stated that if the CAISO Department of Market Monitoring has reason to suspect a resource submitted false, inaccurate, or otherwise misleading information in its affidavit, the CAISO tariff requires it to refer such suspected violation to the Commission for sanction.³⁸ Accordingly, the Commission found “CAISO’s proposal to conduct financial assessments of resources requesting risk of retirement CPM designations to be unjust and unreasonable and hereby reject it.”³⁹

3. Need to Improve the Risk of Retirement CPM Framework

As the CAISO has documented, risk of retirement of resources needed for reliability is an important concern for the CAISO as the number of resources needed to meet renewable portfolio standards increases, energy market prices decrease, and the revenues to cover the fixed costs of existing, traditional generation resources decline.⁴⁰ Under these circumstances, it is important that retirement-related backstop procurement mechanism be effective to ensure that resources the CAISO needs to maintain reliability and effectively integrate

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ Comments of the California Independent System Operator Corporation in Response to the Commission’s Request for Comments about System Resiliency and Threats to Resilience, Docket No. AD18-7, pp. 12, 14-15, 35-37, March 9, 2018; CAISO Tariff Amendment to Improve the Risk of Retirement Capacity Procurement Mechanism, Docket No. ER18-641, pp. 1-2, n.3. Jan. 12, 2018, citing CAISO 2016-2017 Transmission Plan at 205-19 (Mar. 17, 2017), available at http://www.caiso.com/Documents/Board-Approved_2016-2017TransmissionPlan.pdf; CAISO Presentation, Risks of Early Economic Retirement of Gas-Fired Generation – Sensitivities of the 2017-2017 TPP Studies, *passim* (Sept. 21, 2017), at pages 117-37 of the PDF document available at http://www.caiso.com/Documents/Day2_ISO-Presentation_2017-2018TransmissionPlanningProcess_PreliminaryReliabilityResults.pdf; CAISO Department of Market Monitoring 2016 Annual Report on Market Issues & Performance at 15-16, 47-51 (May 8, 2017), available at <http://www.caiso.com/Documents/2016AnnualReportonMarketIssuesandPerformance.pdf>; California Energy Commission workshop with the California Public Utilities Commission (CPUC) and CAISO (Joint Workshop) regarding *Risk of Economic Retirement for California Power Plants*, the transcript of which is available at: http://docketpublic.energy.ca.gov/PublicDocuments/17-IEPR-14/TN217616_20170516T131659_Transcript_of_04242017_Joint_Agency_IEPR_Workshop_on_Risk_of_Ec.pdf;

California Energy Commission, 2017 Draft Integrated Energy Policy Report at 102 (Oct. 16, 2017), available at http://docketpublic.energy.ca.gov/PublicDocuments/17-IEPR-01/TN221520_20171016T153945_Draft_2017_Integrated_Energy_Policy_Report.pdf; Comments of Southern California Edison Company, Pacific Gas and Electric Company, and San Diego Gas & Electric Company on the Order Instituting Rulemaking to Oversee the Resource Adequacy Program, California Public Utilities Commission Rulemaking Proceeding No. 17-09-020, at 2-3 (Oct. 30, 2017), available at <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M198/K355/198355179.PDF>

renewable resources remain operational and do not retire prematurely.

In recent years, resource owners have advised the CAISO that the existing risk of retirement CPM framework (1) does not give them enough time to address the issues they face and decisions they must make when contemplating whether to retire or continue operating a generating unit, and (2) includes features that diminish the utility of seeking a risk of retirement CPM designation. The CAISO has considered these concerns and concluded that they have some merit.

The problems resource owners have identified have become magnified in an era of deteriorating market dynamics, the transitional state of the system, increased procurement of variable energy resources in RA procurement, and uncertainty regarding the reliability need for their generating units and their ability to receive an RA contract or some other capacity-type payment. The identified issues generally fall into two categories: (1) resource owners cannot learn of the potential for receiving a risk of retirement CPM designation for the upcoming RA compliance year until December of the current year (or later), and this late notice is problematic for planning and can require them to operate uneconomically for a longer period than is necessary; and (2) the attestation requirements are unduly stringent and dissuade resource owners from seeking risk of retirement CPM designations because if the CAISO does not grant a risk of retirement CPM designation, the resource owner must retire its resource and is precluded from accepting other business opportunities such as contracting with an LSE.

A letter that Calpine Corporation (Calpine) sent to the CAISO on November 28, 2016, illustrates the first of these issues.⁴¹ Calpine explained that it had four peaking generating units under resource adequacy contracts that would terminate at the end of 2017, and the purchaser had advised Calpine that it would not renew them. Calpine stated it had made diligent efforts to sell capacity from these generating units following contract expiration but was unsuccessful and that, commencing January 1, 2018, it would be uneconomic to operate the peaking generating units without contracts that provide for fixed cost recovery. Calpine stated that complicated and transformational activities leading to an orderly and rational cessation of operations would require months to plan and implement, and those activities would place a significant burden on Calpine's commercial, operational, legal, and personnel functions. These activities include: (1) retaining the engineering and permitting consultants necessary to develop the required permitting, decommissioning, or redeployment plans for each generating unit; (2) assessing major maintenance expenditures for operations in 2018 and beyond if the generating units remained in service;⁴² (3) engaging in the budgeting process

⁴¹ The CAISO provides the letter in Attachment E to this filing.

⁴² In particular, Calpine stated that in the first half of 2017 it either needed to move forward with staffing plans for changing the status of the generating units or have sufficient assurance of a revenue stream so it could invest in capital maintenance for any resource needed to maintain

for 2018, which would establish the operations, maintenance, personnel and/or closure or relocation budgets for generating units and which would conclude in mid-2017; and (4) filing for California Energy Commission (CEC) approval to close one plant by mid-2017, to satisfy CEC licensing requirements before commencing decommissioning activities.⁴³

Calpine emphasized that the existing risk of retirement CPM tariff provisions did not allow a sufficient planning period, or “runway” to undertake these activities in a timely manner. Calpine noted that even if the CAISO determined that the peaking units were needed for reliability, the existing risk of retirement CPM provisions could require Calpine to operate the resources uneconomically into 2018, after their contracts expired, but before the CAISO could designate them as risk of retirement CPM resources. Calpine asserted that continued uneconomic operation with unknown compensation was an unacceptable business outcome. Accordingly, Calpine advised the CAISO that it would not pursue a risk of retirement CPM designation. Instead, Calpine indicated that the CAISO had the unilateral right to designate the units as RMR if they were required for reliability.

In a letter sent on June 2, 2017, Calpine expressed similar concerns regarding its Metcalf unit.⁴⁴ Calpine stated that it had no RA contract for any part of 2018 and expected no such contract to materialize. The CAISO determined that the concerns expressed in these letters were valid. CAISO studies showed that the Metcalf unit and two-of-the-four peaking units were needed for reliability in 2018.

reliability.

⁴³ Calpine noted that the decommissioning planning and implementation process for combined cycle generating units (as opposed to peaking generating units) is an even longer process because many CEC licenses require submitting a decommissioning or closure plan to the CEC for review and approval of such a plan at least 12 months prior to the commencing decommissioning activities. That requirement also compels a resource owner seeking a risk or retirement CPM designation to ascertain as early as possible whether its resource is needed for reliability and eligible for a risk of retirement CPM designation. With earlier notice that the unit is not needed, a resource owner can begin the decommissioning process sooner, thus limiting the amount of time the owner must operate the resource uneconomically without an RA contract before it can shut down the unit and stop incurring costs.

⁴⁴ In the June 2, 2017, letter (June 2 letter), Calpine informed the CAISO that it was assessing a decision to make the Metcalf unit unavailable for 2018 because the unit lacked any form of capacity payment for 2018 or beyond and was facing a cyclical major maintenance project with a budget in excess of \$20 million. In light of these facts, Calpine asked the CAISO to determine whether the resource would be needed for reliability in 2018. The letter sought an early indication of need so that Calpine could (1) prepare for the continued operation of the unit, including the cyclical major maintenance; and (2) prepare for the multifaceted process for staffing, budgeting, and permitting associated with shutting down such a large generating facility. Calpine again advised the CAISO that the risk of retirement CPM provisions did not allow a sufficient planning period or “runway” for such complicated and transformational activities such as major, maintenance, budgeting, and personnel. The CAISO provides the June 2 letter in Attachment F to this filing.

Because the three units were needed for reliability in 2018, RMR was the appropriate course of action under the CAISO tariff. Risk of retirement CPM was not an option. Had the CAISO found that the generating units were not needed for reliability until 2019, risk of retirement CPM designations, not RMR contracts, would have been the only available option. Although the three generating units received RMR contracts, not risk of retirement CPM designations, Calpine's letters illustrated there were problems with the existing risk of retirement CPM process that needed to be addressed.⁴⁵

Other resource owners echoed similar concerns in the ROR CPM stakeholder process.⁴⁶ They have stated that it is problematic to require resource owners to wait until mid-December at the earliest to learn about any potential risk of retirement CPM designations for the upcoming year given they typically make power plant investment decisions well ahead of that time. Because the risk of retirement CPM process for an upcoming RA compliance year starts so late, resource owners do not know whether to invest in keeping their plants available until after the time frame in which such decisions typically are made. As such, resource availability could suffer absent major maintenance, resources could incur additional costs that turn out to be unnecessary if they are not designated as risk or retirement CPM capacity, or resources may have to operate uneconomically for an extended period because of the late timing of risk of retirement CPM notifications for the upcoming year. Like Calpine, these resource owners argued there needs to be a more forward risk of retirement CPM planning mechanism that can apply when the end of a resource's RA contract term is imminent so they can make timely and rational decisions either to suspend operations or pursue a backstop risk of retirement CPM designation. Resource owners noted these same process obstacles do not apply to RMR.

As to the second general issue identified above, some stakeholders expressed concern that the risk of retirement CPM attestation requirement is unduly

⁴⁵ Calpine summarized these problems again in comments during the stakeholder process on the Metcalf RMR agreement:

Most simply put, CPM allows no runway for the complicated and time-consuming decisions required for asset disposition...the timing limitations associated with CPM...do not allow generators to perform normal; planning in advance of the delivery year. Pursuant to the tariff, CPM designation would occur, at the earliest, only a few weeks (mid-December) before the anticipated availability date. That gives the generator owner no time to prepare for the disposition of an asset or the going forward operation of an asset that maybe, as is the case with Metcalf, entering a cyclical major maintenance period.

See Comments of Calpine Corporation on RMR designation for the Metcalf Energy Center at 2 (Oct. 6, 2017). Calpine's comments are available at http://www.caiso.com/Documents/CalpineComments_PotentialReliabilityMust_Run_MetcalfEnergyCenter.pdf.

⁴⁶ See, e.g., Comments of NRG Energy Inc. on Issue Paper in Risk of Retirement CPM initiative, June 6, 2017; Comments of Diamond Generating Corp. on Issue Paper, June 1, 2017.

stringent and advised the CAISO that certain resource owners had not requested risk of retirement CPM designations. They emphasized that the attestation requirement only gives the resource owner one option if the CAISO does not grant it a risk of retirement CPM designation – retire its resource (or face potential penalties from the Commission for providing false information). Some resource owners argued that it is unreasonable to expect them to attest that their resource will retire unless it receives a risk of retirement CPM designation, without knowing whether the resource might ultimately be offered an RA contract. Other resource owners noted that the existing attestation requirement would even preclude them from pursuing other legitimate business opportunities such as selling the resource. The CAISO concluded these concerns have merit.

4. Risk of Retirement CPM Tariff Amendment Filing

The CAISO recognized that there was a need to implement an earlier study and notification process for risk of retirement CPMs so interested resource owners might know earlier in the year whether their resources are needed for reliability so they can timely undertake the steps required either to retire their resources or ensure they are ready for continued operation in the upcoming year. On January 12, 2018, the CAISO filed limited, near-term changes to its risk of retirement CPM tariff provisions to provide an opportunity for generators contemplating retirement to receive earlier notification of their reliability need so they might more effectively and timely plan for their retirement or continued operation. The key feature of the CAISO's proposal was to create two request windows, one in the spring and one in the fall, to allow resource owners more time to make important decisions about retirement or continued operation. The CAISO also proposed to eliminate the existing market based compensation methodology, and retain only the existing cost-based methodology, for ROR CPM designations. The CAISO did not propose to change the existing, separate CPM tariff provision that allows designated resources to retain their market revenues.

Several parties protested the filing arguing it was inappropriate to pay a CPM resource based on its full annual cost of service and also permit it to retain all market revenues. Some parties also argued that the CAISO's proposal would inappropriately front-run the RA bilateral procurement process and unduly distort the prices in that process.

On April 12, 2018, the Commission rejected the risk of retirement CPM tariff amendment filing in its ROR CPM Order. The Commission found that the protesters' concerns regarding the potential for the spring request window to distort prices or otherwise interfere with the bilateral resource adequacy (RA) process had merit. The Commission stated that because a resource at risk of retirement likely has costs greater than what a resource can earn in the competitive market, the proposed compensation offered by the CAISO would likely exceed what the resource would earn in the bilateral RA market. The Commission found that,

without other comprehensive reforms, the benefits resulting from the CAISO's incremental improvement were outweighed by the deleterious effects on the competitiveness of capacity procurement under the RA program.

However, the Commission stressed in its order it was not concluding that a risk of retirement CPM designation can never precede the bilateral RA process because of the potential for front-running.⁴⁷ Indeed, the Commission recognized that the record contained evidence that suggested certain resources could benefit from earlier notice of a potential risk of retirement CPM designation.

The Commission recognized in the ROR CPM Order that the "CAISO has initiated a stakeholder process to holistically examine both the RMR and CPM programs." The Commission stated that this indicated the need to coordinate reform of the RMR and CPM programs rather than proposing incremental changes addressing only a portion of the underlying challenges, as the CAISO had done in the risk of retirement CPM tariff amendment.⁴⁸ The Commission "encourage[d] the CAISO to propose a package of more comprehensive reforms" and "expecte[d] that any such proposal will recognize the need to balance appropriate compensation for resources with consideration of ratepayer concerns, as well as the need to strike a balance between CAISO's backstop procurement authority and primary procurement of supply needed for resource adequacy purposes."⁴⁹ The Commission "strongly encourage[d] CAISO and stakeholders to make progress in the ongoing stakeholder process and to adopt a holistic, rather than piecemeal, approach," including, evaluating whether both risk of retirement CPM and RMR need to be retained as separate mechanisms.⁵⁰

B. The CAISO's Existing Reliability Must Run Authority

Under the CAISO Tariff, the CAISO has the right "at any time . . . to designate a Generating Unit as a Reliability Must-Run Unit" based upon the CAISO's technical analyses and studies.⁵¹ Those studies include the annual Local Capacity Technical Study required by section 40.3.1 and any additional technical studies necessary to ensure compliance with Reliability Criteria.⁵² Once the CAISO designates a resource for Reliability Must-Run service, the resource owner must propose rates for negotiation with the CAISO.⁵³ For this purpose, the CAISO

⁴⁷ ROR CPM Order at P 45.

⁴⁸ *Id.* at P 46.

⁴⁹ *Id.*

⁵⁰ *Id.* at P 48.

⁵¹ CAISO tariff section 41.

⁵² *Id.* at 41.3.

⁵³ *Id.* at 41.2.

maintains a *pro forma* Reliability Must Run Contract as Attachment G to the CAISO Tariff.⁵⁴ Although the CAISO tariff provides broad authority to designate a resource to meet reliability criteria, the *pro forma* RMR Contract was developed as part of a global settlement at the Commission in the early 2000s with a somewhat narrower focus than that authorized by the tariff.⁵⁵ Under the existing *pro forma* RMR Contract, the CAISO's energy dispatch right is limited to dispatches for local reliability and non-competitive congestion.⁵⁶

Before the RA program, resource owners competed for energy rents in the CAISO markets. Before implementing local market power mitigation rules, the CAISO used RMR contracts for resources with local market power. If the CAISO needed a resource, then the resource could command a very high energy price. The *pro forma* RMR Contract provided the CAISO with a cost-based call option for energy to mitigate local market power. The *pro forma* RMR Contract can be implemented in two ways, at the option of the RMR Owner. Under Condition 2, the RMR Owner is paid its full cost of service and its actual variable costs of providing energy. However, an RMR unit owner under Condition 2 may not engage in CAISO market transactions, unless the CAISO issues a relevant dispatch notice.⁵⁷ When the CAISO dispatches the Condition 2 RMR unit for reliability purposes, the owner of the generator unit must bid all of its capacity at formula-based prices.⁵⁸ A Condition 2 unit is only allowed and required to submit cost based bids for energy and Ancillary Services during RMR Dispatch period. The RMR Owner shows all market revenue earned by the resource as a credit (aka, "SC Credit") against the fixed and variable cost payment to the resource.

Under Condition 1, the CAISO pays the RMR Owner only a portion of its fixed costs, and the unit still participates in the market and retains all market revenues it earns.

The CAISO had many resources operating under RMR contracts prior to the RA program. Following the development of the RA program and implementation of the local market power mitigation rules, the CAISO has generally relied on the RA program as supplemented by CPM to secure resources needed for reliability. The CAISO has had only one long term remaining legacy RMR resource under contract

⁵⁴ *Id.* at 41.4.

⁵⁵ See Stipulation and Agreements filed on April 2, 1999 and August 14, 2000 in Docket Nos. ER98-441-000 *et al.*

⁵⁶ CAISO tariff, Appendix G, Form of Reliability Must Run Contract, Section 4.1(b).

⁵⁷ *Id.*

⁵⁸ *Id.* The RMR Contract pays for fixed costs (Schedule B) and variable costs (Schedules C and D). The fixed costs may include capital item additions (Schedule L-1) or repair items (reimbursed through an RMR invoice) which are approved through the process defined in the RMR agreement in Article 7.

to meet local reliability needs in the Oakland local area.⁵⁹ In recent years, the CAISO has used the RMR authority and customized the *pro forma* RMR Contract to obtain voltage support service from AES Huntington Beach synchronous condensers during the 2013-2017 period.⁶⁰ More recently, the CAISO designated three Calpine resources (Metcalf, Feather River and Yuba City) for reliability service beginning in 2018 to ensure their continued availability to meet local reliability needs, with two of the three Calpine resources still under an RMR contract. Today, the CAISO has only 260.2 MW of capacity under RMR contracts. The CAISO has identified infrastructure solutions in its annual transmission planning process that will allow the CAISO to terminate all of these RMR contracts once the solutions are placed in service. The CAISO did not enter into RMR contracts with any new units for 2019 and terminated its RMR Contract with Metcalf following the end of the 2018 Contract Year. These legacy RMR contracts are not affected by this tariff amendment and the applicable legacy RMR tariff provisions will continue to apply. These tariff provisions will be identified as either applicable only to RMR legacy resources in the main body of the tariff or included in Appendix H applicable to Grandfathered RMR Contracts.⁶¹

Under tariff section 41.3, besides performing the Local Capacity Technical Study under tariff section 40.3.1 of the tariff to determine if an RMR Contract is needed, the CAISO may also perform additional technical studies to ensure compliance with Reliability Criteria. The CAISO tariff defines Reliability Criteria as “[p]re-established criteria that are to be followed in order to maintain desired performance of the CAISO Controlled Grid under Contingency or steady state conditions.”⁶² After performing technical reliability studies, the CAISO will determine which units it requires as RMR units, which RMR contracts it needs to extend, and which RMR contracts it can terminate. Accepting an RMR designation is mandatory.⁶³ The CAISO may conduct these studies and designate a unit as RMR “at any time.”⁶⁴ The CAISO generally awards RMR contracts to generators on a calendar year basis. Since inception of the RA program, RMR designation has narrowed to only the resources needed to meet Reliability Criteria that have not been procured as RA or were unlikely to be procured as RA. The CAISO also

⁵⁹ Docket No. ER19-231, Dynegy Oakland, LLC tariff filing per 35.13(a)(2)(iii): Annual Reliability Must Run Agreement and Schedule F Informational Filings to be effective January 1, 2019.

⁶⁰ *Order on Reliability Must-Run Agreement*, 142 FERC ¶ 61,017 (2013) (order approving AES Huntington Beach RMR Contract for synchronous condensers).

⁶¹ Proposed Appendix H to CAISO tariff. See also proposed Appendix J 1 (summary of tariff changes relating to Legacy RMR Units).

⁶² *Id.* at Appendix A.

⁶³ *Id.* at section 41.2.

⁶⁴ *Id.*

holds the sole option to extend an RMR Contract for the following calendar year on an annual basis.⁶⁵ The RMR Owner may terminate the RMR Contract only under extremely narrow circumstances such as CAISO default, condemnation of the unit, or if the CAISO rejects proposed capital items or repairs that make it illegal, uneconomical, or impractical to continue operation without it.⁶⁶ Every year the CAISO conducts studies to determine if the RMR contract remains necessary or if there are other less costly alternative available.⁶⁷ Also, in its annual transmission planning process the CAISO will assess transmission and non-transmission alternatives to RMR contracts.

Unless special circumstances exist, the CAISO exercises its RMR authority in the context of resource withdrawal from the markets—either through a notice of retirement or mothball status. Under the Participating Generator Agreement (PGA), a resource owner must provide 90 days' notice before withdrawing its resource. Upon receiving such notice, the CAISO studies whether it can permit the resource to retire or mothball without causing any reliability problems. If the CAISO needs a resource for reliability, it will designate the resource for RMR service which then triggers the tariff obligation that the resource owner to offer proposed rates and to negotiate the RMR Contract with the CAISO. As discussed in the next section, resource owners can submit retirement/mothball notifications to the CAISO at any time, as long as they follow the minimum notification requirements of the PGA. In determining whether the CAISO needs to designate a resource for RMR service to maintain reliability, the CAISO will assess reliability needs in the current year and the upcoming year. For example, if a generating unit submits a retirement or mothball notice in June of 2019, the CAISO will study whether the unit is needed for reliability for the remainder of 2019 or in 2020. In contrast, if the resource had sought a risk of retirement CPM designation, the CAISO would study whether the unit is needed for reliability before the end of 2021. The CAISO will also assess whether there are any lower cost alternatives before executing an RMR Contract.

RMR agreements allow a generator to recover the costs associated with planned and unplanned capital expenditures that occur during the term of the agreement. However, the CAISO does not up-front fund such expenditures on an accelerated basis. Rather, the CAISO only pays a one-year share of such costs based on the depreciation schedule for such costs, which the Commission ultimately must approve.⁶⁸ If an RMR contract is terminated and the unit closes within six months of termination, the CAISO will pay the unit owner any remaining unpaid capital costs, plus interest at the FERC-interest rate, over a 36-month period

⁶⁵ *Id.* at Appendix G, Form of Reliability Must Run Contract, Section 2.

⁶⁶ *Id.* at section 2.2.

⁶⁷ CAISO Tariff at section 41.4.

⁶⁸ *Pro forma* RMR Contract, Schedule B, Equation B-9 and Schedule L-1.

if the unit remains out of service. The CAISO will stop such payments if the unit returns to service within that 36-month period.⁶⁹

The CAISO allocates RMR fixed and net variable costs not recovered through market revenues costs to the Responsible Utility, *i.e.*, participating transmission owner identified in the RMR contract.⁷⁰ The Responsible Utility owner then re-allocates the RMR costs to its transmission customers under a methodology specified in its applicable Commission-approved reliability services tariff.

Under Section 4.1 of the *pro forma* RMR Contract, the CAISO can dispatch an RMR unit for energy solely to meet local reliability needs or manage non-competitive congestion constraints. Dispatch for local reliability includes any local reliability need, *i.e.*, not just the immediate local reliability reason for the RMR designation. RMR dispatches for Ancillary Services, except for voltage support or blackstart, are more limited per 4.1(c) – such dispatches require a bid insufficiency test. Under Section 41.9 of the tariff, for Condition 2 units only, the CAISO may Exceptionally Dispatch an RMR Unit for reasons other than stated under the RMR agreement if needed for energy or operating reserve, or to manage congestion, if no other generating unit is available to meet the need.

RMR unit owners may substitute a unit under the RMR agreement. The substituted unit may not necessarily be an RMR unit, under the circumstances existing at the time; however, it must be capable of providing equivalent system reliability benefits.⁷¹

The CAISO can limit the RMR owner's market transactions under section 6.1 of the RMR Contract, if an RMR Unit could exceed its Contract Service Limits or impair the CAISO's ability to dispatch the unit to meet reliability needs during other times of the Contract Year.⁷²

C. The CAISO's Existing Generation Unit Retirement and Mothball Framework

Under Section 3.2.2 of the CAISO's *pro forma* Participating Generator Agreement (PGA)⁷³ a Participating Generator must give the CAISO at least 90 days written notice to terminate its PGA, or to remove a generating unit from a PGA for reasons other than its sale, or the Participating Generator no longer had contractual

⁶⁹ *Id.* at Section 2.5.

⁷⁰ *Id.* at Article 1 and 9.

⁷¹ *Pro forma* RMR Contract, Article 1 and Section 5.1(c).

⁷² *Id.* at Section 6.1(b).

⁷³ Attachment B-2 to the CAISO tariff.

entitlement to the unit. A Participating Generator may submit a notice of retirement at any time.

The CAISO's Business Practice Manual for Generator Management specifies four scenarios for retiring or mothballing a generating unit. The scenarios are:⁷⁴

Scenario 1: Repowering / Entered Queue. Participating Generators that wish to retire a Generating Unit and retain the Generating Unit's Deliverability status and have either:

- a. been approved for the affidavit repowering process pursuant to Section 25.1.2 of the CAISO Tariff or the appropriate PTO's tariff; or
- b. entered the CAISO or PTO generator interconnection queue to be studied for repowering pursuant to the GIDAP.

Scenario 2: Undecided and decommissioning Generating Unit. Participating Generators that wish to decommission and retire the Generating Unit and retain the Generating Unit's Deliverability status but have not yet:

- a. committed to or completed the assessment for the repowering process; or
- b. entered into the CAISO or PTO generator interconnection queue after a determination that it is ineligible for the affidavit repowering process.

Scenario 3: Permanent Retirement/Release of Deliverability. Participating Generators that wish to permanently retire the Generating Unit and will not repower, and have no need to retain the Generating Unit's Deliverability status.

Scenario 4: Mothball (make unavailable) / Generating Unit to remain intact. Participating Generators that wish to mothball the Generating Unit for the time being until its next steps have been determined

⁷⁴ *Pro forma* RMR Contract, Schedule B, Equation B-9 and Schedule L-1.

⁷⁴ *Id.* at Section 2.5.

⁷⁴ *Id.* at Article 1 and 9.

⁷⁴ *Pro forma* RMR Contract, Article 1 and Section 5.1(c).

⁷⁴ *Id.* at Section 6.1(b).

⁷⁴ Attachment B-2 to the CAISO tariff. Business Practice Manual for Generator Management, section 12.

which could be: restarting, decommissioning, permanently retiring, repowering or entering the generator interconnection queue. The Generating Unit and interconnection facilities must remain intact until a decision on next steps is made and reported to the CAISO for further direction.

A Participating Generator's written notice of retirement/mothball includes no affidavit requirement, except for the repowering process under Scenario 1 in which a resource owner certifies there are changes to the unit and they are accurately reflected. For Participating Generators under Scenarios 1, 2, and 4, the CAISO will respond to the Participating Generator within approximately 60 days from receiving the retirement/mothball notice.⁷⁵ For Scenario 3, the CAISO will respond within 90 days.⁷⁶ The Business Practice Manual for Generator Management provides instructions and requirements for generating units under each scenario.⁷⁷

The CAISO studies every generating unit that submits a retirement/mothball notice to determine whether the CAISO can maintain reliability without the retiring or mothballing unit. The CAISO will assess other generation and non-generation alternatives that can be implemented in the timeframe available before the proposed off-line date for the resource, before offering an RMR contract to the retiring Participating Generator. The CAISO must conduct these reliability studies because it must ensure compliance with Reliability Criteria and cannot allow a unit to retire or mothball if doing so will cause reliability problems. If the CAISO determines that it cannot ensure compliance with Reliability Criteria when the unit retires or mothballs, then the CAISO will offer the unit an RMR contract, which the unit owner must accept. Mandatory studying of all retiring/mothballing units and mandatory RMR contracts is necessary to ensure the CAISO can maintain reliable grid operations.

D. RMR and CPM Enhancements Stakeholder Process

The CAISO initiated the RMR and CPM Enhancements stakeholder initiative largely in response to concerns and issues brought to light in 2017 in connection with the CAISO's implementation of three new RMR agreements and two annual CPM designations for 2018. The guidance the Commission provided in its Risk of Retirement CPM Order also informed the effort.

Ultimately, three factors primarily drove the need for tariff revisions: (1) the existing RMR construct and *pro forma* RMR Contract date to CAISO start-up and need to be "modernized" to align with current operating conditions and

⁷⁵ *Id.*

⁷⁶ *Id.*

⁷⁷ *Id.* at sections 12.1 and 12.2.

needs; (2) stakeholders sought greater distinction regarding the CAISO's use of RMR versus CPM; and (3) a need for a consistent, effective, and orderly approach to addressing resource retirements and the potential need for backstop procurement. The RMR tariff provisions are approximately 20 years old, and the CAISO and stakeholders believed the RMR construct required a holistic review to ensure it meets the needs of a rapidly transforming grid, aligns with current conditions and CAISO needs, and remains a viable backstop procurement mechanism. Numerous stakeholders also objected to provisions of the *pro forma* RMR contract that hardwired a rate of return that did not reflect current market conditions and claimed that the RMR Contract did not provide ratepayers with the full benefit of a unit for which they were paying the full cost of service. Also, when the CAISO was making RMR and CPM designations in 2017, some stakeholders argued to the CAISO Board of Governors that greater clarity was needed regarding when RMR or CPM procurement occurs. Finally, the risk of retirement of generation needed for reliability is a significant concern for the CAISO, and measures are needed to allow resource owners to make important business and financial decisions regarding potential unit retirement or continued operation in an orderly, timely, and prudent manner.

On January 23, 2018, the CAISO posted an *Issue Paper and Straw Proposal for Phase 1 Items*.⁷⁸ After reviewing stakeholder comments on the issue paper, the CAISO issued a *Draft Final Proposal for Phase 1 Items and Items Under Consideration for Phase 2* on March 13, 2018. In Phase 1 of the initiative, the CAISO proposed to (1) make RMR Condition 1 and Condition 2 units subject to a must offer obligation for energy and ancillary services, and (2) notify stakeholders when a resource informs the CAISO it is planning to retire. The CAISO identified the following items as within the scope of Phase 2 of the initiative:

- **RMR and CPM**
 - Clarify when RMR procurement is used versus CPM procurement
 - Explore whether RMR and risk of retirement CPM can be merged into one backstop procurement mechanism
 - Review allowed rate of return on capital for RMR compensation and CPM bids above the soft offer cap
 - Explore expanding CAISO's tariff authority regarding Local Capacity Requirement criteria and integration of renewable resources

- **RMR**

⁷⁸ Materials issued by the CAISO and submitted by stakeholders in the stakeholder process are available at the following link:

http://www.aiso.com/informed/Pages/StakeholderProcesses/ReliabilityMust-Run_CapacityProcurementMechanismEnhancements.aspx

- Consider whether both Condition 1 and 2 units are still needed
 - Streamline and automate RMR settlement process
 - Lower banking costs associated with RMR invoicing
 - Review cost allocation alternatives for RMR procurement
 - Ensure RMR designation authority includes flexibility needs to maintain reliability
 - Consider allocating flexible capacity RA credits from RMR designations
- **CPM**
 - Align risk of retirement CPM tariff to current RMR rules that allow for recovery of needed capital additions
 - Review year-ahead CPM cost allocation to address load migration
 - In accordance with the 2015 CPM offer of settlement, evaluate if LSEs used CPM for primary capacity procurement for the 2018 RA compliance year.⁷⁹

⁷⁹ The CAISO's May 26, 2015 CPM tariff amendment filing in Docket No. ER15-1783 included an offer of settlement between the CAISO and stakeholders regarding all aspects of the filing. The offer of settlement included two separate triggers to assess whether load serving entities might be using the CPM for primary capacity procurement: (1) within a rolling 24-month period, the same load serving entity twice relies on the CPM to meet any resource adequacy deficiency; or (2) any load serving entity meets more than 50 percent of its annual or monthly obligation for a year or month, respectively, with CPM capacity procured by the CAISO on the load serving entity's behalf. The offer of settlement provided that the first time the trigger is met, the CAISO would open a stakeholder initiative to explore whether load serving entities have relied on the CPM to an unacceptable extent, as the primary means of capacity procurement. It also provided that the stakeholder process may consider prospectively applicable remedial measures designed to avoid load serving entity reliance on the CPM. The Commission approved the tariff amendment filing as just and reasonable but found that the offer of settlement was not a settlement filed under Rule 602. Rather, the Commission treated the offer of settlement component of the CAISO's filing "as record evidence in support of CAISO's section 205 filing." *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,001 (2018) at P49, n. 53. In December 2017, the CAISO made an annual RA deficiency and Collective Deficiency CPM designation in the San Diego area that met the second trigger. Even though the Commission had not accepted the offer of settlement, the CAISO honored its commitments thereunder and, in the stakeholder process leading to the instant tariff amendment filing, the CAISO evaluated whether LSEs were using the CPM as their primary capacity procurement. The CAISO discussed this issue at a May 30 Working Group meeting and at stakeholder meetings, sought stakeholder comment on the issue, and addressed the matter in its straw proposals. The CAISO concluded that the December 17 designations were driven by circumstances unrelated to the design of CPM. *Review of Reliability Must Run and Capacity Procurement Mechanism, Stakeholder Working Group Meeting, May 30, 2018, slides 12-23; Revised Straw Proposal at 37-38; Second Revised Straw Proposal at 37-38; Draft Final Proposal at 44.* In particular, LSEs were prohibited from contracting with generation resources for deliveries beyond their once-through cooling (OTC) compliance date, even if such resources received compliance extensions to continue operating. That was the case with certain OTC resources in the San Diego area. No

Following review of stakeholder comments, on June 26, 2018, the CAISO issued a Straw Proposal. The CAISO merged Phase 1 and Phase 2 into a single effort. The Straw Proposal added a few items to the scope of the initiative: (1) develop an interim *pro forma* RMR contract that would apply to new RMR designations before this initiative is completed and that would allow any changes resulting from this initiative to be reflected in future RMR contracts;⁸⁰ (2) update the allowed rate of return on capital for RMR compensation; and (3) make RMR resources subject to RAIM.

The CAISO issued a *Revised Straw Proposal* on September 10, 2018 and a *Second Revised Straw Proposal* on December 12, 2018. Stakeholders had an opportunity to submit written comments on each proposal, and the CAISO held stakeholder meetings to discuss both proposals and obtain stakeholder input. On January 23, 2019, the CAISO issued a *Draft Final Proposal*, and the CAISO posted draft tariff revisions in Sections 41 and 43A reflective of the *Draft Final Proposal*. The CAISO held a stakeholder meeting on January 30, 2019 to discuss the draft final proposal and posted draft tariff language.⁸¹ Then stakeholders submitted written comments.

On January 25, 2018, the CAISO's proposals in this initiative were discussed at the CAISO Market Surveillance Committee (MSC) meeting. The CAISO Governing Board (Board) voted to authorize this tariff amendment filing at its public meeting held on March 27, 2019.⁸²

stakeholder submitted written comments opposing the CAISO's conclusions. The CAISO expressed its commitment to continue monitoring future CPM procurement.

⁸⁰ On August 31, 2018, the CAISO filed a tariff amendment to implement a revised *pro forma* RMR Contract that provided the CAISO with the option to terminate an RMR Contract when the Commission has accepted a replacement *pro forma* RMR Contract at the conclusion of the instant stakeholder process. The revised *pro forma* RMR applied only to RMR Contracts that became effective on or after September 1, 2018, *i.e.*, interim RMR Contracts. The Commission accepted the tariff revisions on October 20, 2018, *Cal. Indep. Sys. Operator Corp.*, 165 FERC ¶ 61,059 (2018).

⁸¹ During the course of the initiative, the CAISO also held three Working Group meetings to focus on targeted issues.

⁸² Materials regarding the CAISO Board's authorization of this tariff amendment filing are included in Attachment C. These materials include (1) a March 20, 2019 memorandum to the Board from Keith Casey, Vice President, Market & Infrastructure Development entitled *Decision on reliability must-run and capacity procurement mechanism enhancements*, (2) a March 27, 2019 presentation to the Board by Keith Johnson, Infrastructure and Regulatory Policy Manager, entitled *Decision on reliability must-run and capacity procurement mechanism enhancements proposal*, and (3) Department of Market Monitoring Comments dated March 20, 2019. In the near future, the CAISO will make a tariff amendment filing to implement some minor clarifications to the CPM tariff and to revise compensation for CPM resources with cost offers

Besides the draft tariff language the CAISO posted on January 24, 2019, the CAISO posted a draft revised *pro forma* RMR Contract (and additional draft tariff language) on February 15, 2019. The CAISO held a stakeholder call to discuss the draft tariff language on March 13, 2019. Then the CAISO posted revised draft tariff language and a revised draft *pro forma* RMR Contract on March 20, 2019 and April 3, 2019 and held calls with stakeholders to discuss the revisions on April 2, 2019 and April 15, 2019.

E. Market Surveillance Committee Opinion

On March 18, 2019, the CAISO's MSC issued its Opinion on Reliability Must Run and Capacity Procurement Mechanism Enhancements (MSC Opinion).⁸³ The MSC "agrees with the general framework for RMR as targeting risk-of-retirement by resources needed to provide essential reliability services that are not sufficiently compensated for in ISO markets to be accompanied by cost-of-service payments for those units."⁸⁴ The MSC supports a regulatory approach that "does not pro-forma link these cost-of-service payments to a depreciation schedule chosen previously by the owner, but instead determines an appropriate depreciation schedule on its own regulatory merits."⁸⁵

The CAISO notes that although the RMR Unit owner proposes a depreciation schedule in its RMR Contract filing with the Commission, the Commission ultimately determines the just and reasonable depreciation schedule to be utilized under the contract. All stakeholders can intervene in the proceedings at the Commission and litigate (or settle) the appropriate depreciation schedule. As discussed in greater detail in Section III.B.10.c., *infra*, the *pro forma* RMR Contract requires the RMR unit owner to follow the Commission's Uniform System of Accounts to determine Gross Plant Investment, Depreciation Reserve, and Depreciation Expense under the contract.

The MSC agrees that performance requirements for RMR and CPM resources are highly desirable, especially for RMR where there is no other economic incentive to be efficient and available when needed.⁸⁶ The MSC recognizes that the units likely to receive RMR designations will be subject to

above the CPM soft offer cap. Those tariff changes stand-alone from the RMR and risk of retirement CPM changes the CAISO proposes in this filing.

⁸³ The MSC Opinion is included in Attachment D.

⁸⁴ MSC Opinion at 3.

⁸⁵ *Id.*

⁸⁶ *Id.*

RAAIM 17 hours per day, seven days per week, so “generators that comply with that requirement are very likely providing the reliability services that are needed under almost all foreseeable scenarios.”⁸⁷ The MSC states that for “extremely idiosyncratic scenarios in which a unit is needed at other times, the ISO could maintain the ability to negotiate targeted performance metrics for units that are meeting niche reliability needs.”⁸⁸ As discussed in Section III.B.3, *infra*, in response to the MSC’s recommendation, the CAISO is adding a provision in Section 8.5 of the revised *pro forma* RMR Contract that would allow it to offer an alternative non-availability mechanism to RAIM if it determines that RAIM is not adequate given the reliability needs and the resource characteristics of the unit.

The MSC agrees with imposing a must offer obligation on RMR units.⁸⁹ The MSC states that it “is crucial to ensure that default energy bids (DEBs) reflect all critical costs.”⁹⁰ The MSC states that a concern with applying the RAIM is that RMR or CPM status might be granted to generators with high outage rates near the end of their useful life.⁹¹ The MSC notes that it might be uneconomic to upgrade these units to avoid outage rates and corresponding exposure to RAIM penalties, so some units nearing the end of their useful life potentially might face unrecoverable RAIM penalties. The MSC acknowledges that the “CAISO proposal recognizes these issues and addresses them through the inclusion of opportunity costs into the ... (DEBs) of RMR... units.”⁹² The MSC suggests that if the opportunity cost framework proves insufficient to address these concerns, the CAISO should consider a unit-specific benchmark for such units, applying the same RAIM framework but with a different reliability target threshold.⁹³

The CAISO believes its opportunity cost proposal adequately addresses the MSC’s concerns. The CAISO recently implemented its opportunity cost tariff provisions as part of the Commitment Cost Enhancement 3 initiative. Under the CAISO’s opportunity cost framework, resources with eligible use-limits can establish opportunity cost adders for start-up cost bids (including transition costs for multi-stage resources), minimum load cost bids, and energy bids, which can be included in default energy bids. Once established, the CAISO updates the

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.* at 4.

⁹¹ *Id.*

⁹² *Id.* The CAISO’s opportunity cost process provides for opportunity costs for start-up costs and minimum load costs (for run hour limitations) for resources with eligible use limits as well as opportunity costs for energy bids based on MWh limitations, which would be included in default energy bids.

⁹³ *Id.*

adders each month to ensure the accuracy of the bid adders based on the most recent market prices and unit usage information. Theoretically, resources should be able to submit bids in all hours. Because it has just implemented the opportunity cost initiative, the CAISO recognizes that scheduling coordinators may not be able to fully manage use limited resources with opportunity costs. Accordingly, scheduling coordinators of use limited resources can continue to utilize existing outage cards designed to manage use limits.

The CAISO is also proposing additional eligible use limits on start-ups, run hours, and MWhs applicable only to RMR resources under the revised *pro forma* RMR Contract. The purpose of the RMR-only use limits is to manage the timing and prudence of scheduling major maintenance and upgrades. For example, the CAISO may designate a resource for a reliability reason that the CAISO expects to be mitigated with infrastructure enhancements in the following year. If possible, the CAISO would prefer to avoid major maintenance costs in the current RMR contract year if the generating unit has enough start-ups, run hours, and MWhs remaining before needing major maintenance. If the CAISO is satisfied there are enough remaining start-ups, run hours, and MWhs to meet the current RMR contract year's reliability needs, the CAISO will use these limits in its opportunity cost calculation if such limits are more binding than the limits the resource has based on tariff-eligible use limits. The RMR owner will provide this information on limits annually.⁹⁴ Using the above example, if, as expected, the resource is no longer needed for RMR service in the next RMR contract year, then the cost of major maintenance can be avoided. In a variation on this example, if the CAISO expects the reliability need to require at least two years of RMR service and major maintenance will be required either in the current or following RMR contract year, then the CAISO and RMR owner can make an informed decision regarding the scheduling and scope of major maintenance. This ensures RMR designations are cost-effective.

As noted above, scheduling coordinators on behalf of use-limited RMR resources can submit the appropriate use limit reached outage card (just like RA resources), which will enable them to manage their usage if use limits may be reached earlier than expected. Use of this outage card to manage monthly limits allows them to avoid RAIM charges.

Further, the CAISO is retaining existing authority in the RMR contract that permits the CAISO to direct an RMR resource not to participate in the market if it would impair the CAISO's ability to dispatch the generating unit to meet reliability needs at other times during the year.⁹⁵ Thus, the CAISO's proposal

⁹⁴ These are the same parameters Use Limited Resources submit in the Opportunity Cost process.

⁹⁵ The current RMR authority allows the CAISO to direct the RMR owner not to bid. The CAISO is "modernizing" this authority to direct the RMR owner to submit an outage card. Use of

contains ample mechanisms to address the MSC's concerns. In any event, the CAISO commits to monitoring the situation and acting immediately if for some unexpected reason these measures prove inadequate.

The MSC acknowledges that toggling back and forth between RMR and market-based operations can be a concern. However, the MSC correctly notes that the CAISO alone holds the option whether to renew an RMR contract if the RMR resource is still needed for reliability; so, a generating unit owner does not possess the same market power upon returning to the market if it chooses, *i.e.*, the CAISO will have concluded that the generating unit is no longer needed for reliability.⁹⁶ In Section III.B.10.b, the CAISO discusses further why existing measures in its Commission-approved *pro forma* RMR Contract adequately protect against toggling.

The MSC also supports the general framework for CPM.⁹⁷ The MSC recognizes that future CPUC actions and CAISO initiatives may impact RA and, if so, changes to some elements of the CPM may need to be revisited.⁹⁸ The MSC also "note[s] that the current level of the CPM soft-offer cap needs to be re-evaluated," but recognizes that the CAISO has scheduled a stakeholder initiative starting in the near future to address this issue.⁹⁹ As discussed in Section II.D, issues regarding the level of the CPM soft-offer cap and potential mitigation of bids below the cap were beyond the scope of the underlying stakeholder initiative and this tariff amendment filing. The MSC correctly recognizes that the CAISO will be initiating a new stakeholder initiative this year to examine the level of the CPM soft-offer cap and other similar issues, including local market power mitigation.

Finally, the MSC recommends that transmission planning, which could affect the need for an RMR designation, recognize that the avoided cost of generation will include just the generating unit's going forward costs and not the generating unit's full cost of service.¹⁰⁰ The MSC states that such an approach would recognize that a transmission investment that removes the need for RMR status would be less expensive than the full cost of the RMR resource, but more costly than its going forward costs. The MSC states that under such a scenario the CAISO could offer the RMR resource compensation comparable to the projected transmission project cost, which might be below the resource's full

the appropriate outage card will prevent RAIM penalties. See Revised *pro forma* RMR Contract, Section 6.1(f).

⁹⁶ *Id.* at 3.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ *Id.* at 4.

cost of service. This recommendation, which involves determining in the transmission planning process what constitutes the more cost effective or efficient solution to meet an identified reliability need, is beyond the scope of this initiative. This recommendation also ignores that under Commission precedent, mandatory backstop procurement -- like the CAISO's RMR framework -- allows for compensation at the resource's full cost of service. If a generating unit desires to be compensated based on its full cost of service, assessing transmission solutions based on the going forward costs of the generating unit would seem impractical.

III. PROPOSED TARIFF CHANGES

The CAISO proposes to revise certain RMR and CPM tariff provisions and the *pro forma* RMR Contract. The revised *pro forma* RMR Contract provisions will not apply to the generating units under existing RMR contracts unless their owners voluntarily agree to execute the revised *pro forma* RMR Contract. These resources are providing RMR service under existing, Commission-approved RMR Contracts that pre-date the existing *pro forma* RMR Contract in Appendix G of the CAISO tariff. The CAISO does not seek to disrupt existing contractual obligations. As noted above, there are only 260.2 MW of capacity operating under the existing RMR contracts, and the CAISO has approved replacement transmission solutions for these units. Thus, these existing RMR contracts should be terminating in the next few years.

Similarly, provisions described in the next section regarding a generating unit's return from mothball status will not apply to mothballed or submitted mothball notifications prior to the effective date of the proposed tariff provisions. This ensures that owners' expectations when they mothballed their generating units will not be unduly disrupted and avoids any potential retroactive ratemaking issues.

Finally, the CAISO also notes that several stakeholders seek changes to RMR and CPM that are beyond the scope of this initiative. The following discussion does not attempt to re-justify existing, Commission-approved tariff and contract provisions that the CAISO does not propose to change and that are not affected by the changes the CAISO proposes to make.

A. Tariff Revisions Affecting Both RMR and Risk of Retirement CPM

1. General Changes to the RMR and CPM Procurement Framework

An important focus of this initiative was the scope of RMR and CPM procurement. Several stakeholders sought additional clarity regarding when the CAISO will undertake RMR procurement and when the CAISO will undertake CPM

procurement. The CAISO committed to its Governing Board to provide further clarity between the two as part of this initiative.

The CAISO is retaining both the CPM and RMR procurement mechanisms. The CAISO's proposal sets forth clear rules for when it will use either RMR or CPM to procure capacity. The CAISO will use RMR authority to procure resources that would otherwise retire or mothball but are needed to maintain reliability. All future retirement/mothball-related procurement authority, including what is currently called risk of retirement CPM, will be addressed through the RMR tariff provisions. Thus, the CAISO proposes to eliminate all risk of retirement CPM tariff provisions¹⁰¹ and will merge certain relevant provisions of its risk of retirement CPM authority into the RMR tariff. The CAISO discusses its revised RMR procurement process in greater detail in Section III.A.2. The CAISO will continue using CPM procurement to backstop the RA program and for Significant Events and Exceptional Dispatches. The CAISO will not use RMR to backstop the RA program. If a resource declines a CPM designation, the CAISO will offer a CPM designation to the next best resource that meets the reliability need and not move directly to offering the resource an RMR designation. Resources seeking RMR designations must follow the retirement/mothball notification and attestation process discussed in Section III.A.2 to be eligible for an RMR designation. Also, the CAISO must conduct a technical study and determine that a resource is needed to meet Reliability Criteria before it can issue an RMR designation.

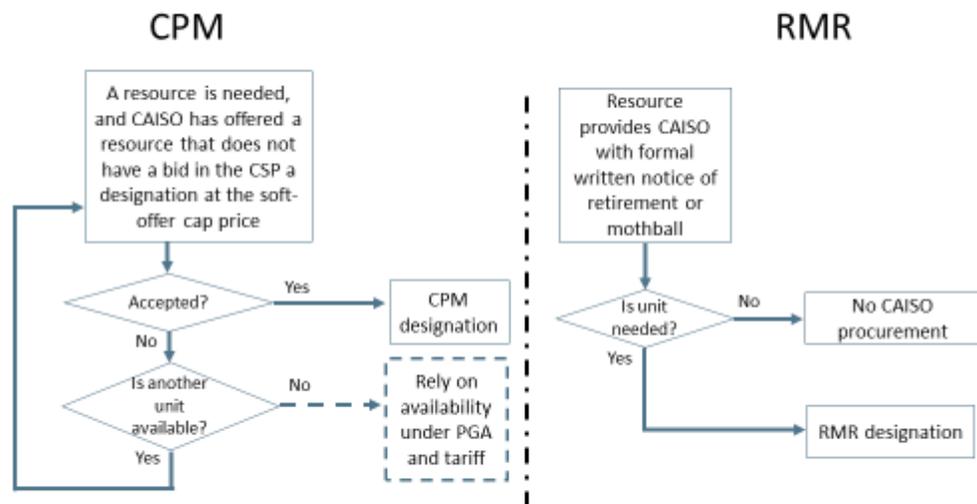
The CAISO is retaining several key features of the RMR and CPM procurement framework, including, but not limited to:

- CPM procurement remains voluntary if a resource has not submitted a bid into the competitive solicitation process (CSP);
- If a resource voluntarily submits a bid into the CSP and the CAISO accepts that bid, then the resource cannot decline the CPM designation;
- Resource acceptance of an RMR designation is mandatory, and RMR pricing will continue to be based on a resource's full annual cost of service; and
- To receive an RMR designation a resource must be needed for reliability based on a CAISO reliability study.

¹⁰¹ The CAISO proposes to eliminate tariff sections 43.A.2.6, 43A.3.7, 43A.8.7 and 4A.9 (d), and the reference to risk of retirement CPM in tariff sections 43A.2 and 43A.4.

Because these provisions are not modified by this filing or affected by other changes the CAISO is making, they are not subject to re-examination in this proceeding under Section 205 of the Federal Power Act (FPA).

The flow diagram below shows the proposed future framework for CPM and RMR procurement:



A couple of stakeholders expressed concern that resource owners might be able to “pick and choose” between RMR and CPM, which have different compensation methodologies. These stakeholders ignore that under the current backstop procurement framework, opportunities exist for resource owners to pursue RMR or CPM. For example, resource owners have advised the CAISO not to consider them for CPM and only consider them for RMR. The CAISO’s revised framework does not create new opportunities. Rather, it provides clearer differentiation between RMR and CPM compared to the existing framework. It also places greater restrictions on resources desiring RMR contracts than exist today. It is difficult to understand how the CAISO’s proposed framework can be less just and reasonable than the existing framework under these circumstances.

First, the CAISO is eliminating any opportunity for resource owners to choose between RMR and risk of retirement CPM as they have attempted to do in the past. All retirement and mothball-related backstop procurement will now occur only through RMR. Thus, the CAISO is eliminating the risk of retirement CPM pricing that would allow retiring resources to be paid their full cost of service and retain all market revenues; whereas, retiring generating units

seeking RMR designations that are needed for reliability will not be permitted to retain net market revenues. There no longer will be any pricing differentiation between RMR and CPM for resources that are retiring or mothballing.

Second, the CAISO will not use RMR to backstop RA procurement deficiencies.¹⁰² If there is an RA showing deficiency, the CAISO will only backstop it with CPM. A resource that might be able to fill the RA deficiency cannot request, and will not receive, an RMR designation to fill the RA deficiency. Rather, the CAISO will fill the RA deficiency with another resource from the CPM competitive solicitation process. If no other resource is available, the CAISO still will not offer an RMR contract to the generating unit because it remains available for CAISO dispatch. Under the CAISO's proposal, the CAISO will use RMR for resources that have submitted a retirement/mothball notice and attestation and that the CAISO has found are needed to meet Reliability Criteria.¹⁰³ In other words, a generating unit desiring an RMR designation must submit a formal notice of retirement/mothball and attestation (discussed in the next section) to even be eligible to receive an RMR designation. This requirement does not exist today. Also, the CAISO must conduct a reliability study to establish that the resource is needed to meet applicable Reliability Criteria before it can be eligible to receive an RMR designation. An RA showing deficiency does not, by itself, mean that a resource is needed to meet Reliability Criteria; it only means that LSEs have not procured sufficient capacity to meet their RA obligations. The CAISO's reliability study must show that a reliability need exists and that only the resource to be designated can meet it, *i.e.*, the resources procured in the RA process or that otherwise have not retired, do not meet all of the CAISO's reliability needs and the CAISO needs the retiring/mothballing resource to meet applicable Reliability Criteria. Thus, resources will not arbitrarily be able to choose between accepting an annual CPM designation or receiving an RMR Contract.¹⁰⁴

Third, the CAISO will not offer a resource that submits a retirement/mothball notice and is needed for reliability a CPM designation; it will only offer the resource an RMR designation. All CPM designations occur

¹⁰² Proposed revised CAISO Tariff Section 41.3 (CAISO does not use its RMR authority to address Resource Adequacy deficiencies).

¹⁰³ The CAISO tariff provides that RMR designation can occur at any time based on technical studies. The CAISO reserves the right to exercise this authority under circumstances that require the CAISO to take action to maintain the reliability of the grid.

¹⁰⁴ See, e.g., *Cal. Indep. Sys. Operator Corp.*, 134 FERC ¶ 61,211 at P 127 (2011) (2011 CPM Order) (“[W]e note that the Commission has approved CAISO’s backstop procurement authority under the [Interim Capacity Procurement Mechanism] and its predecessor, the [Transitional Capacity Procurement Mechanism], and that since its inception, CAISO has also had authority to procure reliability must-run generation to address local reliability needs. . . . We find that the risk of retirement feature of CPM is an appropriate extension of CAISO’s existing and past backstop procurement authority.”).

through the competitive solicitation process and the CPM tariff provisions in CAISO tariff section 43A.

Fourth, regarding the interrelationship between RMR and the remaining categories of CPM, the CAISO notes that Exceptional Dispatch and Significant Event CPMs generally result in one or two month capacity designations to meet short-term reliability needs. On the other hand, RMR designations are contract year or remainder of contract year designations intended to meet longer term reliability needs. Also, the tariff requires the CAISO to issue Significant Event and Exceptional Dispatch CPM designations through the competitive solicitation process in Section 43A of the tariff, not through the retirement/mothball notification process applicable to RMR designations.

Fifth, as discussed in greater detail herein, accepting an RMR designation or an RMR Contract extension is mandatory on the part of a resource. Thus, an RMR resource cannot voluntarily toggle from RMR to CPM.

Sixth, stakeholders' concerns appear to be that CPM and RMR have two different compensation methodologies, and that resource owners might be able to choose the backstop procurement type with the compensation best suited for them. That CPM and RMR have different pricing does not arise from the CAISO's proposal; it exists today and has for many years. The CAISO is not proposing to change RMR and CPM pricing in this filing (except to the extent the CAISO is incorporating risk of retirement CPM into RMR).

The CAISO points out that although other ISOs and RTOs do not have multiple backstop procurement mechanisms like RMR and CPM, they permit a generating unit owner that is needed for reliability to select the compensation scheme it desires from two alternatives, either cost of service recovery or pricing based on some pre-established mechanism, typically based on going forward costs. Thus, the CAISO's two compensation schemes are not "out-of-line" with the practices of other ISOs and RTOs.¹⁰⁵ Indeed, for retiring and mothballing generating units, the CAISO only provides one option -- RMR pricing.

For example, PJM Interconnection LLC (PJM) gives owners of deactivating generating units the option to select between two distinct pricing alternatives -- either a traditional cost of service rate to recover its entire cost of service or a Deactivation Avoidable Cost Credit based on an established formula (essentially avoidable going forward costs plus an adder) set forth in the

¹⁰⁵ The CAISO notes that, as a general rule, the Commission permits significant regional variations among the terms and conditions of ISO and RTO tariffs. However, this filing discusses comparable tariff provisions from other ISOs and RTOs where appropriate to illustrate the justness and reasonableness of the tariff revisions proposed by the CAISO.

tariff.¹⁰⁶ The New York Independent System Operator Corporation (NYISO) permits deactivating owners to choose compensation based either on an owner-developed cost-based rate or an Availability and Performance Rate that is based on RMR Avoidable Costs, Variable Costs, an Availability Incentive, and a Performance Incentive).¹⁰⁷ Further, in ISO New England, Inc. (ISO-NE), delisting resources that ISO-NE finds are needed for reliability elect whether to be compensated based on (1) the terms of a Commission-approved cost of service agreement or (2) the Commission-approved Permanent De-List bid or Retirement De-List Bid for the relevant Capacity Commitment Period.¹⁰⁸ These examples illustrate why there is no basis to find the CAISO's differentiation between RMR and CPM procurement and separate RMR and CPM pricing schemes are unjust and unreasonable.

Finally, the stakeholders objecting to separate RMR and CPM procurement ignore that the CAISO's RMR procurement authority and CPM procurement authority (and its predecessors) have co-existed for almost 15 years with different pricing methodologies. Thus, their arguments constitute a collateral attack on prior Commission orders approving the two separate backstop procurement constructs with different pricing schemes.

2. A Revamped Process Will Apply to Resource Retirement and Mothball Requests and RMR Designations

a. The Revised Process

The CAISO proposes to integrate RMR and risk of retirement CPM into a single, cohesive CAISO backstop procurement mechanism to address resource retirement and mothball requests. The CAISO will assess all of the following reliability need horizons - the current year (RMR), the upcoming year (RMR), and the following year (risk of retirement CPM) - under a single backstop procurement mechanism, *i.e.*, RMR. The CAISO proposes to delete from the CPM tariff in Section 43A all risk of retirement CPM tariff provisions. Under the revised framework, "following year" reliability assessments will be at the CAISO's discretion. The CAISO will not be required to undertake the reliability need assessment reflected in the existing risk of retirement CPM tariff provisions.¹⁰⁹ The CAISO describes the proposed process below. The revised

¹⁰⁶ PJM Open Access Transmission Tariff; Sections 113.2, 114, 116, 117, and 119.

¹⁰⁷ NYISO, Open Access Transmission Tariff, Attachment FF, Appendix C Form of RMR Agreement, Articles 1, 1.5, 1.1, 26, and 4.1.

¹⁰⁸ ISO-NE, Market Rule 1, Section III.13.2.5.2.5.1 (b). The resource owner must make the election within six months after ISO-NE files the results of the relevant Forward Capacity Auction with the Commission. *Id.*

¹⁰⁹ Studying the need for the resource in the upcoming Resource Adequacy Compliance Year is consistent with the CAISO's current RMR practice. Under the current risk of retirement CPM tariff, the CAISO studies the need for the resource before the end of the calendar year

process will apply to all generating units filing retirement and mothball notifications beginning on the effective date of this tariff amendment.

The CAISO proposes to require every resource seeking to withdraw from the CAISO markets to submit a formal notice of retirement or mothball and attestation with the CAISO.¹¹⁰ Thus, any resource seeking an RMR designation must first submit such formal retirement or mothball notice to the CAISO.

The form of Notice of Generating Unit Retirement or Mothball the CAISO proposes to include in the Generator Management Business Practice Manual is attached in Attachment J. The retirement/mothball notice will include an attestation signed by an officer of the company with the legal authority to bind such entity. The attestation requires the affiant to state the reason the generating is seeking to retire or mothball. The attestation states it is being signed under penalty of perjury, and it must be notarized.

The resource owner must attest that it is planning to retire or mothball the resource at a certain date, but no later than 90 days before the date the resource intends to stop service.¹¹¹ Under the Participating Generator Agreement (PGA), resource owners must provide at least 90 days' notice to terminate a PGA or remove a resource from a PGA. A resource owner will also be required to complete the notice/attestation to rescind a pending retirement/mothball notice or return from mothball status.

Among other things, the Notice of Generating Unit Retirement will require the generating unit owner to attest that:

[] In accordance with the BPM for Generator Management, it is retiring the Generating Unit in accordance with the BPM for Generator Management effective _____[month], _____[day], _____[year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one or both] _____ the current year and/or _____ the upcoming year, it is uneconomic for the Generating Unit to remain in service for such year(s), and the decision to retire is definite unless the CAISO procures the

after the upcoming Resource Adequacy Compliant Year. The CAISO is modifying this to permit it to study the need for the resource in such year, but not to require the CAISO to undertake such a study. In the overwhelming majority of instances, if a reliability study shows a resource is not needed in the upcoming Resource Adequacy Compliance Year, it is highly unlikely the resource will be needed in the following year. The proposed tariff language gives the CAISO flexibility to study (or not study) the "following year" given the particular circumstances of each individual resource. This will relieve the CAISO of having to undertake studies that are unnecessary and unlikely to show any reliability need.

¹¹⁰ Proposed tariff section 41.2.1.

¹¹¹ *Id.*

Generating Unit, the Generating Unit is sold to an unaffiliated third-party, a third-party contracts with the Generating Unit for Resource Adequacy purposes, or the Generating Unit obtains some other contract.

In accordance with the BPM for Generator Management, it is retiring the Generating Unit effective ____ [month], _____ [day], ____ [year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one or both] ____ the current year and/or ____ the upcoming year and it is retiring the Generating Unit for reasons other than it is uneconomic for the unit to remain in service during such year(s).

Owner is retiring the Generating Unit for the following reason(s) (state with specificity the reason for retiring the unit):

The decision to retire the Generating Unit is definite. Note: the CAISO may designate the resource for RMR service if needed for reliability

State with specificity any legal, regulatory, or other reason(s) that might preclude the Owner from accepting an RMR Contract for the Generating Unit: _____

In accordance with the BPM for Generator Management, it is mothballing the Generating unit effective ____ [month], _____ [day], _____ [year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one or both] ____ the current year and/or ____ the upcoming year, it is uneconomic for the Generating Unit to remain in service for such year(s), and the decision to mothball is definite unless the CAISO procures the Generating Unit, the Generating Unit is sold to an unaffiliated third-party, a third-party contracts with the Generating Unit for Resource Adequacy purposes, or the Generating Unit obtains some other contract.

It is rescinding its prior notice to retire or mothball the Generating Unit before the effective date of the retirement or mothball because the CAISO has procured the Generating Unit, the

Generating Unit was sold to an unaffiliated third-party, a third-party contracted with the Generating Unit for Resource Adequacy purposes, or the Generating Unit obtained some other contract

State with specificity the reason for rescinding the prior notice:

[] It is terminating the Generating Unit's mothball status because the CAISO procured the Generating Unit, the Generating Unit was sold to an unaffiliated third-party, a third-party contracted with the Generating Unit for Resource Adequacy purposes, the Generating Unit obtained some other contract, or it is economic for the unit to return to service.

State with specificity the reason for returning from mothball status:

Thus, the Notice of Generating Unit Retirement or Mothball will allow the unit owner to indicate whether it is seeking to retire the generating unit because it is uneconomic to continue operating, retire the generating unit for other reasons, mothball the generating unit because it is uneconomic to continue operating the generating unit, rescind its pending retirement or mothball notice because it has satisfied one of the specified reasons, or return from mothball for specified reasons. The CAISO proposes to include the foregoing language both in proposed tariff section 41.2.1 and in the form of Notice of Generating Unit Retirement or Mothball in the Generator Management Business Practice Manual.

The CAISO's proposal provides two paths for resources to notify the CAISO of their intent to retire/mothball a resource and for the CAISO to study the reliability need for such resources and potentially grant RMR designations. The CAISO proposes specific process steps under each path. This will make the overall process more orderly, mitigate any impacts on the RA program, and provide a longer planning "runway" for interested resource owners, if they so choose, to make significant business decisions regarding retirement/continued operation. The two paths are summarized below.

Path 1 applies to the owner of a resource that is not an RA resource at some point in the current calendar year and is planning to retire or mothball the resource. This is the most common retirement/mothball scenario, and the process largely tracks the general process that the CAISO applies today in processing retirement

and mothball notifications and assessing potential new RMR designations. These rules apply:¹¹²

- A resource owner can submit a retirement/mothball notice and attestation at any time during the year and the CAISO will inform the resource owner of the reliability study results when it completes the study.
- If a resource owner wants to obtain an earlier determination of need to facilitate its retirement/mothball decision, the resource can submit its notice and attestation before the 90-day deadline in the PGA.¹¹³
- The CAISO will study whether the resource is needed for reliability in the current calendar year or by the end of the upcoming calendar year. If the CAISO finds that a retiring resource is needed for reliability in either of these timeframes, it will grant the resource an RMR designation for the remainder of the current calendar year. If the CAISO finds that a mothballing resource is needed for reliability in the current year, it will grant the resource an RMR designation for the remainder of the current calendar year.¹¹⁴ The CAISO will pursue any RMR designations at the next feasible CAISO Governing Board meeting. RMR designations will be conditioned on the resource not receiving a contract for Resource Adequacy Capacity.

An example of Path 1 is: in 2020 (or in 2019 after the annual RA showings have been submitted at the end of October) a retiring resource without an RA contract for 2020 (or with an RA contract that expires sometime in 2020) would submit a retirement notice to the CAISO meeting the 90 day notice requirement in the PGA; the CAISO would study the reliability need for the resource in 2020 and 2021; if the CAISO determines that the resource is needed in one of those years, the CAISO will offer the resource an RMR contract for 2020 (or the remainder of

¹¹² Proposed tariff section 41.2.2(a).

¹¹³ For example, if a resource owner has an RA contract that terminates mid-year, the resource owner can submit its retirement notice and attestation 90 days or more before the RA contract terminates. If the CAISO finds that the unit is needed for reliability for the remainder of the current year or the upcoming calendar year, it will offer the unit an RMR Contract for the remainder of the year.

¹¹⁴ Under Path 1, the CAISO will not issue an RMR designation to a mothballing resource that is only needed for reliability in the upcoming calendar year and not in the current calendar year. A mothballed resource is not a retired resource, and it will still be in existence and potentially available to meet any reliability need in the following calendar year without having an RMR contract in the current year. The CAISO has the authority to call a unit out of mothball and to grant it an RMR designation. Allowing the unit to mothball in the current year is simply granting the mothballing unit's request. Under Path 2, discussed *infra*, a mothballing unit needed for reliability in the upcoming calendar year can obtain an RMR contract for that year.

2020 after the expiration of the RA Contract); under the provisions of the *pro forma* RMR Contract, the term of the contract cannot extend into the next calendar year);¹¹⁵ if the resource is not needed for reliability, the CAISO will expect the resource to retire consistent with the commitment in its attestation. If the generating unit was submitting a notice and attestation to mothball in 2020, and the CAISO found that the generating unit was needed in 2020, the CAISO would designate the resource for RMR service.

Under Path 2, if a resource is not RA in the upcoming calendar year and is planning to retire or mothball, these rules apply:¹¹⁶

- The resource owner may submit a notice and attestation by the deadline established in the applicable business practice manual, and the CAISO will study the reliability need for the resource and post the study results by the deadline established in the business practice manual.¹¹⁷ Initially, the CAISO will establish February 1 as the deadline for submitting retirement/mothball notifications under Path 2, and May 15 as the date the CAISO would publish the results of its reliability study.
- The CAISO will study whether a retiring resource is needed for reliability in the upcoming calendar year and *may* study whether the resource is needed for reliability in the following calendar year. For the reasons discussed above, the CAISO will only study whether a mothballing resource is needed for reliability in the upcoming calendar year.¹¹⁸
- The CAISO will post the results of its reliability study indicating the reasons why a generating unit is need for reliability. Consistent with the existing risk of retirement CPM tariff provisions, stakeholders will have no less than seven days to review and submit comments on the reliability study. If the CAISO finds that a retiring resource is needed for reliability

¹¹⁵ However, the CAISO may extend the term of the contract. See Section 2.1 of existing and revised *pro forma* RMR Contract.

¹¹⁶ Proposed tariff section 41.2.2 (b). The resource may or may not be an RA resource during the current Resource Adequacy Compliance Year.

¹¹⁷ The proposed tariff language provides that the notice/attestation deadline will be in the first quarter of the year, and the deadline for the CAISO to post the study results will be end of the second quarter. Proposed tariff section 41.2.2. (b). The CAISO will initially establish February 1 as the deadline for unit owners to file the retirement/mothball notice and attestation and May 15 as the deadline for the CAISO to post the results of the reliability study. Given the lack of experience with this framework and a desire to avoid tariff waiver filings if the CAISO misses a study date by one day or a deadline falls on a weekend, the CAISO seeks "bounded" flexibility in the tariff to establish and change the specific dates through its BPM change management process, which provides for stakeholder input.

¹¹⁸ As discussed above, a mothballed resource is not retired. It remains available to return to service. If reliability studies show that the CAISO needs a mothballed unit for reliability, it has the authority to bring the unit back from mothball status.

in either the upcoming calendar year or the following calendar year, it will grant the resource an RMR designation for the upcoming calendar year. If the CAISO finds that a resource slated for mothballing is needed for reliability in the upcoming calendar year; it will receive a conditional RMR designation for that year; however, it will not receive an RMR designation for the following calendar year. The CAISO will pursue an RMR designation for a needed resource at the next feasible CAISO Governing Board meeting before the termination of the 90 day notice termination. RMR designations will be conditioned on the resource not being procured as an RA resource before the deadline for the annual Resource Adequacy showing for the upcoming calendar year (which occurs at the end of October). Thus, LSEs will first have the opportunity to procure a needed resource as part of the LSE's RA compliance efforts before the CAISO executes any RMR agreement. Thus, new RMR designations arising from the CAISO's study results in the second quarter will be conditional to allow LSEs to procure such resources prior to the end-of-October deadline for submitting annual RA showings. This process also provides earlier notice to resources filing retirement and mothball notices that they are needed (or not needed) and will be procured as RMR if they do not receive an RA contract, thus providing them a longer "runway" to plan and make important business and financial decisions for the upcoming year.¹¹⁹

- If the owner of an RA resource provides notice after February 1 (or a different date established in the business practice manual), the only commitment the CAISO has is to inform the resource of the study results within 60 days prior to the expiration of its current RA contract (if it has one) or 90 days of the request, whichever is later.¹²⁰ If a resource is needed for reliability, the CAISO would pursue any RMR designations at the next feasible CAISO Governing Board meeting. The RMR designation would be conditioned on the resource not receiving a contract for Resource Adequacy Capacity.

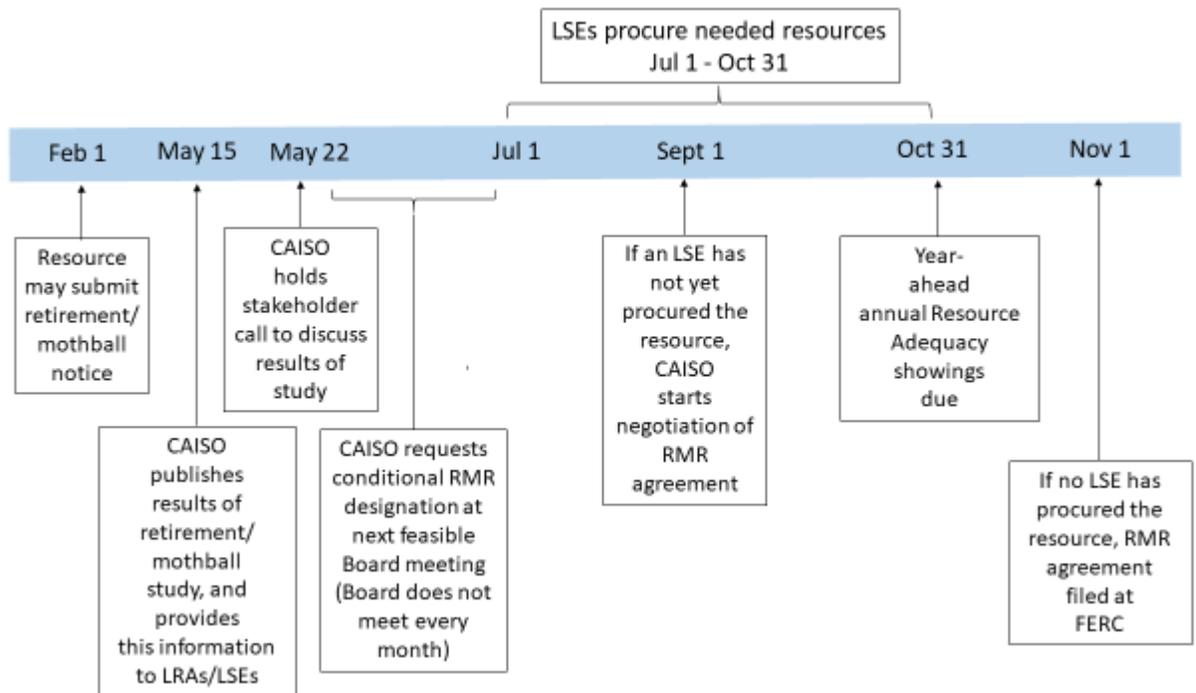
An example of the Path 2 process is: before February 1, 2020, a resource without an RA contract for 2021 would submit a retirement notice to the CAISO; the

¹¹⁹ If the CAISO finds that a resource is needed for reliability in the upcoming calendar year or the following calendar year, the CAISO will offer the resource an RMR designation only for the upcoming calendar year (assuming an LSE does not procure it). As discussed above, the *pro forma* RMR Contract does not provide for a term longer than one calendar year. Thus, a resource needed only in the year following the upcoming calendar year would receive an RMR contract for the upcoming calendar year, which would be subject to the terms of the RMR Contract. The CAISO would offer to extend any RMR contract an additional year if it finds the resource is still needed for reliability in the following calendar year (following a new reliability study).

¹²⁰ Proposed tariff section 41.2.2 (b).

CAISO would post its study results identifying the need for a resource by May 15, 2020; LSEs would have an opportunity to comment on the study results; the CAISO would seek an RMR designation for 2021 at the next feasible Governing Board meeting, and the RMR designation would be conditioned on the resource not obtaining an RA contract for 2021; if the generating unit was submitting a notice and attestation to mothball in 2021, and the CAISO found that the generating unit was needed in 2021, the CAISO would offer it an RMR designation; LSEs would have the opportunity to procure the needed resource before the end of October; the CAISO will begin negotiating an RMR contract with the resource in September 2020 to ensure there is sufficient time to finalize and file the RMR Contract by November 1; if an LSE does not show the resource on its annual RA showings by the annual showing deadline (late October), the CAISO will execute the RMR contract; the term of the RMR contract cannot exceed one calendar year; if the resource is not needed for reliability, the CAISO will expect the resource to retire consistent with the commitment in its attestation; if the resource does not submit a retirement notice until March 1, 2020, the CAISO does not have to provide a response until the latter of 60 days from the resource's current year RA contract (if any) or 90 days from the retirement notice.

The diagram illustrates how the Path 2 process might work:



Under revised tariff section 41.3, when determining whether an RMR designation is necessary to meet an identified reliability need(s), the CAISO will evaluate whether any more cost-effective option(s) is available that would avoid

the need for an RMR contract. This replaces existing tariff language in section 41.4 that the CAISO will select the “cheapest” option. As it does today, in its RMR studies, the CAISO will continue to assess other options (including non-generation options) that would allow the CAISO to avoid an RMR designation. These typically will be solutions that are already available or implementable in the near-term. In its transmission planning process, the CAISO will study alternatives to the long-term use of RMR. For example, in October 2017, the CAISO issued an RMR designation to the Metcalf unit for 2018. The CAISO studied the situation, and measures were implemented that allowed the CAISO to terminate the RMR contract after one year. The deadlines in the Path 2 process will allow the CAISO to study longer-term alternatives to continued RMR designations in the upcoming year’s transmission planning cycle (*i.e.*, the planning cycle that will culminate in a final transmission plan in March of the following year). The study deadline will also closely correlate with the annual Local Capacity Requirements study that the CAISO typically completes by May 1, allowing time to complete other reliability studies to determine a generating unit’s need by May 15.

Under proposed tariff section 41.2.2 (c), if multiple generating units file the requisite notice and attestation with the CAISO and can meet the reliability need identified by the CAISO, but the CAISO does not need all of the generating units to meet the reliability need, the CAISO will ask each owner to submit a proposed annual fixed revenue requirement for its resource plus the total cost for planned capital additions calculated in accordance with the schedules specified in the *pro forma* RMR Contract. Incorporating CPM tariff provisions,¹²¹ the CAISO will determine which resource receives an RMR designation by selecting the generating unit with the lowest combined proposed costs for RMR service, including planned capital additions, provided that if the total costs of two or more resources are within 10 percent of each other, then the CAISO will grant the designation in its discretion based on these criteria: (1) relative effectiveness of the resource in meeting local and/or zonal constraints or other CAISO system needs, including flexible capacity needs; and (2) relative operating characteristics of the resource including dispatch ability, ramp rate, and load following capability. Also consistent with existing CPM tariff provisions,¹²² if the generating unit that would receive an RMR contract based on cost effectiveness criteria has use limitations so the generating unit, in the CAISO’s reasonable discretion, poses the risk of being unavailable to fully meet the reliability need identified by the CAISO, then the CAISO may in its reasonable discretion, and giving due regard to for meeting cost effectiveness considerations, instead grant the designation to another generating unit that fully meets the reliability need. In exercising this discretion, the CAISO cannot unduly discriminate against

¹²¹ See CAISO tariff sections 43A.4.2 and 43A.4.2.3.

¹²² See *id.* at 43A.4.2.2.

generating units with use limitations. Also consistent with existing CPM tariff provisions,¹²³ the designated RMR resource (1) will not be able to propose to the Commission, and will not be compensated by the CAISO, for any costs higher than the resource's proposed annual fixed revenue requirement and (2) will not be able to propose to the Commission, and will not be compensated by the CAISO for any capital addition costs higher than those it submitted to the CAISO.

b. The CAISO's Proposal Will Produce an Orderly, Effective, and Timely Process for Retirements, Mothballs, and RMR Designations

The proposed process will allow the CAISO to address retirement and mothball requests, and any retirement/mothball-related backstop procurement, in an efficient and orderly manner. It eliminates the separate risk of retirement CPM tariff provisions and incorporates all retirement-related backstop procurement into a single mechanism -- RMR. The CAISO's proposal effectively integrates aspects of both the RMR and risk of retirement CPM processes into a single framework.¹²⁴ The revised framework provides for a more consistent and orderly retirement of resources, and the Path 2 option gives interested resource owners sufficient lead time to make resource planning decisions for the upcoming Resource Adequacy Compliance Year.

The CAISO proposes two paths for retiring/mothballing resources. First, for resources that are not currently RA resources, and that seek to retire, the process preserves the existing 90-day notification requirement reflected in the *pro forma* Participating Generator Agreement (PGA) and executed PGAs. The CAISO did not believe it was appropriate to undo this existing timeline that applies to all generating units that have executed PGAs. The CAISO has successfully managed retirements and mothballs, maintained reliability, and assessed alternatives to RMR under this approach. There is no reason to eliminate this path. Unlike the current practice, however, resources will now have to submit the attestation with their retirement/mothball notifications. This is necessary to ensure that a resource is intending to retire/mothball and not simply attempting to "fish" for an RMR contact with no intention of retiring or mothballing.

Second, the proposed process also establishes a new, formal retirement/mothball "window" and designation/study timeline (*i.e.*, Path 2) for resources without RA contracts for the upcoming calendar year and are intending to retire or mothball in that year. In contrast, the CAISO's current

¹²³ *Id.* at 43A.4.1.1.1.

¹²⁴ In particular, it incorporates into RMR the CAISO's existing CPM procurement authority to assess whether a unit is needed for reliability in the year following the upcoming calendar year.

practice allows resource owners that do not have RA contracts for an upcoming calendar year to submit retirement/mothball notifications at any time. As discussed, *supra*, the CAISO has received retirement notifications 13 months in advance of the calendar year in which the generating unit would retire, and others 10 months, seven months, and three months before the upcoming Resource Adequacy Compliance Year. The CAISO has studied the reliability need for these resources and issued conditional RMR designations approximately nine, six, and two months before the upcoming Resource Adequacy Compliance Year. Thus, the CAISO's existing framework has resulted in the CAISO addressing upcoming-year retirement notifications and potential RMR designation requests unpredictably, inefficiently, sporadically, and serially throughout the year. The Path 2 process provides more structure to upcoming-year retirement and mothball requests.

The new Path 2 process will encourage resource owners without RA contracts for the upcoming Resource Adequacy Compliance Year to submit their retirement/mothball notifications by the deadline established by the CAISO. Otherwise, the CAISO is under no obligation to process the resources' retirement/mothball notifications until the latter of 60 days after the termination of the resource's RA contract or 90 days after the retirement/mothball notification. The CAISO's proposal will improve the CAISO's planning and allocation of resources and better promote the orderly retirement of resources.

Importantly, the proposed Path 2 process applicable to resources without RA contracts for the upcoming calendar year also gives resources (and stakeholders) notice in May that they are needed for reliability (or not needed), thus providing them with lead time to make important resource planning, maintenance, capital addition, staffing, or decommissioning decisions for the upcoming calendar year. This occurs while providing more structure and order than the existing retirement/mothball and RMR study process. The proposed Path 2 timeline improves the (1) the existing RMR practice, which imposes no boundaries on the timing of retirement/mothball notifications, RMR requests, and reliability need studies, and conditional RMR designations for the upcoming Resource Adequacy Compliance Year, and (2) the existing risk of retirement CPM process that does not inform resources until the end of the year (at the earliest) whether they are needed for reliability in the upcoming Resource Adequacy Compliance Year. Resource owners have stressed that the existing risk of retirement CPM process provides them with insufficient lead time to make prudent business decisions regarding the disposition of their resources that are at risk of retirement, thus making timely planning, maintenance, staffing, and potential decommissioning decisions problematic.¹²⁵ Also, it can force them to

¹²⁵ Under the current risk of retirement CPM framework, resource owners typically would not find out whether they are needed for reliability and eligible to receive a risk of retirement CPM designation for the upcoming Resource Adequacy Compliance Year until December or

operate uneconomically for longer than necessary because CAISO need determination occurs so late in the year. The CAISO agrees and the Commission, too, has recognized that there is evidence that earlier notification could benefit certain resources at risk of retirement.¹²⁶

The existing backstop procurement framework, which has separate and different processes for RMR procurement and risk of retirement CPM procurement, has resulted in resource owners proactively informing the CAISO they will not pursue a risk of retirement CPM designation, which will not be known until the end of the year at the earliest. Instead, they have requested that the CAISO study their need under the RMR process, which does not limit when the CAISO can make a conditional RMR designation and does not require the generating unit owner to submit an attestation regarding the definiteness of their retirement. The CAISO's proposal eliminates this gap by addressing all retirement-related backstop procurement in a single process that provides lead-time for making important business decisions for the upcoming Resource Adequacy Compliance Year for those resources desiring it.

The proposed process also establishes an attestation requirement for the owners of retiring/mothballing resources that does not exist today under the RMR framework. Only risk of retirement CPM has an attestation requirement.¹²⁷ The proposed process will also require resource owners to attest that their retirement/mothballing is definite unless certain specific conditions change before the CAISO will even study whether a resource is needed for reliability. Requiring the proposed attestation will discourage resource owners not intending to retire or mothball their generating units from simply seeking, without potential consequence, a CAISO determination regarding the need for their resource.

Today a resource seeking to retire or mothball need only provide written notification to the CAISO at least 90 days in advance that it is retiring or

later. This can force resource owners that are not needed to operate uneconomically well into the next year before they can even retire their unit. Providing earlier notification to resources that the CAISO determines are not needed for reliability purposes and thus may retire will reduce the amount of time such resources must operate uneconomically, followed by the lengthy resource shut-down and decommissioning process. Early notification that a resource is needed will allow the resource adequate time to plan for, finance, and undertake any needed upgrade or maintenance projects and prepare for continued operation of the resource.

¹²⁶ *Cal. Indep. Sys. Operator Corp.*, 163 FERC ¶ 61,023 at P 45 (2018).

¹²⁷ Under CAISO tariff section 43A.2.6, resources seeking a risk of retirement CPM designation must attest that it will be uneconomic for the generating unit to remain in service and that the decision to retire is definite unless CPM procurement occurs. As indicated above, risk of retirement CPM involves an assessment of need for the "following year"; whereas, RMR involves an assessment of need in the current and upcoming year. See CAISO tariff section 43A.2.6 (3) and *pro forma* RMR Contract, Article 2.

mothballing. There is no attestation requirement, the owner need not state that the decision to retire or mothball is definite, nor must the owner provide any reason why it is retiring or mothballing. Further, submitting a formal notice of retirement or mothball is not a prerequisite to a resource owner requesting, and the CAISO granting, an RMR designation. Under the existing RMR paradigm, at any time resource owners can request that the CAISO study them for a possible RMR designation for the upcoming year without even having to submit a formal retirement notice. That will no longer be the case if the Commission approves the CAISO's proposal. The CAISO will (1) implement a specified timeline for processing retirement/mothball notices that could lead to RMR designations, and (2) impose more robust notification/attestation requirements on retiring/mothballing resources to ensure they are not simply "fishing" for an RMR designation. Thus, the proposed process contains more robust requirements than exist under the current RMR framework.

The proposed process will promote overall resource portfolio optimization and help protect against potential over-procurement and unnecessary cost incurrence. Providing early notice of a resource's need (and conditional RMR designation) for the upcoming calendar year will provide LSEs ample opportunity to procure such needed resources for their annual RA showings at the end of October, obviating the need for the CAISO to procure the resource. This will prevent LSEs from paying twice for capacity, once through the CAISO's RA procurement and again through their bilateral procurement when they procured a different resource in lieu of the needed resource. This will help prevent situations where LSEs meet all of their RA obligations by procuring other resources and then the CAISO still has to procure additional resources to satisfy unmet reliability needs.¹²⁸

Under the proposed Path 2 process, the CAISO will post its study results showing the reliability need for a resource. This is consistent with the process reflected in existing CPM risk of retirement tariff provisions. Also consistent with the existing risk of retirement CPM tariff provisions, stakeholders will have at least seven days to submit comments on the study results. One stakeholder

¹²⁸ The Commission has found unjust and unreasonable measures that produce inefficient and unreasonable results by requiring ratepayers to pay twice for the same capacity need and result in over-procuring capacity. For example, the Commission followed this principle in accepting ISO-NE's proposal to enter fuel security resources into the forward capacity market as price takers and rejected the NYISO's proposal to price reliability resources (*i.e.*, RMR) above a zero price offer. *ISO New England, Inc.*, 165 FERC ¶ 61,202 at PP 82-85 (2018). Just as reliability resources not clearing the capacity market is inefficient and unreasonable, and results in a greater procurement quantity, it is similarly unreasonable and inefficient for LSEs not to procure needed reliability resources in the RA procurement process. This can result in customers paying twice for capacity -- once for the cost of the RMR contract and again for the generator that an LSE procured instead of the RMR resource. The CAISO's proposal is consistent with the principle the Commission has followed in the aforementioned cases.

requested that the CAISO provide additional detail on the types of reliability studies the CAISO will perform, how the CAISO will conduct the studies, what specific reliability criteria the CAISO will apply, and what study assumptions and analysis the CAISO will use to support the determination of need for an RMR designation. Consistent with the existing RMR and risk of retirement CPM tariff provisions and the Commission's prior decision approving the risk of retirement CPM tariff provisions, the CAISO will include additional details regarding the reliability technical assessment in the business practice manual, not in the tariff.¹²⁹ There is no requirement that the CAISO specify every single reliability criterion it might apply in the tariff, and it would be unreasonable to do so as such criteria can change, and new ones can be added. No other ISO or RTO includes such specific information in the backstop procurement provisions of their tariffs.

Under the existing tariff, the CAISO determines what resources it needs to become RMR, what resources it no longer requires to be RMR, and what resources it requires to continue to be RMR.¹³⁰ The tariff provides that the CAISO will procure RMR from the "cheapest available sources" and terminate RMR contracts that are no longer necessary or can be replaced by less expensive resources and/or more competitive resources."¹³¹ As indicated above, in the revamped RMR study process the CAISO will continue to assess alternatives to offering an RMR Contract to a specific generating unit, and subsequently, in the transmission planning process the CAISO will study transmission and non-transmission alternatives to extending RMR Contracts. The CAISO proposes to revise the tariff to provide that it will make RMR designation decisions based on whether there are any more cost-effective options available.¹³² This recognizes that the cheapest option may not be the best, most efficient, or the most prudent option. For example, if the CAISO

¹²⁹ See 2011 CPM Order, 134 FERC ¶ 61,211 at P 134.

¹³⁰ CAISO tariff section 41.3.

¹³¹ *Id.* at section 41.4.

¹³² CAISO proposed tariff section 41.3. As it does today, before issuing a new RMR designation, the CAISO will continue to evaluate whether there are any other options that can fully meet the identified reliability need in a timely manner and obviate the need for an RMR designation. Alternatives to designation a generating unit for RMR service might include redispatch/reconfiguration through operator instruction, remedial action schemes, special protection schemes, demand response, alternative generation, and transmission upgrades or additions. Feasible alternatives to a new RMR designation may be limited by the timing of the retirement/mothball notification, which is a minimum of 90 days under the PGA. As discussed above, the CAISO does not want to undo the longstanding provision in all PGAs providing for owners to give the CAISO a minimum 90-day notice of its intended retirement. In any event, even if the CAISO enters into a new RMR contract, the CAISO will assess in the upcoming annual transmission planning cycle whether there is a more cost-effective or efficient transmission or non-transmission alternative to maintaining the RMR contract.

identifies two reliability needs, the CAISO may procure a more expensive solution that meets both needs rather procuring separate resources to meet each need that are individually cheaper but result in higher overall costs. This approach is also consistent with the CAISO's Order No. 1000-compliant tariff provisions that require the CAISO to select "the more efficient or cost-effective" solution to meet a reliability need.¹³³ In both the RMR study process and again in the transmission planning process the CAISO is assessing solutions to meet a reliability need.

The proposed tariff provisions also give the CAISO reasonable discretion to select a more expensive resource that does not have use limitations if there is a risk of the cheaper, use-limited unit not being fully available to meet the reliability need. The CAISO cannot act in an unduly discriminatory manner in exercising this discretion. This provision is consistent with a corresponding Commission-approved provision regarding the CAISO's selection of units for CPM designations.¹³⁴

In the unexpected event that two or more resources that can fully meet reliability need(s) submit retirement/mothball notices, the CAISO will apply the "tiebreaker" described above. The Commission has approved this tiebreaker for the CPM selection process, and the CAISO has applied it effectively in connection with some CPM designations. The CAISO believes this approach equally applies to, and will be equally effective for, RMR designations.¹³⁵ The CAISO recognizes that a slightly more expensive resource can provide additional benefits or services (e.g., providing flexible capacity) beyond merely satisfying the immediate reliability issue, thus making it the more prudent and more cost-effective solution in the long-term. Other ISOs and RTOs evaluate comparable considerations. For example, besides pure cost considerations, the NYISO, considers factors such as how a solution (1) affects system flexibility, including generation dispatch, access to operating reserves, access to ancillary services, and the ability to remove transmission for maintenance, and (2) could affect the costs related to operating a system, including how it could affect the need for operating generation for reliability, reduce the system need to cycle generation, and provide more balance in the system. As discussed in greater detail, *infra*, the CAISO grid is facing increased variability and unpredictability. Besides resources that can meet specific, readily identifiable reliability needs, the CAISO also needs resources that are flexible enough to address the multitude of challenges the CAISO will face in the future, which are not precisely

¹³³ CAISO tariff section 24.4.6.2.

¹³⁴ See CAISO tariff section 43A.4.2.2. For example, the Midcontinent Independent System Operator, Inc. (MISO) tariff includes provisions that an alternative solution's demand-side contract be of sufficient duration such that a reliable solution can be assured. MISO FERC Electric Tariff, Module C, section 38.2.7c.

¹³⁵ See CAISO tariff sections 43A.4.2.2 and 43A.4.2.3.

predictable, and which may arise at any time. The CAISO proposal gives the CAISO a reasonable and prudent tool to better address this variability and unpredictability, while still respecting cost considerations.

Finally, the proposed tiebreaker provisions prevent gaming among competing generating units by precluding a resource owner from submitting a low “cost offer” to the CAISO so it can obtain the RMR designation over a competitor, and then filing with the Commission for higher compensation after it has received the RMR designation. This rule follows the Commission-approved CPM rule that a “resource owner may not propose -- and shall not be compensated based upon -- an offer price higher than the price submitted in its bid to the CAISO for the designated capacity.”¹³⁶

c. The Proposed Affidavit Is Sufficiently Robust to Discourage Resources From “Fishing” for RMR Designations

A well-discussed issue during the stakeholder process was the content of the Notice of Generating Unit Retirement or Mothball (Notice) and information submission requirements for retiring/mothballing units. Several stakeholders urged the CAISO to require the unit owner to attest that it is uneconomic for the unit to remain in service. Some stakeholders argued that the CAISO should go even further and (1) require resource owners submitting retirement/mothball notices to submit financial information demonstrating it is uneconomic for their resource to continue operating and (2) provide that either the CAISO or the CAISO’s Department of Market Monitoring (DMM) assess the information to ensure that the financial data actually supports the retirement/mothball decision. These stakeholders expressed concern that the retirement/mothball notification process would grant resource owners a “free bite” at price discovery or a “reliability need determination” with no adverse consequences. One stakeholder suggested that mothballing resources should be ineligible to receive an RMR designation. Another stated that the attestation burden on the resource owner is low because if the CAISO or some other entity procures the resource or the resource is sold to an unaffiliated third party it need not retire/mothball. DMM stressed that the submission of false or misleading information or evidence of any market manipulation will be referred to the Commission.

In response to stakeholder comments, the CAISO modified its initially proposed notice and attestation (contained in Attachment N and reflected in proposed tariff section 42.2.2) to include provisions applicable to resources retiring or mothballing for economic reasons. The notice requires such unit owners to attest that they are retiring/mothballing if it is uneconomic for the unit to remain in service, and that the decision to retire is definite unless the CAISO procures the unit, the unit is sold to an unaffiliated third-party, or the unit obtains an RA or some

¹³⁶ *Id.* at 43A.4.1.1.1.

other contract. The proposed attestation language builds on the existing attestation requirement applicable to resources seeking risk of retirement CPM designations.¹³⁷

However, the CAISO's extensive experience with resource retirements shows that resources retire for many reasons other than economics or their desire to determine if they are needed for reliability or to obtain an RMR contract (*e.g.*, condemnation, environmental issues, license loss or expiration, loss of the site, non-compliance with regulations, the age of the resource, repowering a resource, which results in a new resource under the CAISO's rules, catastrophe, community pressure to close, pursuing other business opportunities).¹³⁸ Accordingly, the proposed Notice of Generating Unit Retirement or Mothball also provides unit owners the option to state they are retiring for reasons other than it is uneconomic to continue operating their unit. For these situations, the unit owner must state the specific reason why it is retiring the unit and attest that the decision to retire is definite (but notes that the CAISO may offer the resource an RMR Contract if it is needed for reliability). In other words, these units are retiring and not seeking RA or other contracts. As discussed above, the CAISO must study every retiring/mothballing unit, including a unit retiring for reasons other than economics, to ensure that it is not needed for reliability before the CAISO can permit it to retire or commence mothball status. If the CAISO needs the unit for reliability, it can offer the unit an RMR Contract. To facilitate such effort, the proposed Notice requests the unit owner to identify any potential legal, regulatory, or other impediments to the unit accepting an RMR contract if offered.

The Commission should reject requests to require unit owners to submit financial data demonstrating it is uneconomic for the resource to continue operating and to require the CAISO to assess the information to confirm the resources are uneconomic. These requirements are unnecessary.

The Commission's rules against submitting false or misleading information to an ISO or RTO render it unnecessary for the CAISO to also require unit owners to submit information demonstrating their financial condition and for the CAISO to assess a unit's financial condition to determine if it is uneconomic.¹³⁹ In approving the CAISO's risk of retirement CPM tariff provisions, the Commission found that the

¹³⁷ See CAISO tariff section 43A.2.6.

¹³⁸ The CAISO's experience shows that almost all resources submitting retirement and mothball notices are not needed for reliability and do not receive RMR designations.

¹³⁹ See, *e.g.*, 18 C.F.R. § 35.41(b) ("A Seller must provide accurate and factual information and not submit false or misleading information . . . in any communication with . . . Commission-approved regional transmission organizations [and] Commission-approved independent system operators"); see *also* 18 C.F.R. §1c.2 ("It shall be unlawful for any entity . . . in connection with the purchase or sale of electric energy or . . . transmission services . . . [t]o make any untrue statement of a material fact or to omit to state a material fact").

CAISO's proposal to require an affidavit stating that it is uneconomic for the unit to remain in service and that the decision to retire was definite unless CPM procurement occurred was sufficient to establish that a resource cannot continue to operate economically.¹⁴⁰ The Commission ruled that because market participants are prohibited from submitting false or misleading information to the CAISO, the affidavit should be sufficient to establish that a resource cannot continue to operate economically. Accordingly, the Commission found it was unnecessary for the CAISO also to assess the resource's financial condition. The Commission stated that if the CAISO's Department of Market Monitoring has reason to suspect that a resource has submitted false, inaccurate, or otherwise misleading information in its affidavit, it could refer such suspected violations to the Commission.¹⁴¹ The Commission thus rejected the CAISO's proposal to assess the financial condition of units seeking risk of retirement CPM designations. The Commission should similarly reject the need for any financial assessment here. The notarized attestation, which builds on the CPM attestation requirement, will require a unit owner to state if it is retiring or mothballing because it is uneconomic to remain in service and that the decision to retire/mothball is **definite** unless one of the four specified events occurs. Resource owners submitting attestations could face penalties if they submit false or misleading information in their retirement/mothball attestation/notice.¹⁴²

Further, the Commission has not required an ISO/RTO (or its market monitoring unit) to find that a resource seeking to retire or mothball is uneconomic, based on a financial assessment, before it can ensure the continued operation of a resource needed for reliability under its RMR (or similar) backstop procurement authority.¹⁴³

The NYISO requires resource owners to submit financial information so the NYISO and its market monitoring unit can review the costs that will be recovered in the RMR agreement, determine reference levels for an RMR unit's market bids, and conduct a capacity market power review of deactivating generators to determine their impact on capacity market clearing prices and whether they are physically

¹⁴⁰ 2011 CPM Order, 134 FERC ¶ 61,211 at P 132.

¹⁴¹ *Id.*

¹⁴² The Commission has previously recognized that false retirement claims can constitute false or misleading conduct. See *N.Y. Indep. Sys. Operator, Inc.*, 124 FERC ¶ 61,301 at P 135 (2008).

¹⁴³ The following are relevant RMR or comparable backstop procurement provisions for other ISOs and RTOs. NYISO, Open Access Transmission Tariff, Section 38 Attachment FF; MISO FERC Electric Tariff, Module C, section 38.2.7; PJM Open Access Transmission Tariff, Part V, Generation Deactivation; ISO-NE, Market Rule 1, Section III.13 *et seq.*, Forward Capacity Market.

withholding.¹⁴⁴ The NYISO has the ability (but not the obligation) to undertake and audit to determine if a proposed generator deactivation has a legitimate economic justification, but this review relates to applying region-specific market power mitigation provisions related to NYISO's capacity markets and does not prevent the NYISO from designating a resource needed for reliability as an RMR unit.

Similarly, the review of economic information of a retiring resource or a resource being mothballed in the other ISO's and RTOs does not preclude the ISO or RTO from retaining the operation of resources that must run for reliability reasons.

PJM requires the generation owner, after PJM notifies it that deactivating the unit would cause reliability concerns, to file with the Commission a cost of service rate to recover the entire cost of the unit until the generating unit is deactivated.¹⁴⁵ Alternatively, the unit owner may receive a Deactivation Avoidable Cost Credit. PJM's market monitoring unit and the generating unit owner will attempt to negotiate each component of the Deactivation Avoidable Cost Credit.¹⁴⁶ Units needed for reliability beyond their deactivation date must file with the Commission, for information purposes, cost support for its Deactivation Avoidable Cost Rate and an attestation by an officer of the unit owner that the cost information is accurate.¹⁴⁷ The unit owner must provide PJM with a copy of its Deactivation Avoidable Cost filing with the Commission.¹⁴⁸

In ISO-NE, the market monitor reviews de-list bids and financial information provided by the unit owner to ensure they follow bidding requirements for the forward capacity market.¹⁴⁹ De-list submittals must include an affidavit executed by a corporate officer attesting to the accuracy of the contents. If the market monitor determines that a de-list bid is inconsistent with specified parameters, the market monitor may determine its own price for the bid.¹⁵⁰

¹⁴⁴ NYISO Open Access Transmission Tariff, Attachment F, Sections 38.3.1.4, 38.3.1.6, 38.7, 38.8, 38.16, and 38.18, and Attachment B; NYISO Market Administration and Control Area Services Tariff, Attachment H, Sections 23.3.1.4 and 23.4.5.6.1.

¹⁴⁵ PJM Open Access Transmission Tariff, Section 113.2.

¹⁴⁶ *Id.* at 114.

¹⁴⁷ PJM Open Access Transmission Tariff, Section 116. Alternatively the resource owner may file for a cost of service rate to recover the entire cost of the generating unit for the period of time that it is deactivated. The market monitoring unit can petition the Commission to include an appropriate cost component if a unit owner files a cost component that is inconsistent with its agreement with the market monitoring unit or is inconsistent with the market monitoring unit's calculation of such component. *Id.* at sections 114 and 119.

¹⁴⁸ PJM Open Access Transmission Tariff, Section 116.

¹⁴⁹ ISO-NE, Market Rule 1, Section III.13.1.2.3.2.1.

¹⁵⁰ *Id.* at section III.13.1.2.3.2.1.1.1.

MISO requires all units under System Support Resource (SSR) agreements to provide MISO and its market monitoring unit a copy of all compensation-related filings with the Commission.¹⁵¹ Certain costs are subject to audit by MISO and the independent market monitoring unit.¹⁵²

Similarly, under Schedule F of the RMR Contract, the RMR unit owner must provide cost and related information to the CAISO to assess its Annual Fixed Revenue Requirement. The unit owner also must submit marginal cost based market bids using resource specific costs submitted to the CAISO pursuant to the CAISO Tariff and RMR Contract.¹⁵³ In negotiating an RMR Contract with the unit owner, the CAISO reviews the submitted cost information. Under Section 12.2 of the RMR Contract, the CAISO may audit the owner's books, accounts, and documents regarding invoices, statements, charges, and computations. The CAISO is retaining these provisions in the revised *pro forma* RMR Contract. Thus, the CAISO has access to cost information to assess the rates being proposed by the RMR owner, just like other ISOs and RTOs. Like other ISOs and RTOs, the CAISO is not assessing the financial information to determine if the resource is even eligible for an RMR agreement. Like the other ISOs and RTOs, that determination is based on the reliability need for the unit.

The CAISO also notes that its proposed retirement/mothball notice and attestation requirements are in-line with, or more robust than, the retirement and mothballing notification/attestation requirements of other ISOs and RTOs. This is further evidence that the proposed attestation requirements are just and reasonable, and adequately address any stakeholder concerns that they will unduly allow resources to "fish" for RMR designations.

PJM requires the unit owner, no later than 90 days before its deactivation date, to provide a written notice of its proposed deactivation, stating when the unit will be retired or mothballed, the desired deactivation date, and a good faith estimate of any project investment that would be needed and the amount of time the unit would be out of service for repairs, if any, that would be required to keep the unit in operation.¹⁵⁴ Unlike the CAISO's proposal, PJM's provisions do not require a notarized affidavit, do not require the unit owner to state a reason for the deactivation, and do not require the unit owner to attest that the decision to deactivate is definite (unless certain specified events occur).

¹⁵¹ MISO, FERC Electric Tariff, Module C, Section 38.2.7j.

¹⁵² *Id.* at section 38.2.7j(ii).

¹⁵³ Revised RMR Contract Section 6.1(d) and CAISO Tariff Section 4.6.4 (Participating Generators must provide the CAISO accurate information).

¹⁵⁴ PJM Open Access Transmission Tariff, Section 113.1.

Attachment FF, Section 38.3.1 of the NYISO's Open Access Transmission Tariff requires a unit owner seeking to retire or mothball to submit a Generator Deactivation Notice in the form in Appendix A to Attachment FF of its Open Access Tariff with the supporting certification from a duly authorized officer that the information is true and correct.¹⁵⁵ The Generator Deactivation Notice Form merely requires the unit owner to indicate whether the notice is for the generator to retire or mothball. The generator does not have to provide a reason for retiring or mothballing. If the notice is for retirement, the generator must indicate the date of its proposed retirement if it is to be retired on a date other than 365 days after the generator's deactivation date. If the notice is for mothballing, the unit owner must indicate the start date of the mothball outage and the date the resource proposes to resume participation in the NYISO's markets if the entity is proposing the generator to be mothballed on a date other than 365 days after the generator deactivation start date. The Generator Deactivation Notice contemplates that the unit owner can rescind its Generator Deactivation Notice. The unit owner is also required to submit the information required under Appendix B to Schedule FF, which is primarily cost-related information. The NYISO uses this information primarily to determine a resource's costs for purposes of assessing RMR service offers, entering into an RMR agreement, and for assessing market power and physical withholding.¹⁵⁶ A generating unit may rescind its Generator Deactivation Notice, but if it does so after the NYISO determines the notice to be complete, it must reimburse NYISO for any costs NYISO incurred in assessing the deactivation.

MISO requires the unit owner to submit an Attachment Y notice,¹⁵⁷ which requires a notarized attestation from an officer that the unit owner will suspend all or a portion of a unit for economic reasons on a specified date.¹⁵⁸ The Attachment Y notice requires the unit owner to state the date the unit will suspend operations. Under the MISO tariff, to "suspend" operations of a unit means "the cessation of operation of a Generation Resource or SCU for more than two (2) months commencing on a specified date that is provided to the Transmission Provider."¹⁵⁹ A unit owner may also submit the Attachment Y notice to rescind its prior notice to

¹⁵⁵ The CAISO includes a copy of the NYISO's Generator Deactivation Notice as Attachment G to this filing.

¹⁵⁶ NYISO, Open Access Transmission Tariff, Attachment FF, Section 38.11.1.

¹⁵⁷ MISO FERC Electric Tariff, Module C, section 38.2.7.a.

¹⁵⁸ MISO FERC Electric Tariff, Attachment Y. A copy of MISO's Attachment Y notice is included in Attachment H to this filing. Attachment Y is titled Notification of Generation Resource/SCU/Pseudo-tied Out Generator Change of Status, Including Notification of Rescission.

¹⁵⁹ MISO FERC Electric Tariff, Module A, Definitions-S.

suspend the facility.¹⁶⁰ A unit owner that has submitted a notice to Suspend may rescind its notice before MISO publishes the results of its reliability study.¹⁶¹ If MISO has already published the results of its reliability study and the unit owner has been notified that the unit is not needed for reliability, the unit owner may rescind its decision to Suspend (or modify the start date of suspension) any time before the end of the period for rescission following the effective date.¹⁶² The MISO tariff also contains provisions permitting unit owners that have been advised their unit is not needed for reliability to rescind their Attachment Y notice after they have commenced suspension.¹⁶³ A unit owner who has been told that its unit is not needed for reliability may also convert its Attachment Y Notice to retirement. A unit owner that rescinds an Attachment Y notice before MISO determines whether the unit is needed for reliability must pay MISO for the costs it incurred to conduct the reliability study.¹⁶⁴

In ISO-NE, a resource seeking to deactivate submits a de-list bid in the forward capacity market auction qualification process.¹⁶⁵ The market monitor then reviews the de-list bid and may mitigate it. The resource then has the option to retire or elect conditional treatment; if it chooses neither option, the market monitor's prices will be the finalized price used in the forward capacity market auction.¹⁶⁶ The resource owner may also request that ISO-NE review the resource for reliability.¹⁶⁷ If ISO-NE determines that the resource is needed for reliability, ISO-NE may request that the resource remain in service. After the determination, the resource owner must choose whether it will remain in service or retire. If it remains in service it may choose to receive either (1) the Commission-approved de-list bid instead of the Forward Capacity Market clearing price, or (2) a cost based rate approved by the Commission.¹⁶⁸

The CAISO also notes that the Commission accepted cost-of-service compensation to ensure fuel security for the Constellation Mystic Power unit with no finding that the plant was uneconomic and without any formal attestation requirement.¹⁶⁹ The Commission also accepted a fuel security program for ISO-NE

¹⁶⁰ See *id.* at Attachment Y.

¹⁶¹ *Id.*, section 38.2.7.d(i).

¹⁶² *Id.*, section 38.2.7.d(ii)(1).

¹⁶³ *Id.*, section 38.2.7.d(iii).

¹⁶⁴ *Id.*, section 38.2.7.e (i).

¹⁶⁵ ISO-NE, Market Rule 1, section III.3.1.2.3.1.5(b).

¹⁶⁶ *Id.*, section III.13.1.2.4.1.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*, section III.13.2.5.2.5.1.

¹⁶⁹ *Constellation Mystic Power, LLC*, 164 FERC ¶ 61,022 (2018). The Commission also established a hearing in that proceeding. Following the hearing, the Commission issued a

that allows ISO-NE to retain units needed for fuel security. Specifically, ISO-NE will retire resources needed for fuel security that submit a retirement de-list bid and trigger one of two modeling outcomes demonstrating a fuel security need.¹⁷⁰ Fuel-security resources selected for retention will have the option either to (1) engage in a cost of service agreement and be entered at a zero bid in the forward capacity market, or (2) receive their retirement de-list bid price, as reviewed and approved by the market monitor.¹⁷¹ There is no requirement that eligible resources first demonstrate that they are uneconomic.¹⁷²

The prior discussion shows that the various ISOs and RTOs have diverse notification and/or attestation requirements for retiring and mothballing resources. To discourage resources from “fishing” for RMR designations or submitting false or misleading information, the CAISO submits that its proposed notification/attestation provisions are “in-line” with those of other ISOs and RTOs, and in many instances are more robust. The CAISO requires a notarized attestation from an officer of the company with legal authority to bind the entity attesting, under penalty of perjury, that the resource will either be retired or mothballed, and that the decision to mothball or retire is definite unless the CAISO procures the resource, the resource is sold to a non-affiliated entity, or the resource receives an RA contract or some other contract. The resource owner must also attest to the reason the resource is retiring or mothballing. Only MISO has a similar attestation requirement.

If a resource subsequently wants to come out of mothball status or rescind its retirement/mothball notice, the resource must submit a formal notice to the CAISO attesting to which of the specified events has occurred to enable the resource to return to service. The other ISOs and RTOS permit a unit to rescind a retirement/mothball notice or return from mothball (or even retirement) for any reason (and without having to state a reason). The CAISO’s attestation provisions appropriately discourage the submission of false or misleading information and provide safeguards to ensure that retirement and mothball intentions are genuine.

The CAISO, unlike MISO and NYISO, does not charge generating units rescinding their retirement/mothball notices for any costs incurred in processing their requests prior to rescission. The CAISO notes, however, that MISO and the NYISO permit unit owners to rescind their retirement/mothball notices for any reason, but the CAISO does not. CAISO resource owners may only rescind their retirement/mothball notices for limited, specified reasons. The CAISO’s different

subsequent order that accepted the cost-of-service agreement subject to a compliance filing and established a paper hearing on return on equity. *Constellation Mystic Power, LLC*, 165 FERC 61,267 (2018).

¹⁷⁰ *ISO New England Inc.*, 165 FERC ¶ 61,202 at PP 40, 53-56 (2018).

¹⁷¹ *Id.* at P 40.

¹⁷² ISO-NE, Market Rule 1, III.13.2.2.2.5A.

attestation requirements and framework renders the MISO and NYISO approaches unnecessary and problematic. All CAISO retirement/mothball notices and attestations and RMR designations are conditioned on the resource not receiving a Resource Adequacy contract. For example, the CAISO's Path 2 process occurs prior to the deadline for the annual RA showings. It would be unfair to permit a unit owner to avail itself of that process and then charge the unit owner that subsequently receives a Resource Adequacy contract (or an RMR designation from the CAISO) for the costs of the reliability study. The CAISO wants to encourage LSE procurement of needed resources through the RA compliance process to avoid over-procurement and double-paying for capacity, and to ensure RMR remains a measure of last resort. The CAISO also presumes that if an LSE procures a resource that submitted a mothball notice, there must be some benefit to the LSE that led it to procure that resource instead of some other resource. A resource owner should not be penalized for accepting an RA contract in these circumstances. Particularly under these circumstances, it would be an unnecessary and undue administrative burden for the CAISO to track the costs of such reliability studies, especially given that many of these studies may track or be incorporated into other ongoing and standard reliability studies the CAISO conducts. The CAISO also notes that once units retire on the retirement effective date, they cannot rescind their retirement notice. They may return as a different resource, but then they are required to follow the steps required for new resources either by submitting a new interconnection request or through the repowering process.

One stakeholder suggested that the provisions allowing resource owners to rescind their retirement/mothball notifications if one of the specified conditions is satisfied is too lenient. As discussed above, other ISOs' and RTOs' retirement/mothball notification procedures permit resource owners to rescind their retirement/mothball notifications without having to provide any reason. The CAISO's attestation is stronger because it provides that the decision to retire/mothball is **definite** unless one of the specified events occurs.

The CAISO submits that the specified conditions under which a unit might rescind its retirement/mothball notice or return from a mothball outage are reasonable, and do not create huge loopholes as alleged by one stakeholder. They are limited and reflect reasonable business opportunities that a resource owner should not be precluded from pursuing. The existing, Commission-approved risk of retirement CPM attestation provides that retirement is definite unless the unit is procured as CPM. Procurement of the resource by a third-party can achieve the same objective, *i.e.*, providing it some bilateral procurement revenues. This should be encouraged because RMR is -- and should be -- a procurement measure of last resort. If an LSE procures such a resource then there must have been some benefit to the LSE that led it to procure such resource instead of a different resource. Such opportunities should not be unreasonably precluded. Similarly, selling the unit to an unaffiliated third-party is a legitimate business opportunity that should not be precluded.

The same stakeholder argued that a resource could merely sell 1 MW and avoid retiring or mothballing the resource. Obviously, that behavior would raise suspicion of submitting false or misleading information because the resource owner is required to state the reason for the mothball or retirement. If a resource states that it is retiring or mothballing because it is uneconomic to continue operating the unit, and then returning to service after selling only 1 MW, that would clearly “raise a flag” regarding the submission of potentially false or misleading information.

Another stakeholder argued that if a resource has mothballed, there should be no conditions on its returning to service. The CAISO disagrees. The resource will have attested that it was uneconomic for the unit to remain in service and that decision to mothball was definite unless the unit was procured or sold. Allowing the unit to return to service for any other reason would encourage resources to attempt to find out they are needed, and if not, then simply mothball for a short period of time and return to service for any reason, including a reason inconsistent with its attestation. This could lead to a “revolving door” of mothball requests to “fish” for an RMR designation without any potential adverse consequences. A robust attestation requirement applicable to resources returning from mothball outages, such as that proposed by the CAISO, is reasonable to discourage resources from simply seeking a need determination from the CAISO with no potential consequence. The CAISO notes that the attestation requirement for units returning from mothball adds an additional reason to justify the unit’s return -- it permits a resource to return from mothball status by attesting that it is economic for the unit to return (e.g., the market may have improved, other resources in the area may have retired, or the unit owner may have restructured its operations to make the unit more economic). If a unit cannot meet this standard, then that calls into question its prior attestation it was uneconomic for the unit to continue operating. With this additional justification, the CAISO’s attestation requirements are not unduly punitive to resources returning from mothball outages.

One stakeholder suggested a minimum term (three-six months) for mothballing resources to deter “gaming” of the process. As noted above, MISO has a minimum two-month “suspension” term, but the NYISO has no minimum term. The CAISO’s attestation requirements render the need for any arbitrary minimum mothball term unnecessary. A mothballed resource can return to service only if the reason for it mothballing is remedied, *i.e.*, the CAISO procures it, it obtains another contract, or it becomes economic to return the unit to service. If the reason a resource mothballed is “cured”, it should be able to return to service without being required to remain mothballed for a specified period of time. As discussed above, the limitations the CAISO has included in the notice and attestation are strong enough to deter resources from “fishing” for RMR designations without consequence and can result in referrals to the Commission if a resource is suspected of filing false or misleading information. On the other hand, resources in MISO can rescind their suspension notices for any reason. Further, if there was a

minimum mothball term in the tariff and the CAISO needed the mothballed resource to meet reliability before the end of the minimum term, the CAISO would need to seek a tariff waiver to bring the unit out of mothball before the end of the mothball term. Similarly, if an LSE prefers to procure a mothballed resource instead of some other resource (or if no other resource is available), a resource owner should not be precluded from accepting such designation simply because there was a minimum mothball term. A minimum mothball term would be detrimental both to the LSE and the unit owner in these circumstances.

Finally, recommendations that mothballing units should not be eligible for RMR designations at all are misplaced. Both the NYISO and MISO processes permit issuing RMR designations (or System Support Resource designations in the case of MISO) to units submitting a mothball notice (or suspension notice) that are needed for reliability. If the CAISO needs a specific unit to maintain reliability, it should be able to require the unit to accept an RMR designation; otherwise, the unit could go out on mothball and jeopardize reliability.

d. The Proposed Path 2 Process Effectively Strikes a Balance between RMR Procurement and RA Procurement

A couple of stakeholders argued that the proposed RMR process does not effectively address concerns regarding “front running” of the bilateral procurement market. They worried that suppliers will withhold from the bilateral market and seek higher compensation through RMR contracts. On the other hand, some suppliers preferred that the CAISO provide an even longer “runway” for them to make prudent capital and operating decisions regarding retirement or continued operation of their units in the upcoming Resource Adequacy Compliance Year. One stated that RMR designations in the September timeframe might leave inadequate time for them to develop and negotiate an RMR agreement for filing by November 1.

The CAISO believes that its proposed process for considering RMR designations strikes a proper balance between RMR backstop procurement and bilateral RA procurement. The process effectively balances RA “front running” concerns with resource owners’ desire for a longer “runway” to rationally plan for potential resource retirement or continued resource operation. The proposed revisions to the RMR framework provide an opportunity for resource owners interested in and willing to commit to retiring or mothballing their units to obtain early notice of their need in the upcoming calendar year in limited, well-defined circumstances.

The two stakeholders concerned about “front running” ignore that the existing RMR tariff provisions already allow a resource owner to come in at any time of the year and request an RMR designation for the upcoming calendar year and does not require them to submit a formal retirement/mothball notification or

affidavit.¹⁷³ Indeed, under the existing framework, resource owners are not even required to submit a formal retirement notice to be considered for an RMR designation. In other words, the existing RMR process already allows for “front running” of the RA process; the discussion in Section III.A.3 of this filing shows several examples of this. Thus, the CAISO’s RMR proposal does not create front-running concerns; they already exist under the current process.

In conjunction with significant changes in the RA program starting in 2020, the proposed revisions to the RMR procurement process creates an overall backstop procurement framework that does not unduly front-run bilateral RA procurement. The revised framework differs dramatically from the backstop procurement framework the Commission rejected in the CAISO’s risk of retirement CPM tariff amendment filing.

First, to be eligible for RMR designations, resource owners will now be required to attest to the reason for their retirement/mothballing and attest that their retirement/mothballing is definite unless certain specified events occur, e.g., the resource is procured or sold. This presents potential consequences to a resource owner that do not exist under today’s retirement/mothball and RMR procurement framework, including possible referrals to the Commission for submitting false or misleading information. It also provides generators and other stakeholders with a transparent and clear process to seek RMR designations from the CAISO.

Second, the Path 2 process establishes a defined “window” within which retiring/mothballing resources must seek any advance determination of need and possible RMR designation for the upcoming calendar year. That window provides some structure and predictability that does not exist today and ensures that the CAISO will select the best resource if more than one resource submitting a retirement/mothball notice can meet the identified reliability need.

Third, the CAISO’s Path 2 timeline provides ample opportunity for LSEs

¹⁷³ Risk of retirement CPM reviews, in which the CAISO assesses reliability needs in the year following the upcoming Resource Adequacy Compliance Year, occur after the RA showings. As discussed above, this has proved problematic for suppliers and led them to forgo seeking risk of retirement CPM designation and instead asking to be reviewed only under RMR. Also, as noted above, the CAISO is “dialing back” its risk of retirement CPM procurement authority that is being incorporated into the revised RMR tariff provisions. Studying “following year” reliability needs will now be discretionary on the part of the CAISO, as opposed to the mandatory review that occurs under the existing risk of retirement CPM. As discussed above, on November 28, 2016, Calpine sought RMR designations for 2018 for four generating units, and the CAISO issued conditional RMR designations to two of the generating units in March 2017. On February 28, 2018, NRG notified the CAISO that it was closing two generating units, one effective October 1, 2018 and the other effective on January 1, 2019. The CAISO issued conditional RMR designation to the two generating units in July 2018.

to procure the needed resource as part of their RA compliance efforts before the CAISO executes an RMR contract with the unit. As indicated above, the CAISO will seek to post its study reports regarding the need for a resource by mid-May, and will only execute the RMR contract if the resource has not been procured as RA by the end of October. Thus, actual RMR procurement will be a measure of “last resort.”

Fourth, the CPUC’s recent approval of new multi-year procurement requirements for local capacity resources beginning in 2020 also mitigates concerns about undue front-running of the RA process.¹⁷⁴ The CPUC decision requires CPUC-jurisdictional LSEs to procure 100 percent of their local capacity requirements in years one and two, and 50 percent of their requirements in year three. The CPUC also disaggregated located capacity procurement in the Pacific Gas & Electric Company-Other local area, which should reduce the need for any CAISO backstop procurement compared to the regime that exists today.¹⁷⁵ The CAISO is most likely to offer an RMR contract to a resource to meet a local capacity need. Because a resource with an RA contract for the upcoming Resource Adequacy Compliance Year is ineligible to obtain an RMR designation through the Path 2 process, and because LSEs will be procuring 100 percent of their local capacity RA obligations for the upcoming two years in advance, the Path 2 process should have no significant impact on the bilateral RA process. The CAISO expects the number of local capacity resources even eligible to use the Path 2 process would be limited.

A simple example demonstrates why the Path 2 process should have limited impact on bilateral RA procurement: in 2019, LSEs will procure 100 percent of their local capacity RA requirements for 2020 and 2021 and 50 percent of their requirements for 2022; a resource in a local capacity area procured as RA for 2021 is ineligible to participate in the Path 2 process; a resource without an RA contract for 2021 can submit a retirement/mothball notice by February 1, 2020, and the CAISO will determine whether it is needed for reliability in either 2021 or 2022; if it is, the CAISO will offer the resource an RMR contract only for 2021 (a mothballing resource needed only in 2022 would not receive an RMR designation). This does not front-run the RA local capacity

¹⁷⁴ Decision D.-19-02-022, *Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local and Flexible Procurement Obligations for the 2019 and 2020 Compliance Years, Decision Refining the Resource Adequacy Program*, Rulemaking 17-09-020 (Feb. 21, 2019).

¹⁷⁵ The PG&E-Other local area includes Humboldt, Sierra, Stockton, Greater Fresno, North Coast, and Kern. Today, LSEs in the PG&E-Other area can procure capacity anywhere in the local capacity area to satisfy their local capacity obligations. Now they will have to procure sufficient capacity in each of these sub-areas, thus reducing the likelihood that the CAISO will have to engage in backstop procurement to address reliability needs in the sub-areas that go unmet do to a less granular procurement requirement.

procurement process for 2021 because LSEs will already have procured 100 percent of their local capacity obligations for 2021. This does not front-run local capacity RA procurement for 2022 because the CAISO has not offered – and cannot offer -- the resource an RMR contract for 2022. Even if there was potential front-running, the local capacity resource gains no undue advantage in negotiating an RA contract. For 2021, the resource would be competing for a system or flexible capacity contract, and system capacity sells for less than local capacity.¹⁷⁶ Even if the CAISO finds that the resource is needed for reliability in 2022, the CAISO can only offer the resource a one-year contract for 2021, and in 2021 (and annually thereafter) the CAISO is required to re-study the reliability need for the resource to determine if it is eligible for an RMR contract in the upcoming year. Further, the CAISO will immediately assess alternatives to extending the RMR in the upcoming annual transmission planning cycle. In other words, the resource owner accepting an RMR Contract instead of an RA contract faces the risk that the CAISO will approve an alternative to RMR in the transmission planning process thus rendering the RMR Contract unnecessary in future years. For example, new transmission enabled the CAISO to terminate the Metcalf RMR Contract after one year, and the CAISO has approved transmission solutions that should allow termination of the Feather River and Yuba City RMR designations unless needed for other reliability issues. On the other hand, the CAISO does not proactively assess transmission and non-transmission alternatives to individual RA resources in the transmission planning process.

Fifth, besides the new multi-year local capacity procurement obligation that did not exist when the Commission rejected the CAISO's risk of retirement CPM tariff amendment filing last year, the compensation scheme for RMR resources differ significantly from the compensation scheme the CAISO proposed for risk of retirement CPM resources. The CAISO believes that the proposed RMR compensation scheme better "balance[s] appropriate compensation for resources with the consideration of ratepayer concerns" as the Commission directed.¹⁷⁷ In that regard, in the risk of retirement CPM proposal, the CAISO proposed to pay designated resources their full annualized cost of service, while permitting them to retain all market revenues. The CAISO's DMM and numerous stakeholders vehemently objected to resources being permitted to retain all market revenues (including revenues above actual cost) while being paid their full annual cost of service. The instant proposal cures that "flaw" because RMR resources are not permitted to retain net market revenues. The CAISO will claw-back all net market revenues of RMR resources and credit them back against the fixed-cost payments made to the resource.

¹⁷⁶ Aggregated RA contract prices for 2017-2021 show an average system price of \$1.76 kW-year compared to an average local capacity price of \$2.59 kW-year. CPUC Energy Division, *The 2017 Resource Adequacy Report*, p. 23, August 2018.

¹⁷⁷ ROR CPM Order, 163 FERC ¶ 61,023 at P 46.

Also, under the risk of retirement CPM proposal, designated resources would have received a guaranteed 12.25 percent return on their investment (as specified in Attachment F to the existing *pro forma* RMR Contract). As discussed *infra*, the CAISO proposes to eliminate this guaranteed return feature in the RMR Contract and, instead, require resource owners to justify, and the Commission to determine, a just and reasonable return on capital.

Further, under the risk of retirement CPM proposal, there were no restrictions on the level of resource's bids into the CAISO's energy and ancillary services markets. On the other hand, the CAISO proposes herein to require RMR resources to submit market bids reflecting their actual marginal costs. If a non-use-limited RMR resource does not submit a marginal cost-based bid, the CAISO will submit one for the resource.¹⁷⁸ The CAISO's proposal ensures that entities paying the "full freight" of the RMR resource are receiving the full benefits of the resource, including marginal cost energy bids. Thus, LSEs are deriving a significant benefit from the CAISO's proposal that was not part of the risk of retirement CPM filing.

Sixth, the CAISO's assessment of the reliability need for the resource in the "following" year was mandatory under the risk of retirement CPM provisions. Under the CAISO's proposal, "following year" reliability reviews will now be at the CAISO's reasonable discretion.

A couple of stakeholders suggested that the CAISO's process will give resource owners without RA contracts for the upcoming year a free shot at "price discovery" regarding their resource and possibly market power. However, a resource receives no "price discovery" from a CAISO determination that it is not needed for reliability. The unit owner will be expected to retire/mothball the resource consistent with its commitment. LSEs interested in procuring the unit will know that if the unit is not needed for reliability. Even if a study report indicates a resource is needed for reliability, the resource owner knows that it will only receive one-year cost-of-service compensation as an RMR unit.¹⁷⁹ It will not receive a multi-year contract, which it might receive under the CPUC's new multi-year local procurement requirements. Thus, the resource owner is in no position to command a price from LSEs (or the CAISO) higher than its annual cost of service.¹⁸⁰ The Commission has recognized that cost of service

¹⁷⁸ As indicated *supra*, the CAISO does not generate bids for use-limited RA resources and, accordingly, will not generate bids for use-limited RMR resources.

¹⁷⁹ This is the same compensation the resource would receive if the CAISO waited until the end of the year to determine that the resource was needed for reliability.

¹⁸⁰ Ultimately the Commission, not the resource owner, determines the just and reasonable compensation for the resource. Thus, at the time of RA contract negotiations, the resource owner does not know the exact level of RMR compensation the Commission may approve, and

recovery is not a “windfall” and that for mandatory backstop procurement mechanisms, compensation must be based on a resource’s full cost of service.¹⁸¹

Further, these stakeholders ignore that if a resource needs major maintenance and capital improvements costing millions of dollars to continue operating, whether or not the CAISO offers the resource an RMR contract, the resource owner will need sufficient compensation to recover these costs, or else it will likely consider retiring. As the Calpine letters described above bear this out and demonstrate that, absent a compensatory contract that provides sufficient funds to undertake the necessary capital projects, resource owners likely will retire their units.¹⁸² Under these circumstances, it is not the likelihood of an RMR contract that would cause a resource owner not to execute an RA contract, but rather its inability through an RA contract to earn sufficient revenues to undertake the necessary major maintenance and capital additions and earn sufficient revenues to remain in service.

Also, claims that CAISO findings of need for specific units will cause resource owners to withhold from the RA market are not supported by actual experience. The CAISO issued conditional RMR designations to the Ormond Beach and Ellwood units in July 2018. Subsequently, the CPUC issued an order directing Southern California Edison Company (SCE) to attempt to negotiate contracts with these units.¹⁸³ The CPUC stated that SCE should sign contracts “only if doing so is expected to be less costly than any applicable backstop procurement measures.”¹⁸⁴ SCE executed contracts with the units, and the CPUC approved the contracts, thus obviating the need for the CAISO to enter into RMR contracts.¹⁸⁵ Also, as discussed above, there are numerous reasons a resource owner would prefer an RA contract to an RMR contract.

it faces the risk that the Commission will approve a different compensation level than it desires. Accepting an RA contract eliminates any risk the generating unit owner might face in litigating (or settling) compensation in a Commission proceeding.

¹⁸¹ See *Midcontinent Indep. Sys. Operator, Inc.* 148 FERC ¶ 61,057 at P 86 (2014); *PSEG Power Conn., LLC*, 110 FERC ¶ 61,020 at P 30 (2005).

¹⁸² Calpine estimated that the expenditures required to complete necessary major maintenance at the Metcalf Energy Center totaled well over \$20 million. See Attachment F.

¹⁸³ CPUC Decision D.18-06-030, *Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local and Flexible Procurement Obligations for the 2019 and 2010 Compliance Years, Decision Adopting Local Capacity Obligations for 2019 and Refining the Resource Adequacy Program, Rulemaking 17-09-020* p. 35 (June 21, 2018).

¹⁸⁴ *Id.*

¹⁸⁵ CPUC, *Bilateral Resource Adequacy Capacity Agreements to Meet Local Area Reliability Needs in 2019 Pursuant to D.18-06-030, Advice Letter 3854 (U 338-E)* (Sept. 26, 2018).

One stakeholder suggested limiting retirement/mothball requests to certain times of the year so it would not impact the bilateral RA market. This stakeholder ignores that the existing RMR framework already permits the CAISO to conditionally designate a resource as RMR for the upcoming calendar year before the annual RA showings. Rejecting the CAISO's proposal and reverting back to the framework that exists today would remove the added restrictions and protections the CAISO is proposing. The stakeholder's proposal would constitute a drastic change to the retirement/mothball paradigm that exists today where resource owners can seek to retire/mothball at any time of the year as long as they provide the requisite 90-day notice under the existing Commission-approved terms of the PGA. Such a drastic change would disrupt the expectations of every resource that has executed a PGA. Also requiring a resource owner that is uneconomic to "hang around" longer, without compensation, to wait for the window when it can submit a retirement or mothball notice is unjustifiable.

The stakeholder's suggestion also defeats a key objective of this tariff amendment and fails to address an important issue identified by suppliers -- units that must decide whether to retire or continue operating in the upcoming calendar year face important planning decisions with significant financial and business implications. They often need a longer planning horizon to make those important decisions prudently. The existing RMR framework is preferable to the option presented by the stakeholder. This stakeholder's suggestion would also force resources that are uneconomic and not needed for reliability to continue operating longer than is necessary simply because they would be required to wait until after the annual RA showings at the end of October to submit a retirement/mothball notice. Based on the standard process that requires the CAISO to assess the RA showings for RA deficiencies and collective local deficiencies, and then allow a 30-day cure period, the CAISO would not be in a position to begin reviewing retirement/mothball notices and studying the need for specific units until mid-December. The proposed and existing retirement/mothball process gives the CAISO approximately 90 days to study the need for a retiring unit. This would drive the RMR procurement process well into the next year, forcing unit owners to operate longer than necessary without a contract. Even assuming that a process could be established where the CAISO could identify needed resources in late December, such a process would ignore the critical facts that RMR contracts require Board approval, require negotiation between the CAISO and the unit owner, require the unit owner to prepare an RMR filing and a case to support a requested return on investment, and require a Commission order to implement. Completing all of these necessary steps within a few-day period at the end of the year is unrealistic. Thus, the stakeholder's suggestion is both problematic and impractical.

Finally, stakeholders objecting to an early finding of need for a unit ignore

that the Path 2 process can reduce the potential for over-procurement and incurrence of unnecessary costs. By identifying needed resources early in the procurement process, the CAISO can facilitate LSE's procurement of needed resources as part of their RA portfolios. If LSEs procure sufficient resources to meet their resource adequacy requirements but do not procure a needed resource, the CAISO will then have to procure the resource. This will result in LSEs ultimately paying for more capacity than is needed compared to the LSEs procuring the needed resource in the first instance.

e. The Path 2 Process Provides a Sufficient “Runway” for Resources to Make Important Planning and Retirement-Related Decisions

Although some suppliers may prefer an even longer “runway” to make planning decisions, the CAISO believes that its Path 2 proposal provides a sufficient “runway” and should not unduly hinder resource owners submitting retirement or mothball notices for the upcoming Resource Adequacy Compliance Year. Unit owners should know by May 15 if they are needed for reliability.¹⁸⁶ The CAISO will seek an RMR designation at the next feasible Governing Board meeting, and resource owners will know that they will receive an RMR contract if they are not procured by an LSE in the bilateral RA procurement process.¹⁸⁷ Alternatively, resource owners will learn by May 15 that they are not needed for reliability and can plan for retirement or mothball more than six months before their planned retirement/mothball date.

The proposed framework also provides ample time to negotiate and finalize an RMR Contract and filing with the Commission. The CAISO historically has approved RMR extensions for the upcoming year and

¹⁸⁶ The CAISO will not, and will not need to, re-study the need for the resources. There should not be any changed circumstances that would render unneeded in September a resource the CAISO found to be needed in its reliability study in May. If anything, it is more likely that any changed circumstances that occur after May 15 would reinforce or increase the need for the backstop procurement or support additional backstop procurement. This can arise due to unexpected resource retirements, long-term resource outages, and delays in the in-service dates of approved transmission and generation projects. There will not be a new load forecast for the upcoming Resource Adequacy Compliance Year between May and September. The CAISO will have already determined that there are no short-term solutions that would obviate the need for offering the RMR Contract for the upcoming calendar year. Further, the CAISO has already modeled in the transmission planning process all potential new generation and transmission facilities projected to be in service in the upcoming calendar year. The CAISO is aware of the projected in-service dates of new transmission and generation. The transmission planning base cases also account for demand response programs. Most importantly, negotiating and executing and RMR procurement should be a “last resort” and occur only after LSEs have had a reasonable opportunity to procure the resource.

¹⁸⁷ The CAISO notes that this timeframe is close to (or earlier than) the timing of the Ormond Beach and Ellwood conditional RMR designations that occurred in July.

terminations of RMR agreements at its September Board meeting. That timeline has not unduly hindered RMR contract negotiations or prevented resource owners from filing their RMR contracts by November 1. Presumably resource owners know what their costs are when negotiating RA contracts, and the RMR cost of service formula is set forth in Schedule F of the RMR agreement. Resource owners will have from mid-May onward to plan for any potential RMR filing if they do not receive an RA contract.

B. RMR Revisions Other Than the Procurement Framework

1. Eliminating Condition 1 RMR

The CAISO currently has two types of RMR designations: RMR Condition 1 and RMR Condition 2. Condition 1 pays a resource a portion of its fixed costs and allows the resource to retain all of its market revenues. Condition 2 pays the owner all of its fixed and variable costs, and it does not retain net market revenues. The resource owner alone selects either Condition 1 or Condition 2 for its unit.¹⁸⁸

The CAISO proposes to eliminate Condition 1 RMR and update the Condition 2 RMR form of Contract. The CAISO intends to use its authority to designate resources for RMR service to be used as a measure of last resort to retain resources needed for reliability that would otherwise seek to retire or mothball. A mandatory, cost-of-service RMR construct best aligns with this objective. A generating unit desiring an RMR designation will be attesting that it is uneconomic for the unit to continue operating and that retirement or mothballing is definite unless it is procured. If a generating unit is uneconomic, requiring it to earn most of its revenues in the market will likely be impractical for most resources. As a “last resort” backstop procurement mechanism for retiring, RMR should not create an opportunity for resources to earn more than their cost of service by being guaranteed recovery of a portion of their fixed costs and then earning more than their unreimbursed cost of service through the markets.

Eliminating RMR Condition 1 will also simplify the RMR framework and more clearly distinguish RMR from the CPM framework, which allows resources to retain their market revenues.

The CAISO will continue to compensate RMR resources based on traditional full cost of service rate making on a yearly basis as are current RMR Condition 2 resources.¹⁸⁹ Accepting an RMR designation is mandatory. In Section III.B.10.a,

¹⁸⁸ Article III of *pro forma* RMR Contract,

¹⁸⁹ Revised *pro forma* RMR Contract, Schedules B, F and L.

infra, the CAISO discusses why it is not changing the full cost of service compensation for RMR resources. Fixed cost payment includes actual amortized fixed costs based on booked costs in Schedule F of the RMR contract, plus annual share of any necessary capital additions, plus variable costs that the resource accrues while operating and, potentially other costs such as repair costs. The fixed costs and the capital additions will be included in the fixed RMR payment, while the variable costs will be recovered through market revenues, except that all market revenues the RMR resource earns above its variable costs will be credited against the RMR unit's fixed cost payment.¹⁹⁰ This ensures that the unit is paid no more than its actual fixed and variable costs, including the annual capital addition and repair costs. If market revenues are insufficient to cover the unit's variable costs, then market payments will be "trued up" via the bid cost recovery mechanism.

2. Must Offer Obligation for RMR Resources

a. Description of RMR MOO

RA and CPM resources have a day-ahead and real-time must offer obligation (MOO) to self-schedule or submit economic bids into both the energy and ancillary services markets, subject to specific conditions for certain types of units.¹⁹¹ The MOO is essentially a 24 x 7 obligation.

Historically, RMR resources have not had a formal must offer obligation. RMR resources operating under Condition 1 have an implicit must offer obligation because they must earn market revenues to make up for a lower fixed cost payment contribution. This incents the unit owner to participate fully in the CAISO markets by submitting market bids for all energy products and services. Condition 2 resources have a limited must offer obligation. Under the RMR Agreement, whenever the CAISO issues an RMR dispatch for local reliability or to mitigate non-competitive congestion, owners of RMR Condition 2 units must submit cost-based bids for all RMR capacity for the duration of the RMR dispatch. Under Section 6.1 of the *pro forma* RMR Contract, however, the CAISO may order the owner not to bid to participate in Market Transactions if the CAISO determines that such participation would cause a unit to exceed Contract Service Limits or impair the CAISO's ability to dispatch the unit to meet reliability needs at other times during the Contract Year.¹⁹² RMR Condition 2 resources, however, are otherwise precluded from participating in CAISO market transactions. The CAISO can also issue dispatch instructions to both RMR Condition 1 or Condition 2 RMR resources

¹⁹⁰ Revised *pro forma* RMR Contract at Section 8.1 and proposed CAISO Tariff Section 11.13.

¹⁹¹ CAISO tariff sections 40.6, 40.10.6, and 43A.5.1.

¹⁹² *Pro forma* Reliability Must Run Contract, Section 6.1.

for ancillary services, but only if bids in the Ancillary Services markets are not sufficient.¹⁹³

The CAISO proposes to establish a MOO for RMR resources like the MOO currently applicable to RA and CPM resources under existing tariff provisions in CAISO tariff section 40.6.¹⁹⁴ Further, if the RMR resource has effective flexible capacity (EFC), it will have a flexible capacity MOO for the highest flexible capacity category for which the RMR capacity qualifies under the existing tariff.¹⁹⁵ This change will update the RMR agreement to align it with the RA and CPM resources the CAISO relies on to serve demand and meet reliability needs through market optimization.

Under the CAISO's proposal, RMR resources, which will be a modified and updated version of the Condition 2 type going forward, will be obligated to submit marginal cost-based bids for start-up costs, minimum load costs and energy costs. These bids are designed to reflect the unit's full marginal costs¹⁹⁶ and allow ratepayers who are paying the entire cost of the unit to capture the full value of the resource without depressing market prices.

For example, for a gas-fired RMR resource, commitment costs bids must reflect the proxy cost methodology for start-up and minimum load costs set forth in CAISO tariff section 30.4.1.1, except that the bids may reflect a higher or lower fuel price than reflected in the CAISO's gas price index to reflect the resource's actual gas costs¹⁹⁷ and the requirement to bid the opportunity cost.¹⁹⁸

¹⁹³ *Id.* at Section 4.1 (c).

¹⁹⁴ Proposed CAISO tariff section 41.5.1; revised *pro forma* RMR Contract, Section 6.1.

¹⁹⁵ An RMR resource's obligations will be identical to the obligations of RA capacity under existing tariff provisions. RMR resources will have a flexible capacity obligation if they have an EFC. RA and CPM resources have a flexible capacity obligation only if they are procured to meet a flexible capacity RA obligation or flexible capacity RA deficiency. Under RMR, the CAISO is always procuring the entire generating unit and paying its full cost of service, including the costs of any necessary capital additions.

¹⁹⁶ Revised *pro forma* RMR Contract at Article IV and Article VI.

¹⁹⁷ Gas costs include the fuel commodity price plus transportation costs. See Attachment C to the Business Practice Manual for Market Instrument.

¹⁹⁸ Revised *pro forma* RMR Contract at Schedule L (RMR owner must submit information on remaining start-ups, minimum load and MWhs until major maintenance is required, which are not eligible limits for an opportunity cost). The RMR owner may also just include the CAISO's calculated gas price index in its commitment costs bids.

Thus, start-up costs,¹⁹⁹ including transition costs for natural gas fired RMR resources, for example, must include the following components in addition to the fuel cost:

- Cost of auxiliary power
- Greenhouse gas cost adder, if applicable
- CAISO's market services charge and System Operations Charge
- Major maintenance adder if applicable
- Opportunity cost adder, if applicable²⁰⁰

Minimum load costs²⁰¹ for natural gas fired RMR resources must include the following components in addition to the fuel cost:

- Variable operation and maintenance cost per Section 39.7.1.1.2
- Greenhouse gas cost adder, if applicable
- Market Services Charge and System Operations Charge
- Bid Segment Fee
- Major maintenance adder, if applicable
- Opportunity cost adder, if applicable.²⁰²

Energy bids for natural gas field resources must include the generated energy bid components resource adequacy generated bid components and default energy bids with the exception of the 10% adder normally included in default energy bids.²⁰³ As with commitment costs, scheduling coordinators on behalf of RMR resources may include the gas price index or actual gas costs and must also include the opportunity costs, if any:

- Variable operation and maintenance cost per Section 39.7.1.1.2
- Greenhouse gas cost adder, if applicable

¹⁹⁹ The new revised *pro forma* RMR Contract (Section 6.1) requires Commitment Costs to be calculated pursuant to the Proxy Cost Methodology pursuant to CAISO Tariff Section 30.4.1.1.

²⁰⁰ Only use-limited resources have opportunity costs.

²⁰¹ The new revised *pro forma* RMR Contract (Section 6.1) requires Commitment Costs to be calculated pursuant to the Proxy Cost Methodology pursuant to CAISO Tariff Section 30.4.1.1.

²⁰² Only use-limited resources have opportunity costs.

²⁰³ RMR resources must select either the Variable Cost Default Energy Bid or the Negotiated Option Default Energy Bid. The Variable Cost Default Energy bid for RMR resources will not include the 10% adder. See proposed new CAISO Tariff Section 39.7.1.6.

- Grid Management Charge
- Opportunity Cost, if any.

Thus, RMR resources will be required to bid into the market at their full marginal cost reflecting the bid components itemized above for gas fired resources. This will help ensure that all market commitment and dispatch decisions are based on the full marginal cost of the RMR resource similar to the bid costs we expected to see reflected in Resource Adequacy resources.²⁰⁴

The following additional bidding rule will apply to gas-fired RMR resources:

- Submit \$0 MW Ancillary Services bids²⁰⁵ and \$ 0 MW RUC bids (the \$ 0 MW RUC bid applies to RA resources).²⁰⁶

RMR resources will be entitled to a Daily RMR Capacity Payment²⁰⁷ based on the Schedule B of the applicable RMR Contract consisting of two components:

- Daily Availability Payment²⁰⁸ component reflecting the day's pro rata portion of the Annual Fixed Revenue Requirement derived from Schedule F of the RMR Contract; and the
- Daily Surcharge Payment²⁰⁹ reflecting the day's pro rata portion of any costs associated with Capital Items from Schedule L.

RMR resources will be entitled to a Daily Variable Cost Payment²¹⁰ to recover variable costs for market transactions through market revenues and the

²⁰⁴ Actual major maintenance costs will be fully compensated through the Daily Surcharge Payment, similar to the current RMR design for Legacy RMR Units.

²⁰⁵ Revised *pro forma* RMR Contract at Section 6.1. The \$ 0/MW bid for Ancillary Services recognizes that the CAISO has procured the entire generating unit for RMR service and all its attributes under a full cost of service contract. There is no marginal cost associated with the RMR resource offering its Ancillary Services Capacity.

²⁰⁶ *Id.* Under CAISO tariff section 40.6.1(4), the CAISO optimizes RA capacity participating in RUC using a \$0/MW-hour bid. RMR resources being paid their full cost of service should be treated similarly to RA resources in this regard. This practice is also consistent with the Commission's precedent to price reliability and fuel security resources as price takers in capacity market auctions. See discussion in Section III.A.2.b.*supra*.

²⁰⁷ Proposed CAISO Tariff Section 11.13.2 and proposed Revised *pro forma* RMR Contract Section 8.1

²⁰⁸ *Id.*

²⁰⁹ *Id.*

²¹⁰ Proposed CAISO Tariff Section 11.13.3 and revised *pro forma* RMR Contract Sections 8.1 and 9.1.

CAISO's Bid Cost Recovery mechanism if market revenues are not sufficient, including commitment costs adjusted to remove major maintenance costs and opportunity costs.²¹¹ Similarly, RMR resources will also be entitled to variable cost recovery for Exceptional Dispatch energy through the Daily Additional Cost Settlement.²¹²

If market revenues exceed the Daily Variable Cost Settlement, the excess revenues, which will be used to offset the Daily RMR Capacity Payment. This is similar to what is done today for Legacy Condition 2 RMR Units to implement the cost of service Legacy RMR Contracts.²¹³

In addition, for RMR costs that are not recoverable through market revenues, RMR owners can invoice the CAISO through for any variable cost that is not recoverable from market revenues. One example is motoring costs for synchronous condensers. RMR owners will be able to invoice the CAISO and be reimbursed by the CAISO.

In addition, the CAISO is making the following changes to how RMR resources will participate in the CAISO markets:

- For RMR units that do not have a tariff exemption, such as use-limited resources, CAISO will insert generated cost-based bids if the unit submits no bids (just like the CAISO does for RA units that are not exempt from bid generation rules, such as use-limited resources);²¹⁴
- As discussed in greater detail in the next section, the CAISO is eliminating the existing RMR non-performance penalty structure and subject RMR resources to the same performance incentive mechanism applicable to RA resources.
- The CAISO is modifying and "modernizing" the existing RMR provision in Section 6.1 of the *pro forma* RMR Contract that allows the CAISO to order an RMR unit not to submit bids in the market if it would cause the unit to exceed contract service limits or impair the CAISO's ability to dispatch the unit to meet reliability needs at other times during the contract year. The revised provision will permit the CAISO to direct the RMR resource to submit an outage card if the CAISO determines that

²¹¹ Major maintenance adders are recovered through the daily capacity payment. Opportunity costs are not recoverable but are used to ensure that cost based bids reflect the resources' full marginal costs as discussed elsewhere in this transmittal letter.

²¹² Proposed CAISO Tariff Section 11.13.4 and revised *pro forma* RMR Contract Sections 8.1 and 9.1.

²¹³ Proposed CAISO Tariff Section 11.13.6 and revised *pro forma* RMR Contract Sections 8.1 and 9.1.

²¹⁴ See CAISO tariff section 40.6.8 (a)-(b) and (e)

participation in the CAISO markets will impair the CAISO's ability to dispatch the unit to meet reliability needs at other times during the year.²¹⁵

b. RMR MOO is Just and Reasonable.

Most stakeholders, including the CAISO's Market Surveillance Committee and Department of Market Monitoring, support the MOO and marginal cost bidding proposals, but a few stakeholders object to them.

The RMR construct was developed at CAISO startup, before the establishment of the RA program, CPM, current versions of exceptional dispatch, renewable portfolio standards, the must offer obligation, and the need for flexible capacity. System needs and operations have changed dramatically since the RMR construct was developed. As the CAISO has advised the Commission,²¹⁶ the significant increase in variable energy resources on the system, along with increasing rooftop solar installations, distributed energy resources, and electric vehicles make load and supply output increasingly more variable and unpredictable. Now it is much more difficult, if not impossible, to predict with precision when a resource (including an RMR resource) might be needed for reliability or what specific need it might be required to address. As the CAISO indicated in its CCE3 filing and as recognized in the Commission order conditionally approving the CCE3 filing,²¹⁷ the CAISO might need resources (including use-limited resources) at any time. It is important to "modernize" the RMR construct to reflect current and expected future operating conditions, needs, and increasing system variability and unpredictability. This is not the "old world" in which the RMR construct originated. In this rapidly changing environment, the CAISO cannot predict with certainty the specific hours every day a resource will be needed during the year and that the resource will only need to be available during those specific hours. The CAISO needs resources to be available to meet reliability needs at any time. Approving a MOO for RMR resources will ensure that resources for which the CAISO is paying the full cost of service will be available to meet reliably needs whenever they arise through the market optimization.

To support CAISO reliability and resilience effectively under current and expected conditions, RMR units should have a MOO for the energy and ancillary service markets similar to RA and CPM resources. A MOO for RMR resources that corresponds to the resource's capacity attributes, *i.e.*, system, local, and/or flexible

²¹⁵ Revised *pro forma* RMR Contract at Section 6.1(f). RMR units will no longer have contract service limits. These provisions were intended to limit operation of the RMR Unit to the five (5) year historical average and provide additional compensation when the use attributable to reliability dispatch exceeded this average.

²¹⁶ CAISO Tariff Amendment Filing to Implement Commitment Cost Enhancements Phase 3 Initiative, Docket No. ER18-1169, pp 3-4, 14, March 23, 2018 (CCE3 Filing). See also *Cal. Indep. Sys. Operator Corp.*, 163 FERC ¶ 61,211 at P 5 (2018) (CCE3 Order).

²¹⁷ CCE3 Filing at 3-4, 14; CCE3 Order, 163 FERC ¶ 61,211 at P 5.

capacity, and the requirement that RMR resources submit market bids reflecting their marginal costs, is appropriate because the RMR designation applies to the entire RMR unit, and ratepayers are paying the full annual fixed costs of the RMR resource, including capital additions and repairs. Further, as discussed in Section III.B.7, *infra*, the CAISO is providing RA credits for the capacity of the RMR unit to LSEs being allocated the costs of the designation. Under these circumstances, less than full participation of the RMR resource could lead to unnecessary over-procurement (including potential additional CAISO backstop) and ratepayers not receiving the full value of the resource for which they are paying “full freight.” It is just and reasonable for RMR resources to have a MOO and participate in the market for all hours the resource can physically submit bids, just like comparable RA and CPM resources, with the market making commitment and dispatch decisions based on the bid cost of the resource.

A MOO for RMR units also is a key element of the CAISO’s proposal to align RMR with the RA and CPM reliability capacity constructs and streamline the process for dispatching market resources economically to meet the system’s needs. With the MOO in place, the CAISO will dispatch RMR resources using the same process used to dispatch RA and CPM resources. The proposed approach aligns dispatch of RMR resources with the market mechanisms used to dispatch RA and CPM capacity to maintain system and local reliability using modeled constraints that enable market software to select resources to meet grid operational needs and enables the CAISO to use Exceptional Dispatch as necessary in the same way CAISO dispatches any other generator. The alternative to market-based dispatch for Condition 2 resources would be to continue manually committing them based on study cases that can result in suboptimal dispatch of the RMR resources, distort market prices, and impose an additional and unnecessary burden on CAISO operators. The MOO ensures that resources are bidding into the market every day as opposed to these resources staying outside of the market and waiting for a CAISO dispatch.

A couple of stakeholders argue that the proposed MOO could inappropriately suppress prices in the energy markets. The CAISO disagrees. ISO/RTO markets are based on the premise that, in a competitive wholesale electricity market, a resource’s offer will be approximately equal to its marginal costs.²¹⁸ In the CAISO markets, this includes major maintenance and opportunity costs, as applicable. The CAISO will require RMR resources to include these costs, and all other applicable costs, in their market bids. Thus, bids from RMR resources will not be below their marginal costs. The proposed cost-based pricing of RMR market bids is consistent with the Commission’s competitive pricing principles.

²¹⁸ See, e.g., *Offer Caps in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Notice of Proposed Rulemaking, FERC Stats & Regs. ¶32,714 at PP 2-3, 7-10, 44-48, 53 (2016), *Final Rule*, Order No 831, FERC Stats. & Regs. ¶31,387 at PP 2-7, 34-37 (2016).

One stakeholder argued that a MOO with cost-based bids may be problematic for an RMR unit near the end of its life because the unit may have to run more than it has in the past. This may or may not be true in individual cases, but the argument ignores that RMR resources with high marginal costs, reflecting fuel and heat rate and major maintenance costs and other variable costs, will have high RMR cost-based bids and therefore will run infrequently compared to lower costs resources. Further, RMR resources will have to bid any major maintenance adders and opportunity costs, if applicable. As discussed above, the CAISO will require an RMR resource that has eligible use-limits to apply to for use-limited status and establish an opportunity cost during the RMR agreement negotiation process. Also, the CAISO is proposing that RMR resources can establish an opportunity cost based on remaining start-ups, run hours, or MWhs prior to their next major maintenance investment. This authority may produce higher opportunity costs for a unit that would be available under the CCE3 process, which will help limit the use of the resource and avoid unnecessary investments in a specific RMR contract year.

Further, use-limited RMR units can manage their limits through use of outage card(s) under existing tariff section 40.9.3.4 (d) and Section 9.3.3 of the Reliability Requirements Business Practice Manual to effectively manage their use limitations.²¹⁹

Finally, as a last resort, under Section 6.1 (f) of the revised *pro forma* RMR Contract the CAISO has the authority to direct an RMR unit with use limitations under the CAISO tariff or the RMR Contract to submit an outage card if necessary to preserve its availability to meet reliability needs later in the year. This “modernizes” the CAISO’s existing authority under Section 6.1 of the *pro forma* RMR Contract to order an RMR unit not to participate in market transactions so it is more consistent with the current market paradigm that contemplates the use of outage cards.

Finally, practices of other ISOs and RTOs illustrate the reasonableness of the CAISO’s MOO proposal, combined with a marginal cost bidding requirement. The NYISO’s Commission-approved RMR framework includes a MOO for RMR units and requires the resource owner to submit bids at or below a NYISO-

²¹⁹ The CAISO tariff requires the operator or scheduling coordinator of a generator that will be going on an outage to, among other things, provide the CAISO with information about the outage and work to be performed (*i.e.*, submit an outage card) using the nature-of-work categories set forth in the business practice manual. CAISO tariff section 9.3.3(2). The Business Practice Manual for Outage Management lists various nature-of-work outage categories for the operator or scheduling coordinator to select from when it submits an outage card for the generator outage. These nature-of-work outage categories include several that are specific to use limits – namely, annual use limit reached, monthly use limit reached, other use limit reached, and short-term use limit reached. Business Practice Manual for Outage Management, Version 17, at 18-19 (Oct. 31, 2018).

determined reference level.²²⁰ In the NYISO, if an RMR generator faces operational constraints, the NYISO and the generator will develop reference levels that will permit the generator to operate consistent with the identified constraints, while ensuring that the generator will be available to (1) resolve the reliability needs the generator is being retained to address, and (2) for an economic commitment when appropriate.²²¹

Similarly, deactivating units in ISO-NE needed for reliability that execute cost of service agreements under ISO-NE's Market Rule 1 are treated as Generating Capacity resources with a Capacity Supply Obligation.²²² These resources not only have a Day-Ahead and Real-Time must offer obligation,²²³ they must submit energy and ancillary services bids equal to their Stipulated Variable Costs, which are intended to reflect the unit's marginal costs.²²⁴

A MISO System Support Resource "shall offer its SSR Capacity into the MISO's Energy and Ancillary Services Market to the extent permitted by the Operational and Environmental Limitations when the SSR Unit(s) is/are available and not needed to address the reliability issues pertaining to this Agreement, consistent with Section 38.2.7."²²⁵ Offers into the MISO markets "shall be cost-based, including Start-up, No-Load, and Energy Offers."

²²⁰ NYISO Open Access Transmission Tariff, , Attachment FF, Appendix C Form of RMR Agreement, Sections 3.5, 3.6; NYISO Market Administration and Control Area Services Tariff, Attachment H, Section 23.6.1 and 23.6.2. Under Section 3.5 of the NYISO's *pro forma* RMR agreement, the "Owner shall offer for sale into the Day-Ahead and Real-Time Markets all of the Energy and Ancillary Services each RMR Generator is capable of providing by submitting ISO-committed flexible bids (offers) at or below (equally or less restrictive than for physical parameters) the Reference Levels that are currently on file with the ISO and approved for use by the ISO's MMA." The section goes on to state that "RMR Generators that are not Installed Capacity Suppliers, or that have not sold all of their Unforced Capacity, must still be offered into the Energy and Ancillary Services markets consistent with this obligation." Further, the section states "[c]onsistent with Section 23.6.1.1 of the Services Tariff, Owner shall offer Energy, Operating Reserves and Regulation at prices that are equal to or less than each RMR Generator's ISO-approved Reference Levels." Under Section 3.6 of the NYISO's *pro forma* RMR agreement, "[c]hanges to an RMR Generator's reference levels must be made consistent with the mitigation measure rules specified section 23.6.2 of MISO's Market Services Tariff. "Changes to an RMR Generator's variable costs for purposes of providing Energy, Reserves, and Regulation shall be addressed via modifications to the RMR Generator's Reference Levels using the adjustment process set forth in Section 23 of the Service Tariff." Cost-based reference levels are intended to reflect a resource's marginal costs. NYISO Market Administration and Control Area Services Tariff, Section 23.3.1.4.1.3.1 and 23.6.2.

²²¹ NYISO Market Administration and Control Area Services Tariff, Section 23.6.2.3.

²²² ISO-NE, Market Rule 1, Appendix I, Section 3.1.

²²³ *Id.*, Section III.13.6.1.1.1.

²²⁴ *Id.*, Appendix I, Sections 3.4 and 3.4.1.

²²⁵ MISO FERC Electric Tariff, Attachment Y-1, Section 8C(4).

3. Applying the Resource Adequacy Availability Incentive Mechanism to RMR Resources

Under Section 8.5 of the existing *pro forma* RMR Contract, absent a force majeure event, the CAISO applies a non-performance penalty to a RMR unit that fails to comply with a CAISO dispatch instruction. Under the existing RMR agreement, the CAISO only issues dispatch instructions to RMR units: (1) for energy to meet a local reliability need or manage congestion on non-competitive paths and (2) except for blackstart or voltage support required to meet local reliability needs, for ancillary services only if the available bids in the ancillary services markets or do not provide sufficient capacity to meet the CAISO's requirements. Under Section 8.5, a unit is deemed compliant with a dispatch notice if it delivers at least 97 percent of the requested MW or not more than 2 MW less than the requested MW.

Under Schedule B—Monthly Option Payment of the *pro forma* RMR Contract, RMR units have target availability hours (TAH). An RMR unit's TAH represents the number of hours the CAISO expects the unit to be available and not on outage during the year. The TAH calculation starts from the 8,760 hours of the year and then subtracts both the hours corresponding to the unit's long-term planned outages and the unit's average hours on outage from other outage types over the prior five years. The hourly availability charge is equal to the annual fixed revenue requirement (AFRR) divided the TAH. The annual fixed payments for the RMR Unit are determined by multiplying the actual available hours by the hourly availability charge. The fixed portion of the payments are capped at the annual total fixed cost value; however, if the RMR Unit is available for fewer hours during the year than the TAH, then the RMR Unit will under collect on its fixed costs.

RA and CPM resources are subject to the Resource Adequacy Availability Incentive Mechanism ("RAAIM"), set forth in Section 40.9 *et seq.* of the tariff. Through RAAIM, the CAISO assesses monthly non-availability charges and makes monthly availability incentive payments to RA and CPM capacity that falls below 94.5 percent availability or exceeds 98.5 percent availability, respectively, during specified availability assessment hours. The RAAIM availability assessment hours for non-flexible system and local capacity comprise the five-hour period from 4:00-9:00 p.m.²²⁶ The RAAIM assessment hours for Category 1 flexible capacity, which is the most common category of flexible capacity, are from 5:00 a.m. – 10:00 p.m.²²⁷ The existing tariff establishes a uniform RAAIM price for RA resources to

²²⁶ CAISO tariff section 40.9.3.1.

²²⁷ *Id.* at 40.9.3.2 and 40.10.6.1(a)(1). Different assessment hours apply to Category 2 and Category 3 flexible capacity, which are intended to apply to narrowly targeted resource-types. See CAISO tariff section 40.9.3.2 and 40.10.6.1(a) (2) and (3). BPM for Reliability Requirements section 7.1.1.

determine their the total RAAIM charges or incentive payments. The RAAIM price is set at 60 percent of the CPM soft offer cap.²²⁸

The CAISO proposes to eliminate the existing availability and performance mechanisms in Sections 8.5 and 8.6 of the *pro forma* RMR Contract. Instead, RMR resources will be subject to the same incentive mechanism that applies to RA and CPM resources.²²⁹ For example, for an RMR unit without effective flexible capacity, the CAISO will assess RAAIM based on the five RAAIM assessment hours established each year. For an RMR resource with effective flexible capacity, the CAISO will assess RAAIM based on the highest category of flexible capacity the resource has. RMR units with effective flexible capacity likely will be Category 1 and thus will have an assessment period of 17 hours per day, seven days per week. The CAISO proposes that the RAAIM penalty price it will use to calculate RAAIM charges for RMR resources that are available at levels below the RAAIM threshold will be the RMR agreement price. The price paid to RMR resources is known to the CAISO; whereas, RA bilateral prices are not. Also, accepting RMR designations is mandatory. It would be unjust and unreasonable to require an RMR unit to face a potential RAAIM price higher than its contract price. Such a RAAIM price would be overly punitive because it would result in the unit paying more for RAAIM than it is being paid under the RMR Contract.

To mitigate their exposure to RAAIM penalties, RMR resources can provide substitute capacity for both outages using the same rules applicable to RA and CPM resources.²³⁰ RMR units in local capacity areas will be treated as Listed Local RA Capacity. When Listed Local RA Capacity is on outage for a non-RAAIM-exempt nature of work, that RA Resource must provide substitute capacity from a resource in the same Local Capacity Area. If that “listed local” resource fails to do so, then it will face RAAIM exposure for the outage.²³¹ The logic behind this approach is that Listed Local RA Capacity has been identified, through the RA showing process, as having been procured specifically to meet a local need. To mitigate the impact of its outage, the substitute capacity should be in the same local capacity area. When the CAISO enters a RMR contract with a unit, it will procure all of that unit’s attributes, including its ability to meet a local need if it is in a local capacity area. The CAISO’s proposal to treat RMR units in a local area as being Listed Local RA Capacity aligns the RMR unit’s substitution obligations with the obligations of the category of capacity being procured and recognizes that CAISO ratepayers are paying the unit’s full cost of service.

²²⁸ CAISO tariff section 40.9.9.6.1(b).

²²⁹ Proposed CAISO tariff section 41.7.

²³⁰ Proposed CAISO tariff section 41.7 and CAISO tariff section 40.9, 40.

²³¹ CAISO tariff, Appendix A, Definitions—Listed Local RA Capacity.

In response to the MSC's recommendation regarding applying RAAIM to meet peculiar or "niche" reliability needs, the CAISO proposes to add a provision to the RMR contract that will allow the CAISO to offer a different non-performance mechanism if the CAISO believes that RAAIM is not adequate given the CAISO's reliability needs and the unit's characteristics.²³²

The CAISO will calculate RAAIM charges and RAAIM payments separately from the daily RMR settlements. The CAISO will treat RMR Capacity the same way as RA Capacity except that the RAAIM penalty for RMR Capacity will be based on the RMR Capacity Payment.²³³ RAAIM incentive payments are available only if other RA or CPM resources incur RAAIM charges. Some resources must perform below the tolerance band for resources performing above the tolerance band to receive an incentive payment. The redistribution of payments from under-performing resources to performing resources provides the appropriate incentive for all resources, including RMR resources, to perform when they are most needed. The strong incentive for resources to perform should reduce the number of hours the system faces operational challenges, resulting in a more reliable system. Also, RAAIM is calculated monthly, not annually. This provides some opportunity for an RMR resource that may have under-performed in one month to earn back some of its lost cost of service by performing better in another month (assuming other resources under-performance).²³⁴ Otherwise the RMR resource would be "locked-in" for the entire year at receiving less than its cost of service.

It is important that RA, CPM, and RMR resources have performance incentives so they are motivated to be available and submit bids. RA and CPM resources are subject to the RAAIM performance incentive mechanism, and the CAISO believes that RMR resources, too, should be subject to RAAIM, especially given that RMR resources will have the same MOO as RA and CPM resources. The availability and performance mechanisms in the existing *pro forma* RMR do not incent a resource to comply with its MOO. This unduly limits the CAISO's ability to streamline the RMR settlement process by requiring the CAISO to track and validate availability in a separate tracking system. In particular, the RMR system does not track an RMR unit's compliance with its MOO. The CAISO believes applying the same performance mechanism to RA, CPM, and RMR resources, in conjunction with a MOO, is the best solution and will effectively support system reliability. RMR resources will be subject to RAAIM, like RA and CPM resources, and the CAISO will no longer use the separate availability payment incentive or the non-performance penalty provisions in the existing *pro forma* RMR Contract. This will greatly streamline settlements, improve market participation of RMR resources

²³² Revised *pro forma* RMR Contract, Section 8.5.

²³³ Proposed CAISO Tariff Section 40.9.6(e). Revised *pro forma* RMR Contract at Section 8.5.

²³⁴ RAAIM payments and charges are separately settled and are not part of the RMR Daily Settlement at proposed CAISO Tariff Section 11.13.

and reduce the burdens on CAISO staff. CAISO staff spends approximately 32 hours per month separately processing four RMR invoices. RMR Owner staff and Responsible Utility staff also spends time each month preparing and reviewing the RMR Invoices.

Stakeholders offered various reasons why applying RAAIM to RMR resources is inappropriate -- LSEs contend that applying RAAIM to RMR resources is not stringent enough; some suppliers argue that applying RAAIM is too strict. Combined with the MOO, applying RAAIM to RMR resources -- just as the CAISO applies RAAIM to RA and CPM resources -- effectively balances these competing concerns. Applying RAAIM to RMR aligns the RA, CPM, and RMR procurement programs in terms of the incentives for availability and bidding, streamlines the CAISO's application of penalties to resources providing reliability services thus reducing the administrative burdens on the CAISOs, better supports the CAISO's reliability needs, and better incents RMR resources to comply with their MOO compared to the existing penalty structure in the RMR agreement.²³⁵

a. More Stringent Incentive Measures are Unnecessary

The Condition 2 form of RMR Contract, which will be the only form of RMR that emerges from this initiative, contains no incentives for RMR units to submit market bids. The existing non-performance penalties in the RMR contract are not based on bidding or compliance with a resource's MOO. RAAIM provides such an incentive. The availability incentive mechanism in the *pro forma* RMR Contract also lacks incentives designed to ensure that resources are always available because it only requires the RMR resource to be available for the aggregate of hours equal to the Target Availability Hours, which does not require availability during any specific hours and is based on a generating unit's historical average performance. On the other hand, the combination of a MOO and RAAIM will provide for and incent increased availability of a resource for which the CAISO is paying its full cost of service.

Some LSEs argue that RAAIM cannot ensure RMR resources will be available when needed to meet reliability because RAAIM only assesses penalties in specified hours of the day, which may not reflect all of the hours an RMR resource is needed. They claim that RMR resources will have no incentive to provide availability during hours outside of the RAAIM availability assessment hours (4:00-9:00 p.m. for an RMR resource that only has "generic" system and/or local capacity attributes), and 5:00 a.m.–10:00 p.m. for an RMR resource that has Category 1 flexible capacity attributes). They suggest that the penalty for RMR resources should be based on their actual performance over all hours of the day

²³⁵ The existing penalty structure in the RMR Contract consists of payments for availability reported in the outage management system, non-performance penalty when requested service is not delivered, and the long-term planned outage adjustment. The availability payments only incent the RMR Unit to be available (not on outage) for at least the number of hours equal to its five-year historical average. It does not incent them to participate in the market.

(i.e., 24 x 7) without the RAAIM tolerance band. These LSEs argue that because the CAISO is paying an RMR resource its full cost of service, more stringent availability measures than RAAIM are required.

The CAISO strongly disagrees that RMR resources require a different availability metric than RA and CPM resources or that RMR resources will not be available to meet reliability needs under RAAIM.²³⁶ This strong disagreement is founded on the following 10 considerations. First, the RAAIM assessment hours reflect the hours the CAISO has identified as being the most important for resources to be available in the market. Second, if RMR resources are not available in the market, the CAISO will have the right to issue Exceptional Dispatches if necessary for reliability.

Third, the opponents of applying RAAIM to RMR resources ignore that if an RMR resource has effective flexible capacity it will have a flexible capacity must offer obligation. The CAISO assesses RAAIM for Category 1 resources over a 17-hour period, seven-days-a week. The CAISO expects that resources likely to receive an RMR designation, i.e., gas-fired resources, will be a Category 1 flexible capacity resource. In that regard, every resource that has received an RMR designation, Exceptional Dispatch CPM, or annual CPM, or been mothballed in the past two years would qualify as a Category 1 flexible capacity resource. The CAISO's review shows that all gas-fired resources under PGAs, except gas fired cogenerators, qualify as Category 1 flexible capacity. Resources most likely to be designated as RMR resources will already have a 17-hour must offer obligation. It is unreasonable to suggest that an RMR resources will be available 17 hours a day to meet the RAAIM assessment hours and then mysteriously be unavailable during the seven late night and early morning hours.

Fourth, in response to the MSC's recommendation, the CAISO has reserved the right in the revised *pro forma* RMR Contract to offer a different availability metric if for some unexpected reason if it believes that RAAIM is inadequate given the specific reliability needs and resource characteristics of the RMR resource (e.g., synchronous condensers that do not produce energy such as those associated with the Huntington Beach synchronous condensers that were under RMR contract.) The Commission would need to accept any "custom" metric as a non-conforming change to the *pro forma* RMR contract. Thus, the CAISO is retaining the ability to seek a different availability measure if necessary.

²³⁶ RMR resources will be expected to meet the same needs met by RA and CPM resources. That is why the CAISO is providing RA credits for RMR designations. The RAAIM assessment hours typically represent the hours of greatest need for the CAISO, and the CAISO reassesses those hours annually. The opponents of RAAIM are hanging on to the narrow concept of RMR that may have been appropriate 20 years ago, but is no longer appropriate given current and expected future circumstances.

Fifth, these opponents of RAAIM ignore that RMR resources will have the same MOO applicable to RA and CPM resources. Non-use-limited gas-fired resources have a 24 x 7 MOO under Section 40.6. The CAISO expects that resources likely to be designated as RMR will have a 24 x 7 MOO. The Commission has recognized that a capacity resource's failure to meet its energy market obligations may be a tariff violation.²³⁷ In that regard, in ruling on ISO-NE's pay-for-performance proposal, the Commission noted that under the capacity market rules a resource unavailable during a shortage event would be subject to penalties. However, the Commission noted that even if there is no shortage event, resources with a capacity supply obligation had a day-ahead must offer obligation and to leave that offer open to follow ISO-NE dispatch instructions. The Commission stressed that failure to meet these obligations could result in a tariff violation. Similarly, if an RMR resource fails to follow its must offer obligation, it could be subject to a Commission investigation regarding a tariff violation. This incents an RMR resource to be available outside of the RAAIM assessment hours. The CAISO notes that it is including in Section 6.1 of the revised *pro forma* RMR Contract a provision whereby the CAISO will monitor compliance with an RMR resource's bidding obligation. This will enable the CAISO to promptly identify any non-compliance and take appropriate action.

Sixth, the CAISO will insert bids for non-use-limited RMR resources if they do not bid, just like the CAISO does for non-use-limited RA resources. Thus, any concern that RMR resources will not be bidding 24 x 7 is restricted to RMR resources that qualify for a bid insertion exemption, such as use-limited RMR resources. Under section 6.1 (e) of the Revised *pro forma* RMR Contract the CAISO will monitor compliance with bidding obligations of those RMR resources that are exempt from bid insertion. Thus, the CAISO will be well-positioned to refer to the Commission any RMR resource that are not complying with their must offer obligations. This provides an additional layer of protection to stakeholders that are concerned RMR resources might not be available to maintain reliability when needed. The MOO, RAAIM, and the Commission's market behavior rules are an effective and sufficient combination to ensure that RMR resources are available when needed to meet the CAISO's needs.

CAISO bid insertion essentially makes RAAIM a forced outage metric for RMR resources. It is not credible to suggest that RMR owners will, without adverse consequence, provide a resource every day only during the RAAIM availability assessment hours, while taking forced outages during the other hours of the day. The CAISO's experience is that forced outages generally last more than a few hours and typically for a day or longer. Given this, the proposed assessment hours for each day will effectively provide an incentive for the RMR resource to be

²³⁷ *ISO New England, Inc., et al.*, 147 FERC ¶ 61,172 at PP 37-38 (2014). The Commission has also recognized that strong market behavior rules and the CAISO's must-offer obligation is sufficient to prevent the exercise of market power. *Cal. Indep. Sys. Operator Corp.*, 112 FERC ¶ 61,310 at P 39 (2005).

available. An RMR resource out for a full day will have an availability of 0% for that day whatever the RAAIM assessment hours are.

Seventh, RA, CPM, and RMR resources all meet the CAISO's reliability needs and will have the same MOO. RA and CPM resources may meet narrow reliability needs, and they do not have a 24 x 7 performance measure. Further, the CAISO is proposing to provide RA credits for RMR designations to LSEs. The CAISO believes that a resource required to meet a specific reliability need should not have a different CAISO availability obligation depending on whether it is procured as RA, RMR, or CPM; yet, that is what the opponents of RMR RAAIM are essentially proposing. For example, all resources in a local capacity area help meet the CAISO's local capacity requirements. An RMR resource need not have a different availability obligation than the 20,000 MW plus of RA capacity in a local capacity area. An example that highlights the reasonableness of the CAISO's approach is the Feather River generating unit that the CAISO procured for RMR service to meet voltage support needs in a local area. Until 2018, the Feather River unit was meeting the same needs as an RA unit without having a 24 x 7 RAAIM assessment period. When the resource's RA contract was not renewed, the CAISO designated the resource for RMR service so that it could continue to meet the need that it served when the resource was under an RA contract. It is unclear how a resource that satisfied the specific voltage support needs as an RA resource through application of RAAIM would no longer satisfy those same needs through application of RAAIM when the resource becomes RMR and has the same offer obligations as an RA unit. Maintaining a separate set of incentives for each individual RMR resource creates inconsistencies between capacity procurement mechanisms, adds unnecessary complexity to the CAISO's systems and processes, and creates inefficiencies in the CAISO's market optimization and settlement processes. Under the enhancements proposed in this filing, the CAISO will no longer be operating in a regime where it issues manual dispatch instructions to RMR resources when it needs them. RMR resources will have a 24 x 7 MOO and will be dispatched by the market as needed and subject to exceptional dispatch if manual dispatches are needed for reliability, such as may occur during low prices hours of the day even with a MOO. In arguing that a generating unit meeting a reliability need must have a performance incentive meticulously crafted to match that unique need, these opponents of the proposal have waged a collateral attack on RAAIM.

Eighth, LSE concerns that RMR resources might be unavailable when needed for reliability are also effectively addressed by the CAISO's outage coordination process in Section 9 of the CAISO tariff. Under Section 7.2 of the revised *pro forma* RMR Contract, RMR units will be subject to the outage provisions of Section 9 of the CAISO tariff. Under tariff section 9.1, the CAISO is authorized to coordinate and approve outages in accordance with applicable Reliability Criteria. Whenever a resource requests a planned outage, CAISO operations engineers review the time frame of the outage relative to other outages and system operating

conditions to ensure the outage does not impact reliable operation of the grid. Operations engineers will not approve RMR outages affecting reliable grid operation and will require mitigation or cancellation of other outages before approving an outage. The CAISO has successfully implemented its outage coordination and approval process to maintain reliability and will continue to do so in the future. This process has ensured that RMR resources, RA resources, and CPM resources have been available when needed to meet reliability. Specifically, the CAISO can deny, cancel, or reschedule an outage that is likely to have a detrimental effect on the efficient use or reliable operation of the grid.²³⁸

Ninth, it does not follow that an RMR resource should be assessed over a 24 x 7 period solely because it is paid its full cost of service. The existing Condition 2 construct does not require an RMR resource to meet such an availability threshold to receive full cost recovery. Also, as discussed above, paying RMR resources cost of service does not constitute a windfall. Availability measures must be just and reasonable and cannot be punitive. The Commission has found RAIM to be just and reasonable for RA and CPM resources that retain all market revenues; it is likewise just and reasonable for RMR resources that are paid their cost of service, but retain no net market revenues.

Tenth and finally, other ISOs and RTOs pay reliability resources their full cost of service and impose a MOO on them, but they do not assess performance penalties based on 24 x 7 market participation. The practices of other ISOs and RTOs regarding capacity and backstop resources highlight the reasonableness of the CAISO's approach.

The NYISO, which imposes a MOO on RMR generators, applies no "customized" performance metric for an RMR resource failing to be available at a specified level.²³⁹ Rather, in the NYISO, RMR generators face the same penalties and deficiency charges applicable to generators generally under the NYISO tariff.²⁴⁰

²³⁸ CAISO tariff sections 9.1, 9.3.1.3, 9.3.1.3.3.1 (c) (2), 9.3.1.3.3.2 (c) (2), 9.3.3.3.3.3 (c) (3), 9.3.1.1.1.4 (c) (2)-(3), 9.3.6.5.1, and 9.3.6.9-9.6.3.10.

²³⁹ See NYISO Open Access Transmission Tariff Att. FF, Appendix C, Form of RMR Agreement.

²⁴⁰ *Id.* at Section 4.7. The NYISO can also terminate the RMR agreement if the RMR generators fail to meet the minimum performance standard, minimum availability standard, or Operation to Address the Reliability Need Standard specified in the contract. *Id.* at Section 2.2.2. The NYISO Form of RMR Agreement also provides for an availability incentive payment and a performance incentive payment if a resource performs above specified baseline availability and performance levels; however, there is no mechanism for charging an RMR resource that performs below its baseline availability and performance levels. *Id.* at Sections 4.4 and 4.5.

In ISO-NE, the performance assessment (and potential penalties) applicable to a capacity resource with a Capacity Supply Obligation only apply when there is a Capacity Scarcity Condition.²⁴¹ If a resource provides more than its share of energy during these periods it receives an incentive payment, if it provides less than its share it will receive a negative capacity payment.²⁴² A deactivating generator that ISO-NE finds is needed for reliability and operates pursuant to a cost of service contract is treated as a Generating Capacity Resource with a Capacity Supply Obligation.²⁴³ Under the *pro forma* cost of service agreement, such resource has no performance metrics other than those generally applicable to other capacity resources in ISO-NE.²⁴⁴

Similarly, the Commission approved PJM's proposal to assess the performance of capacity performance resources only during performance assessment hours, which would be triggered when PJM declares an emergency action.²⁴⁵ Like ISO-NE, PJM imposes a charge on resources that under-perform during an emergency event, and pays resources that over-perform.²⁴⁶

System Support Resources in MISO are only expected to operate in the hours and at the levels instructed by MISO. They are subject to a performance-related adjustment if they fail to respond within a tolerance band of 95 percent,²⁴⁷ which is close to the CAISO's 94.5 percent level where RAIM charges kick-in.

The CAISO's proposal to apply its existing RAIM scheme (including the generally applicable RAIM assessment hours) to RMR resources is not unjust and unreasonable when compared to the performance incentive mechanisms other ISOs and RTOs have in place for capacity resources providing reliability services. The availability assessment hours under RAIM are those that reflect the period of greatest CAISO need and when the availability of capacity is most critical to maintaining system reliably. RAIM, which applies to specified hours every day, provides a broader assessment period relative to the more limited penalty assessment periods of other ISOs and RTOs, which generally are tied to emergency events, capacity scarcity conditions, or ISO reliability dispatches.

²⁴¹ *ISO New England, Inc., et al*, 147 FERC ¶ 61,172 at PP 6, 36-38 (2014).

²⁴² ISO-NE Market Rule 1, Section III. 13.7.2.4-III.13.7.3.

²⁴³ *Id.*, Appendix I, section 3.1.

²⁴⁴ *See id.*

²⁴⁵ *PJM Interconnection, LLC*, 151 FERC ¶ 61,208 at PP 6, 13, 77, 106-110, 158 (2015). The Commission accepted PJM's proposal to rely on an estimate of 30 hours of emergency action to formulate the non-performance charge rate. *Id.* at P 163.

²⁴⁶ PJM Open Access Transmission Tariff, Attachment DD, Section 10A.

²⁴⁷ MISO FERC Electric Tariff, Attachment Y-1, Standard Form System Support Resource Agreement, Section 9.B.

Some LSEs argue that RMR resources should not be permitted to provide substitute capacity because there may not be another resource available to meet the specific reliability need for which the CAISO procured the RMR resource. They also note that the substitute resource can retain all market revenues unlike the RMR Resources and, although the substitute resource will be subject to RAAIM, it will have a different RAAIM penalty. They argue that this undermines the intent of crediting net market revenues against the RMR cost of service and allows the resource owner to be compensated with no non-performance penalties.

The CAISO expects that RMR designations will continue to be primarily for local capacity needs. All RMR resources in a local capacity area will be treated as Listed Local RA Capacity, which means they can only provide substitute capacity from the same local capacity area. This ensures that any substitute resource will meet the CAISO's local capacity area requirements. Permitting an RMR resource to provide substitute capacity from the same local area may enable the CAISO not to issue a CPM designation to another resource in the local capacity area. But forbidding a local RMR Resource from procuring substitute capacity in the same local capacity area will increase the likelihood of the CAISO to issue a CPM designation, which carries a two month term (and capacity payment) because it is in a local capacity area. Allowing RMR resources to provide substitution benefits the CAISO by providing another reliability resource in the local area and benefits LSEs by avoiding a potential CPM designation. Having a substitute resource is a far superior option than having no substitute capacity all. A prudent operating framework should incent substitution.

As with similarly situated RA and CPM generating units, RMR generating units designated for flexible capacity needs can provide substitute capacity in the same or a higher flexible capacity category, *i.e.*, an RMR resource with Category 1 flexible capacity must provide substitute capacity from a Category 1 flexible capacity resource.²⁴⁸ Thus, substitutions for system and flexible capacity RMR resources pose no potential reliability issues.

Further, the CAISO plans outages to mitigate any adverse reliability impacts. The CAISO will do the same for RMR resources under RAAIM. Also, as discussed above, RA resources can meet a specific reliability need (that may not be met by any other resource), and they can provide substitute capacity. The CAISO has reliably operated the grid allowing RA resources to procure substitute capacity under these circumstances; there is no reason the CAISO will be unable to do the same by allowing RMR resources to procure substitute capacity. Not allowing RMR resources to provide substitute capacity in a framework where the CAISO is

²⁴⁸ CAISO Tariff Section 40.9.3.6.3 (RAAIM substitution rules). Revised *pro forma* RMR Contract Sections 8.1 (RMR Resources are subject to all Resource Adequacy tariff provisions) and 8.5 (RMR Resources are subject to the same performance incentive mechanism as Resource Adequacy Resources).

seeking to align RA, CPM, and RMR procurement would be unjust and unreasonable. Any substitute capacity an RMR resource procures is subject to RAAIM for failing to comply with its MOO.

Finally, any claim that substitution will allow an RMR resources to be fully compensated and avoid all of its obligations under the RMR contract is mere hyperbole, and unfounded. As an initial matter, substitution only applies when the RMR resource is on an outage, and the RMR resource has an obligation to find and procure the substitute capacity. If RMR resources seek to provide substitute capacity when they are not on a legitimate outage, they face potential referral to the Commission. Thus, suggestions of rampant substitution are speculative. Importantly, if an RMR resources fails to perform a material obligation under the RMR Contract, the CAISO can terminate the agreement.²⁴⁹ Thus, if an RMR resource unit is failing to perform or meet the CAISO's needs, the CAISO can treat such non-performance as a default and terminate the contract.

b. An Availability Metric Less Stringent than RAAIM is Inappropriate

The arguments raised by some suppliers objecting to RAAIM do not warrant its rejection. RMR resources units likely will be resources that sought (and did not receive) RA contracts. RAAIM applies to RA resources. If RAAIM would have been acceptable to a supplier under an RA contract, it should be no less acceptable under an RMR contract where sources are recovering their full cost of service, plus the costs of capital additions. The substitution rules applicable to RA and CPM resources will apply to RMR resources as well; so, they are not being treated in an unduly discriminatory manner.²⁵⁰ That resource owners might prefer a less robust availability scheme that allows less performance from them does not mean that RAAIM is unjust and unreasonable. They will have a MOO just like RA resources, and a comparable availability metric should apply. One stakeholder suggested that RAAIM might be problematic for a resource approaching the end of its life. An initial matter, RAAIM is not a performance metric; it is an availability metric that only assesses a unit's compliance with its MOO.

Further, as discussed in Sections II.E and III.B.2, *supra*, the CAISO identified the several mechanisms available to address this concern effectively. The CAISO

²⁴⁹ See revised *pro forma* RMR Contract sections 2.2 and 11.4.

²⁵⁰ The CAISO permits resources to take planned outages without being subject to potential RAAIM penalties if they provide substitute capacity and believes that RMR resources do not face significantly different exposure in finding substitute capacity than do RA or CPM resources that are located in a local area. The ability to substitute for both planned and forced outages would be available to RMR resources because the resources will be modeled like RA and CPM capacity in the CAISO systems, and this will help to mitigate exposure to RAAIM penalties associated with outages. Also, the CAISO does not apply RAAIM to planned outages that do not require substitution. See CAISO tariff sections 40.9.3.4(a) and 9.3.1.3.3.

will only briefly touch on them here. First, RMR resources must bid their marginal costs, including major maintenance and opportunity costs. RMR resources with higher maintenance costs, limited run hours, and/or limited starts will be able to reflect these limitations in their marginal cost bids (including opportunity costs), making them less likely to be economically dispatched. Second, if resources are running more than expected, their opportunity costs can be adjusted to better preserve future availability. Third, use-limited RMR resources can utilize the applicable outage card to manage their run hours. This exempts them from RAAIM for the hours they are on a use-limited outage.²⁵¹

Fourth, the CAISO is authorized under the revised *pro forma* RMR Contract to direct an RMR resource to submit an outage card to preserve its availability for future periods. These CAISO-directed outages are not subject to RAAIM. Thus, there are adequate measures to ensure that an RMR resource near the end of its life is not unduly exposed to RAAIM.

Finally, some stakeholders note that the CAISO is considering possible alternatives to RAAIM in its ongoing RA Enhancements stakeholder initiative. They argue that adopting RAAIM for RMR resources while this initiative is ongoing is inappropriate. These stakeholders ignore that until any different mechanism is developed, approved, and implemented – which likely would not be until 2022 at the earliest given implementation and other challenges, RA and CPM resources will continue to be subject to RAAIM. The CAISO proposes that RAAIM also apply to RMR resources during such period. The CAISO does not believe that RMR resources should have a different incentive mechanism especially given that all such resources will have the same MOO, and the CAISO is seeking to streamline its systems and processes, including the application of the same incentive mechanism. RMR resources subject to a must offer obligation should not have a different penalty structure than RA or CPM simply because the CAISO is exploring alternatives to RAAIM in an ongoing stakeholder process. If the CAISO adopts a different performance metric(s) in the RA Enhancements stakeholder process, it will be applied prospectively. At this point in time, the CAISO is in the early stages of its RA Enhancements initiative, and nothing has been decided. One option is for the CAISO to continue applying RAAIM to RMR and CPM resources.

c. Requiring RMR Owners to Justify a Return on Investment in Their RMR Filings with the Commission

The existing RMR contract provides for an Allowable Pre-Tax Rate of Return equal to 12.25 percent plus 30 percent of the amount by which (a) the latest available 6-month average of yields on 10-year U.S. Treasury Bonds, as of the date of the RMR filing, exceeds (b) the latest available 6-month average of yields on 10-

²⁵¹ CAISO tariff section 40.9.3.4 (d).

year U.S. Treasury Bonds.²⁵² The RMR owner may apply to the Commission in a limited section 205 proceeding to establish a different Allowable Pre-Tax Rate of Return.²⁵³ The Allowable Pre-Tax Rate of Return is applied to the ‘net-investment’ value (undepreciated assets) for resources eligible for RMR.²⁵⁴ The RMR Owner may also propose this rate for capital items under Article 7 and Schedule L of the RMR Contract.

Despite changing economic and business conditions, the allowed rate of return under the RMR contract has not been updated since the original language for the RMR contract was implemented approximately 20 years ago. The CAISO proposes to eliminate the “hardwired” return on investment provisions of the *pro forma* RMR Contract and instead require the RMR owner to propose and justify a resource-specific rate of return as part of its RMR rate schedule filing with the Commission following designation for RMR service. The Commission would then determine the resource’s just and reasonable rate of return. The rate of return for new capital additions under RMR Schedule L will continue to be handled per the Schedule L submission with that rate established for each individual project based on project costs. The CAISO’s proposal will result in an “up-to-date” rate of return for each RMR contracts based on the assets of each owner.

Stakeholders overwhelmingly supported this proposal; although, one stakeholder preferred the return on investment be “hardwired” into the RMR contract. The proposed modification will allow the rate of return to change as conditions change and reflect then current conditions at the time of the RMR agreement is initially filed. Although RMR owners may need to retain an expert consultant to justify a proposed rate of return, that cost is recoverable as an administrative and general cost (specifically as a regulatory commission expense under Account No. 928) under the RMR agreement.²⁵⁵

The cost of service-based backstop mechanisms of the other ISOs and RTOs require the RMR owner to file its proposed cost of service with the Commission for approval; they do not “hardwire” a specified return on net plant investment. MISO’s *pro forma* System Support Resource Agreement provides for Commission approval of the fixed cost compensation for an SSR resource.²⁵⁶ ISO-

²⁵² CAISO Tariff, Appendix G, Attachment F, Part B, Section 5.

²⁵³ *Id.*

²⁵⁴ *Id.* at Section 3.

²⁵⁵ *Id.* at Section 2(A)(4).

²⁵⁶ MISO FERC Electric Tariff, Attachment Y-1, Standard Form System Support Resource Agreement, Exhibit 2, Section A. For example, the Commission ruled on the justness and reasonableness of the cost of capital for two SSR agreements with Wisconsin Electric Power Company. *Midcontinent Indep. Sys. Operator, Inc.*, 161 FERC ¶ 61,059 at PP 26-32, 79-85 (2017). The NYISO also permits a resource owner to receive the Availability & Performance

NE provides for the recovery of taxes and return as determined by the Commission.²⁵⁷ In PJM, the resource owner can file with the Commission a cost of service rate to recover the entire cost of operating the generating unit.²⁵⁸ The NYISO's *pro forma* RMR agreement allows the generator to file an owner-developed rate or an Availability and Performance Rate for Commission approval.²⁵⁹ Finally, the CAISO notes that the Commission recently established a paper hearing to determine whether and how the new methodology for determining the return on equity for public utilities that the Commission announced in 2018 should apply to the Constellation Mystic Power plant located in ISO-NE.²⁶⁰

4. Clarifying the Reliability Needs that Enable RMR Designations

Existing CAISO Tariff Section 41.2 provides that “[t]he CAISO will ... have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a Generating Unit as a Reliability Must-Run Unit.” CAISO Tariff Section 41.3 provides that “[i]n addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria.” In Appendix A, the CAISO tariff defines Reliability Criteria as “[p]re-established criteria that are to be followed to maintain desired performance of the CAISO Controlled Grid under Contingency or steady state conditions.” Thus, the CAISO tariff authorizes the CAISO to enter into RMR contracts to meet any NERC, WECC or CAISO established reliability requirement that otherwise cannot be met without the designated resources. CAISO tariff section 41.9 also permits the CAISO to Exceptionally Dispatch a Condition 2 RMR unit for reasons other than prescribed in the RMR Contract to (a) meet forecast demand and operating reserve requirements or (2) manage Congestion and no other generating unit that is available is capable of meeting the identified requirement.

To date, the CAISO has implemented its RMR authority through the existing *pro forma* RMR Contact, which provides the CAISO with authority to issue

Rate approved by the Commission or an owner developed rate filed under Section 205 of the Federal Power Act, as approved or modified by the Commission. NYISO Open Access Transmission Tariff, Attachment FF Appendix C, Form of RMR Agreement, Article 4.

²⁵⁷ ISO-NE, Market Rule 1, Appendix I, Section 4.3 and Schedule 3.

²⁵⁸ PJM OATT, Section 119.

²⁵⁹ NYISO OATT, 38.26 Attachment FF Appendix C, Section 4.1. The Availability and Performance Rate calculated in accordance with a particular schedule (Schedule 8) in the NYISO Services Tariff permits the owner to recover RMR Avoidable Costs, RMR Variable Costs, an Availability Incentive, and a Performance Incentive. *Id.*

²⁶⁰ *Constellation Mystic Power, LLC*, 165 FERC ¶ 61,267 at PP 12, 31-34 (2018) (referencing new methodology for determining rate of return proposed in *Martha Coakley v. Bangor Hydro-Elec. Co.*, 165 FERC ¶ 61,030 (2018). The paper hearing is currently ongoing.)

dispatches for energy to meet local reliability needs or manage uncompetitive congestion.²⁶¹ The current *pro forma* RMR Contract also allows the CAISO to issue a dispatch notice to an RMR resource for Ancillary Services if available bids in the Ancillary Services markets do not provide sufficient capacity to meet CAISO requirements and certain requirements are met.²⁶² The decision to implement the CAISO's RMR tariff authority in the RMR Contract more narrowly than permitted by the tariff dates back to the early days of the CAISO where the CAISO relied on the market to meet reliability needs and expected that RMR use would be limited to instances where a resource was needed for local reliability and could exercise market power in the energy market if the CAISO needed the resource to operate.

The RMR tariff provisions allow the CAISO to issue RMR designations to meet all reliability needs, not just local reliability needs. To ensure that this authority is not unduly limited by the terms of the RMR Contract, the CAISO is modifying the RMR *pro forma* to require the RMR resource to participate in the CAISO markets and to respond to Exceptional Dispatches. Specifically, the CAISO proposes to eliminate the existing provisions of Section 4.1 of the *pro forma* RMR Contract that limit RMR dispatch for local reliability or to resolve noncompetitive congestion and ancillary services only under specified circumstances. RMR resources will have a must offer obligation and will be fully subject to the CAISO's exceptional dispatch authority.²⁶³ Most stakeholders support the CAISO's proposed clarification, but one stakeholder believes the CAISO should specify all applicable Reliability Criteria and the studies it will perform to ensure such Reliability Criteria are met. Another stakeholder even suggested that the CAISO should not have the authority to issue RMR designations to meet reliability needs that are not local needs.

The CAISO grid is rapidly transforming to one where variable energy resources and energy-limited resources, both grid connected and behind-the-meter, will be the predominant energy technologies. The California Public Utilities Code states that "[i]t is the policy of the state that eligible renewable energy resources and zero-carbon emission resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045."²⁶⁴ The transition to a more variable and energy-limited resource fleet creates distinct planning and operational challenges for the CAISO. The CAISO is operating a system with increased variability and less predictability. Maintaining reliability on this rapidly transforming system is not now -- and will not be in the future -- limited to meeting only narrow, local reliability criteria. Flexible capacity needs have grown dramatically, and the

²⁶¹ CAISO Tariff, Appendix G, *Pro Forma* RMR Contract, Section 4.1.

²⁶² *Id.* at Section 4.1 (c).

²⁶³ See Revised *pro forma* RMR Contract, Section 4.1(c) and 6.1.

²⁶⁴ Cal. Pub. Util. Code, Section 454.53 (a) (2019).

CAISO risks losing resources needed to maintain reliability to retirement because of their inability to earn sufficient revenues in the CAISO markets. The CAISO must have the tools necessary to maintain grid reliability and resilience in this transformational period. If any type of reliability need arises, the CAISO must be able to procure a retiring or mothballing resource that is necessary to meet the reliability need. These might involve meeting flexible and system capacity needs besides the local capacity needs traditionally met by RMR resources.²⁶⁵ RMR must be available and fully effective as a “last resort” mechanism to address all types of reliability needs that arise, not just local needs. Clarifying the RMR tariff provisions and *pro forma* RMR Contract to indicate that RMR is not limited solely to meeting local reliability needs but can be used to meet all reliability needs is necessary to support grid future grid reliability and resilience in light of changing grid conditions.

Other ISOs and RTOs do not expressly limit the scope of their backstop procurement authority to narrow local reliability needs. PJM will notify resources whether deactivation of the generating unit “would adversely affect the reliability of the Transmission System.”²⁶⁶ MISO can procure System Support Resources “that are required to maintain the reliability of the Transmission System based on [MISO’s] Attachment Y Reliability Study.”²⁶⁷ The NYISO can procure RMR resources to meet a Generator Deactivation Reliability Needs, which are defined as “a violation or potential violation of one or more Reliability Criteria and applicable local criteria.”²⁶⁸ Under the NYISO tariff, reliability needs can result, *inter alia*, from resource adequacy (including statewide and New York Control Area resource deficiencies).²⁶⁹ ISO-NE can review de-list bids “to determine whether the capacity associated with that bid is needed for reliability reasons during the Capacity Commitment Period associated with the Forward Capacity Auction.”²⁷⁰

The CAISO notes that the Commission recently issued an order that conditionally accepted a cost of service agreement providing for the continued operation of Constellation Mystic Power units 8 and 9 to address fuel security concerns in New England.²⁷¹ Moreover, the Commission recently approved a tariff

²⁶⁵ Examples include, among other things, the CAISO needing a resource because (1) it does not have sufficient system operating reserve to meet established reliability criteria, (2) it does not have sufficient system ramping capability to meet operational criteria, and (3) it does not have sufficient system inertia to meet planning and/or operational criteria.

²⁶⁶ PJM Open Access Tariff, Section 113.2.

²⁶⁷ MISO FERC Electric Tariff, Section 38.2.7a(1).

²⁶⁸ NYISO Open Access Transmission Tariff. Attachment FF, Section 38.1.

²⁶⁹ *Id.* at section 38.22 *et seq.*

²⁷⁰ ISO-NE, Market Rule 1, III.13.2.5.2.5.

²⁷¹ *Constellation Mystic Power, LLC*, 164 FERC ¶ 61,022 (2018)..

framework that allows ISO-NE to procure resources needed for fuel security reliability under short-term cost of service agreements.²⁷²

There is no prudent reason to limit the CAISO's RMR procurement authority only to local reliability needs, especially given that LSEs are receiving RA credits for RMR capacity, and RMR resources will have a MOO.

Regarding one stakeholder's preference that the CAISO list in the tariff all reliability criteria that the CAISO might apply and reliability studies the CAISO might undertake to justify an RMR designation, the CAISO notes the neither the current CAISO RMR tariff provisions nor the CPM tariff provisions contain such information. The Commission has found that it is unnecessary to include the precise details of the CAISO's RMR and CPM technical assessments and types of technical studies performed to be included in the tariff.²⁷³ There is no basis to change this approach. Further, the backstop procurement tariff provisions of other ISOs and RTOs do not contain such details.

5. Revised Methodology for Allocating RMR Costs

The CAISO currently allocates RMR costs above the costs covered by market revenues to the "Responsible Utility in whose PTO Service Territory the Reliability Must Run Units covered by such Reliability Must Run Contracts are located or, where a Reliability Must Run Unit is located outside the PTO Service Territory of any Responsible Utility, by the Responsible Utility or Responsible Utilities whose PTO Service Territories are contiguous to the Service Area in which the Generating Unit is located, in proportion to the benefits that each such Responsible Utility receives, as determined by the CAISO."²⁷⁴ Under the CAISO tariff, a Responsible Utility must be a party to the Transmission Control Agreement, *i.e.*, be a Participating Transmission Owner (PTO). Thus, the CAISO essentially allocates RMR costs to PTOs. The Responsible Utility/PTO²⁷⁵ reallocates any RMR costs to its transmission customers under its separate reliability services tariff. The existing RMR cost allocation scheme is approximately 20 years old and predates the concepts of RA and LSE in the CAISO tariff.²⁷⁶ The Commission found that:

²⁷² *ISO New England Inc.*, 165 FERC ¶ 61,202 (2018).

²⁷³ *2011 CPM Order*, 134 FERC ¶ 61,211 at P 134 (2011).

²⁷⁴ CAISO tariff section 41.7.

²⁷⁵ *Id.* at Appendix A, Definitions of "Responsible Utility" and "Transmission Control Agreement."

²⁷⁶ See *Cal. Indep. Sys. Operator Corp.*, 89 FERC ¶ 61,229 at 61,683-84 (1999), *order on reh'g*, 90 FERC ¶ 61,315 at 62,042 (2000) (orders accepting CAISO tariff amendment to allocated costs for RMR units located outside of the PTO service territory of a Responsible

such an assignment of RMR costs is appropriate because the benefits of RMR service are localized: The RMR designation indicates that the particular unit (when called upon for local reliability purposes) is the only one that can, because of system constraints, serve the demand in question.²⁷⁷

The CAISO proposes to change the allocation of RMR fixed costs to allocate them to load serving entities (LSEs) rather than Responsible Utilities/PTOs. Under revised tariff section 41.9, the CAISO proposes to allocate RMR costs not recovered through market revenues to the Scheduling Coordinators for LSEs that serve load in the TAC area(s) in which the need for the RMR contract arises based on the percentage of metered demand of each LSE in the TAC area(s) to the total metered demand in the TAC area(s) as recorded in the CAISO settlement system for the actual days of any settlement month period for which the RMR agreement was in effect. This methodology provides transparency and certainty and tracks the Commission-approved methodology for allocating the costs of risk of retirement CPM designations, Exceptional Dispatch CPM designations, and Significant Event CPM designations, *i.e.*, all CPM reliability designations not resulting from RA showing deficiencies. If an RMR designation addresses a reliability need in more than one TAC area, the costs of the RMR can be allocated to load in all TAC areas that benefit from the designation, just like CPM designations needed to maintain reliability in more than one TAC area. For example, if the CAISO made an RMR designation to meet a system reliability need, the CAISO would allocate the costs to load in all TAC areas. Under the proposed RMR reliability assessment and procurement process, there is no reason to allocate RMR costs differently than how the CAISO allocates risk of retirement CPM costs. The existing RMR cost allocation is based on an outdated concept and needs to be “modernized” to track the true beneficiaries of RMR procurement.

Not only is the proposed methodology for allocating RMR costs consistent with the methodology for allocating the costs of CPM procurement associated with similar reliability needs, it will spread the RMR costs to the Scheduling Coordinators for the proximate load, *i.e.*, the LSEs that serve load in the TAC area where the reliability need will exist. The cost responsibility for RMR designations will be spread to those entities that will benefit most by the CAISO’s backstop procurement. LSEs, not PTOs, are the ultimate beneficiaries of RMR costs and should bear the costs directly based on their proportionate use of the system while the RMR contract is in effect. The proposed allocation methodology recognizes that load using the grid during the period an RMR agreement is in effect benefits

Utility, in addition to the existing allocation of RMR costs within the CAISO Controlled Grid to Responsible Utility in whose PTO Service Territory the RMR unit is located).

²⁷⁷ *San Diego Gas & Elec. Co.*, 94 FERC ¶ 61,200 at 61,746 (2001) (internal quotation marks omitted) (citations omitted).

from the capacity the CAISO has procured to address the reliability need in the TAC area(s). For example, RMR capacity will have a 24 x 7 availability obligation, thus supporting daily and hourly reliability during the month. Because the CAISO will allocate RMR costs monthly based on actual monthly load that, its proposal will effectively address any load migration that occurs during the term of the RMR contract. The CAISO's proposal to allocate RMR costs to LSEs also aligns with the CAISO providing RA credits for the procured RMR capacity to LSEs.

In addressing the NYISO's RMR construct, the Commission stated that NYISO should ensure that any cost allocation regime is consistent with the Commission's cost allocation principles and precedents.²⁷⁸ For example, the Commission noted that PJM allocates costs to the load in the zone(s) of the transmission owners that will be assigned financial responsibility for the reliability upgrades necessary to alleviate the reliability impact that would result from a unit's deactivation.²⁷⁹ Although other ISOs and RTOs have adopted different approaches to address the recovery of costs associated with agreements like RMR agreements, they all allocate such costs to LSEs, not to participating transmission owners.²⁸⁰ The CAISO proposes to change its outdated methodology to do the same.

6. Providing RA Credits for RMR Designations

Because the CAISO proposes to allocate RMR costs to LSEs, the CAISO will provide RA credits to LSEs for such RMR designations. The CAISO currently provides RA credits to LSEs for CPM designations.²⁸¹ No stakeholder opposed allocating RA credits to LSEs for RMR designations. Providing RA credits for RMR designations will also mitigate against unnecessary over-procurement and LSEs paying twice for capacity.

Under revised CAISO tariff section 41.8, the CAISO will allocate RA credits (local, system, and flexible RA capacity, whichever apply) for annual and monthly RA showings to the Scheduling Coordinators of LSEs that serve load in the TAC Area(s) in which the need for the RMR contract arose in an amount equal to the LSE's *pro rata* share of the eligible net qualifying capacity or flexible capacity of the RMR resource. The CAISO will allocate RA credits to all Scheduling Coordinators for LSEs that serve load in the applicable TAC Area(s) in accordance with the LSE's proportionate share of the LSE's applicable TAC Area load at the time of the CAISO's annual coincident peak Demand set forth in the annual peak Demand Forecast for the next Resource Adequacy

²⁷⁸ *N. Y. Indep. Sys. Operator, Inc.*, 150 FERC ¶ 61,116 at P 20 (2015).

²⁷⁹ *PJM Interconnection, LLC*, 107 FERC ¶ 61,112 at P 22 (2004).

²⁸⁰ MISO FERC Electric Tariff, Section 32,8,7.(1); NYISO Open Access Tariff, Attachment FF, Section 38.22-24.

²⁸¹ CAISO tariff section 43A.9.

Compliance Year as contemplated under CAISO tariff section 40.2.2.3. The credited amount will be broken down in monthly values. The monthly values could be different if the monthly net qualifying capacity or monthly flex capacity of the RMR resource varies by month. This approach follows how the CAISO provides RA credits for CPM designations other than LSE-specific RA showing deficiencies. For example, the CAISO allocated RA credits to LSEs for the portion of the 2018 Encina and Moss Landing CPM designations pertaining to a collective local deficiency.

The CAISO recognizes that it proposes to allocate the costs of RMR designations monthly based on LSEs' actual load during each month the RMR designation is in effect, but provides RA credits based on each LSEs forecasted annual proportionate share of the LSE's applicable TAC Area load at the time of the CAISO's annual coincident peak Demand set forth in the annual peak Demand Forecast for the next Resource Adequacy Compliance Year. The CAISO cannot assign RA credits to LSEs in precisely the same manner as it allocates the RMR costs because that would require retroactive crediting which would be a meaningless and impracticable exercise under the CAISO's RA paradigm. The CAISO must allocate RA credits before year ahead RA showings and actual monthly performance. The allocation should be as constant as possible to facilitate LSE procurement of their remaining RA procurement needs. In that regard, LSEs' annual RA showings for the upcoming Resource Adequacy Compliance Year are due by the end of October, and any curing of RA deficiencies occurs in December -- before the RMR Contract for the upcoming year even goes into effect. Hence, actual load for each of the upcoming 12 months is unknown when the CAISO must apply the RA credits to the annual RA showings. Similarly, LSEs' initial monthly RA showings are due 45 days before the first day of the month for which they apply.²⁸² Again the actual load for that RA month is unknown when the LSE submits its RA showing for that month. The CAISO's approach provides certainty for LSEs and allows them to plan their procurement in advance. Also, it is efficient and easily implementable.

7. Streamlining and Automating the RMR Settlement Process

The historic RMR settlement process has remained relatively unchanged for 20 years. The RMR Owner transactions and costs are captured on a spreadsheet and submitted to the CAISO for invoicing. The RMR invoice amount is based on calculations and validations executed manually outside of the CAISO's existing settlements system and timelines, then billed through a manual pass-through-bill mechanism. The RMR Owner submits monthly RMR Invoices, which the CAISO and the applicable Responsible Utilities (RUs) then review. The CAISO invoices the applicable RUs following review and then pays the RMR Owner when the

²⁸² CAISO tariff sections 40.2.1 (a) and 40.2.2.4 (b).

applicable RUs pay. The CAISO prepares monthly invoices in an Excel spreadsheet based on a uniform template created in 1998. As the CAISO markets and systems have changed over the years, the CAISO and stakeholders have revised the invoicing process and some changes to inputs. These include availability data from the outage management system, dispatch and price information from market systems, meter reads, fuel price index data, reference data defining the resource characteristics, and formulas to calculate monthly settlement for each RMR Unit based on all these inputs. Introduction of the Resource Adequacy (RA) program in 2006 caused a significant decline in the number of RMR Contracts, so most of the RMR Invoicing validation regressed to manual processes as it became uneconomic to support automation with the limited number of RMR units. When the number RMR Units increased in 2018, the CAISO identified many challenges with the current RMR Implementation framework.

Another aspect of the RMR Invoice process that presents a challenge for the CAISO Settlements team is the unique settlement timeline for RMR Contracts. The RMR Invoice submittal intervals do not align with the market settlement timeline and contain steps that do not align with the market process. This presents challenges because CAISO staff must track a separate calendar for the RMR process, and the inputs from the market settlements timeline do not align with the RMR invoice calendar. Integrating the RMR invoicing into the market settlement process will resolve these challenges.

The complicated settlement calculation performed in the RMR Invoicing template is necessary to implement the terms and conditions in the RMR Contract. The Monthly Option Payment portion represents the fixed components of the RMR compensation, and the RMR Owner invoices for these on an hourly basis by multiplying the hourly rate by the hourly availability and summing them for the month. The hourly rate is determined by dividing the annual fixed costs by the expected hours of availability. There are also limits to payments to ensure the Monthly Options Payments do not exceed the annual fixed compensation and includes an adjustment for long-term planned outages.²⁸³ This structure incents the resource not to be on outage more than its five-year average outage rate, but it includes no incentive for the unit to participate in the market, and it does not include a must offer obligation. The other payments are for variable costs, startup, pre-empted dispatch, and excess service cover costs for hourly dispatches when the unit is required for reliability operation. Other challenges include maintaining a separate portal for RMR Invoice submittal, maintaining a separate RMR Dispatch quantity report that impacts market optimization efficiency, and maintaining several separate processes for communications and financial transactions.

²⁸³ *Pro forma* RMR Contract, Schedule B, Equation B-6 for limit on Availability Payment and Section 8.6 for long term planned outage adjustment.

The CAISO proposes to transition to a more automated RMR implementation by utilizing capabilities now available through the CAISO markets and systems that were not available at the inception of RMR. These include an automated settlement system, bid cost recovery mechanism, and automated bids. Stakeholders supported changes to simplify, streamline, and automate the RMR settlement and invoicing process. They recognized that allowing the CAISO to leverage existing systems, data, and processes can provide significant benefits. Below the CAISO discusses the specific changes it will implement.

The CAISO proposes to align RMR implementation to the extent possible with the RA/CPM paradigm for bidding, dispatch, penalties, incentives, settlements, and payment to streamline RMR functionality and promote more efficient market and reliability systems operations and maintenance. The CAISO's goal is to revise the RMR implementation process and streamline it to align with existing market and reliability tools. The CAISO proposes to apply RA and CPM bidding and dispatch rules to new RMR Units. This will allow the market optimization to determine dispatch of RMR units rather than using a separate manual process.

Simplifying and automating the RMR settlement process will require streamlining of the RMR process used to dispatch RMR resources because many of the manual processes in RMR settlements arise from the RMR paradigm for dispatching RMR resources. The CAISO proposes to represent RMR resources in CAISO systems as RA/CPM resources:

- Establish a MOO and bid insertion rules for RMR resources by modeling RMR capacity as RA/CPM capacity²⁸⁴
- Consolidate the reliability dispatch processes by eliminating RMR dispatch procedures and modeling RMR capacity as RA/CPM capacity, which enables using existing market and reliability mechanisms applicable to RA/CPM capacity to dispatch all reliability capacity when needed
- RMR capacity will be represented in CIRA as reliability capacity

²⁸⁴ A MOO for RMR resources is also a key element of streamlining the RMR dispatch process. The CAISO market design includes mechanisms to dispatch resources for modeled constraints and use Minimum Online Commitment ("MOC") or Exceptional Dispatch for issues identified in Voltage Stability Analysis ("VSA") and Dynamic Stability Analysis ("DSA") tools or offline studies. These mechanisms rely on bids in the market, so the proposed MOO is critical to the streamlining effort. The MOO must be supported with a bid insertion mechanism (for non-use-limited resources as is the case today with RA resources) to ensure bids are available at all times. Modeling the RMR capacity in CAISO systems as RA/CPM capacity will allow the CAISO to use the existing bid insertion SIBR rules applicable to non-use-limited resources, apply RAIM, and use of existing processes for dispatch, thus allowing the CAISO eliminate the workarounds and extra procedures used under current manual RMR process.

- SIBR RA/CPM bidding rules will apply

The *pro forma* RMR Contract contains several limitations on the CAISO's ability to dispatch RMR units, and these limitations were designed when there was no market power mitigation and no capacity procurement requirement by LSEs. These limitations include dispatch for non-competitive congestion, and dispatch for Ancillary Services only after a bid insufficiency criterion has been met.²⁸⁵ The CAISO proposes to remove the Ancillary Service bid insufficiency test from the *pro forma* RMR Contract and revise the dispatch provisions to align with current market paradigm. Under the current CAISO market construct, the CAISO has designed the obligations to ensure there is sufficient capacity bidding into the market where energy and Ancillary Services bids are co-optimized in the Day-Ahead Market ("DAM") and Real-Time Market ("RTM").²⁸⁶ Further, the CAISO may commit additional capacity in the DAM to meet bid insufficiency conditions under Tariff section 31.5.4. With these mechanisms in place, the bid insufficiency limitation designed in the *pro forma* RMR Contract serves no purpose, and the CAISO can remove it. This will allow for more efficient use of the RMR unit to meet CAISO reliability needs. Also, even with current co-optimization of energy and Ancillary Services bids, the CAISO still must be able to address inter-hour Ancillary Services needs in the RTM. The CAISO can fill this gap by increasing its flexibility to dispatch for Ancillary Services beyond mere "bid insufficiency" because such situations arise despite sufficient bids in DAM. Applying an energy and Ancillary Services MOO for RMR units, just like RA and CPM units, makes the bid insufficiency test anachronistic.

The structure of RMR compensation also affects the CAISO's ability to streamline the RMR process. The CAISO proposes to maximize the use of existing market functions and eliminate all RMR provisions that can be addressed by an existing market mechanism.

The CAISO proposes to simplify the RMR compensation structure by applying a flat rate to cover fixed costs and applying bid cost recovery mechanism to cover variable costs. Schedule F will continue to define the fixed costs of operating the RMR resource, *i.e.*, the Annual Fixed Revenue Requirement (AFRR). There will be no changes except that the RMR Owner will propose and support the return on investment, replacing the existing default 12.25 percent rate of return. The CAISO proposes to revise the hourly rate in Schedule B by replacing the concept of target available hours (TAH) with hours in the year. This will enable the CAISO to use of an hourly settlement similar to CPM.

²⁸⁵ *Pro forma* RMR Contract, Sections 4.1(a)-(b).

²⁸⁶ CAISO tariff sections 31.2, 31.2.2, 34.1.5.1, and 31.5.3.

The CAISO will also streamline the rules applicable to variable cost recovery. The variable cost provisions of the RMR Contract should ensure market dispatches keep RMR resources whole for variable costs. These costs are currently defined in Schedule C for costs associated with MWhs delivered and in Schedule D for startup costs. The Bid Cost Recovery (BCR) provisions of the CAISO Tariff provide this mechanism over each trade day,²⁸⁷ and the CAISO proposes to replace Schedules C and D and instead apply the BCR provisions of the tariff. Consistent with current practice for Condition 2 RMR resources, the CAISO will calculate the market revenues the RMR resource receives that exceed its variable costs and credit these amounts back to the LSEs who are allocated the fixed costs (monthly availability payment and capital item charge) of RMR agreements. The CAISO will calculate costs using values and processes used in BCR mechanism, and will make adjustments as needed to ensure RMR resources do not “double-recover” their costs. This approach is similar to the RMR Contract variable cost definition as both use fuel price index to calculate cost based on the resource heat rate. These processes eliminate the need to identify RMR Dispatches which must be manually identified in the current market structure.

The CAISO proposes to leverage its current market settlement system and interface to automate the RMR validation and invoicing processes. The CAISO manages invoice cycles for market settlement and separate invoice cycles for RMR settlement, which is prone to delays due to late invoice submittals by the scheduling coordinator. Further, the RMR Contract’s separate and unique invoicing timeline does not align with the CAISO market settlement timeline.²⁸⁸ For all parties to manage resources more effectively, the CAISO will merge the timeline for RMR invoicing and statements with the current market settlement timelines.

The CAISO will streamline RMR invoicing. The current process for invoicing RMR contracts is done manually in an Excel spreadsheet template due to the complicated nature of the calculations involved with tracking of outage system availability, RMR dispatch hours, MWh, startups, fuel prices, market interval dispatches and bifurcation of RMR versus non-RMR service to compute monthly charges. With the simplifications regarding bidding, dispatch, compensation structure, and by eliminating RMR contract service limits, the CAISO can transform RMR Invoicing into a more efficient approach resulting in a few line items within the CAISO market settlement invoice process.

Thus, the CAISO will replace RMR invoicing template and owner submitted Excel based invoices and instead use the general CAISO settlement system invoice

²⁸⁷ CAISO tariff section 11.8, *et seq.*

²⁸⁸ Compare CAISO tariff section 11.13.3 and *pro forma* RMR Contract, Section 9.1 (setting forth RMR invoicing timeline), with CAISO tariff section 11.29.7. *et seq.* (setting forth CAISO market settlement timeline).

process and timeline.²⁸⁹ By simplifying the fixed payment to a fixed daily amount, no complicated calculations are required because the settlements systems will receive the daily amount through the same mechanism used to provide the CPM monthly payment amounts. The CAISO will create additional charge codes to track and allocate costs presently allocated to the Responsible Utility to LSEs. This will also allow the CAISO to track net market revenues earned by the RMR unit so the CAISO can credit such excess revenues to the LSEs being allocated RMR fixed costs. The CAISO can eliminate the cumbersome RMR invoicing steps and RMR payment calendar by using the CAISO market settlement timeline and invoicing process. In addition, the CAISO will eliminate the separate invoicing and settlements process defined in the RMR contract and replace it with the process in the CAISO tariff.²⁹⁰ In addition, the CAISO will use the CAISO tariff dispute resolution process for settlements related disputes, but retain the RMR dispute resolution for other issues that may arise under the RMR Contract.²⁹¹

Because the CAISO is proposing to allocate the costs of RMR agreements to load serving entities, the new RMR agreement will no longer contain roles and responsibilities for the Responsible Utility. This aligns better with the new cost allocation mechanism, and streamlining of the RMR agreement to better align with tariff provisions and to leverage existing CAISO business processes. All affected parties of interest will continue to be able have to participate in the Commission proceedings regarding RMR filings as intervening parties, as allowed under the Commission rules and regulations.²⁹²

Finally, the CAISO proposes to remove or revise certain provisions from *pro forma* RMR Contract to complete the simplification process and maximize streamlining efforts. The CAISO will update the *pro forma* RMR Contract, by deleting Schedules D, E, G, H, M, O and P, and modifying Schedules A, B, C, F, I, J and K. The CAISO will replace most of the provisions previously contained in Schedules C and Schedule M by applying existing CAISO Tariff provisions

²⁸⁹ CAISO tariff section 11.29.7, *et seq.*

²⁹⁰ CAISO tariff sections 11.13.6.4 and 11.29.8.4 (setting forth CAISO tariff settlement statement dispute processes) and Revised *pro forma* RMR Contract, Section 9.1.

²⁹¹ Schedule K of RMR Contract.

²⁹² The market credit risk for RMR resources will differ from the current approach because the CAISO proposes to allocate RMR costs to Scheduling Coordinators representing LSEs (see Section III.B.6. *infra*). Under the current structure, the RMR owner bears the risk of default if the Responsible Utility defaults. *Pro forma* RMR Contract, Sections 9.3-9.4. With the costs allocated to Scheduling Coordinators of LSEs and treated as energy costs, RMR owners will be at risk of a general market default, but no longer will be at risk for the Responsible Utility defaulting. The default loss allocation spreads market defaults broadly across all market participants based on measures representing levels of market participation. CAISO tariff section 11.29.7 *et seq.*

and BPM rules for bidding and dispatch of generating units.²⁹³ The CAISO has tariff provisions and BPM sections for calculating the GHG cost adder for bids, DAM and RTM gas price indices, resource heat rate curves, and GMC based scheduling coordinator charges, which will apply to RMR resources just as they apply to similar resources under the CAISO Tariff.

Moreover, under Schedule A, the CAISO will require all resource characteristics of the RMR Unit to be reflected in Master File which will accommodate RMR units with multi stage generator characteristics. The CAISO is also removing the concept of Contract Service Limits, Total Availability Hours, and Non-Performance Penalties, and instead will look to use existing outage functionalities and RAAIM to manage the availability, bidding and dispatch of the resources. The CAISO is modifying Schedule C to allow for RMR units to invoice the CAISO for any costs not recovered under the CAISO Tariff, such as additional fuel costs, motoring charge for synchronous condensers, and Black Start capability payments. The CAISO will delete Schedule G because the additional compensation for use of RMR unit above service limits will no longer apply. The CAISO proposes to delete Schedule H because the CAISO no longer needs separate accounting for generating units operating on fuel oil. The CAISO also proposes to delete Schedule M. Instead, RMR units will bid cost based bids consistent with existing CAISO Tariff provisions and BPM rules. The CAISO notes that it included some of these concepts in the RMR agreements for Metcalf Energy Center, LLC and Gilroy Energy Center, LLC, with support from all parties. The Commission approved these agreements.²⁹⁴ The CAISO believes that these provisions improve efficient operation and administration of RMR units.

8. Lowering Banking Costs Associated with RMR Invoicing

Currently, the tariff requires the CAISO to establish two segregated commercial bank accounts (RMR Owner Facility Trust Account and Responsible Utility Facility Trust Account) for each RMR Contract.²⁹⁵ The CAISO uses these accounts to collect charges paid by the Responsible Utility and disburse revenues to the RMR owner (and vice-versa). These accounts carry no balances because RMR funds are disbursed on the same day they are received. The protocol of

²⁹³ See, e.g., *pro forma* RMR Contract, Schedule C, Section A (8), Table C1-8, and Section F.

²⁹⁴ *Metcalf Energy Center, LLC*, 161 FERC ¶ 61,310 (2017), *order accepting settlement*, 163 FERC ¶ 61,073 (2018); *Gilroy Energy Center, LLC*, 161 FERC ¶ 61,311 (2017), *order accepting settlement agreement*, 163 FERC ¶ 61,072 (2018).

²⁹⁵ CAISO tariff section 11.13.2.1.

establishing two accounts serves no discernable purpose because all funds are tracked and recorded, regardless of where they are received. Accordingly, the CAISO proposes to eliminate the requirement to open new accounts for each RMR contract. In its place, the CAISO will use its established market clearing account to administer RMR-related transactions.²⁹⁶ Going forward, all payments and disbursements will be made from this account. Stakeholders strongly supported this proposal.

The proposal will result in revisions to the following CAISO tariff sections:

- **11.13.2.1 Facility Trust Account** – References the establishment of the two accounts per contract.
- **41.6 –Reliability Must-Run Charge** – References the payment of RMR invoices to the established accounts.
- **11.29.9.2 CAISO Accounts to be established** – References the establishment and using the clearing account.

The advantages to the proposed revisions are:

- **Streamlined process** - Because the CAISO will process RMR transactions using one account, it will be simpler for both the CAISO and the RMR contract party to process payments and disbursements.
- **Faster RMR contract implementation** - Opening new bank accounts when new RMR contracts are signed requires time and effort. In addition, multi-stage testing is necessary to ensure these accounts are visible to the CAISO and the RMR contract party. Under this proposal, testing will be reduced or eliminated (if the RMR contract party has another RMR contract in place).
- **Reduced bank fees** - The CAISO pays a maintenance fee for each bank account that is active. Each account costs \$125 per month plus monthly charges for additional services (Wire Transfer, Payment Manager). Having fewer accounts to maintain will produce both financial and non-financial benefits (monitoring, reconciliation).

9. Existing RMR Provisions That the CAISO Is Retaining

The CAISO is retaining many existing RMR provisions of the CAISO tariff and the *pro forma* RMR Contract. Although the CAISO is not required in a Section 205 filing to re-justify existing provisions of its tariff, the following

²⁹⁶ Revised *pro forma* RMR Contract, Article 9.

discussion explains how retaining these provisions works with the RMR enhancements discussed above.

a. Continuing to Compensate RMR Resources Based on Their Full Annual Cost of Service Is Just and Reasonable Because Acceptance of an RMR Designation Is Mandatory

The CAISO is retaining its existing fixed cost compensation scheme for RMR resources. Specifically, RMR resources will continue to be compensated based on their full annual cost of service as calculated under Schedule F – Annual Revenue Requirement of Must Run Units of the *pro forma* RMR Contract (except that the CAISO is modifying the rate of return provision as discussed above). During the stakeholder process, some stakeholders argued that the CAISO should modify the fixed cost compensation to include only going forward fixed costs or going forward fixed costs plus some modicum of return on investment.

There is no basis to adopt a compensation scheme for RMR resources based on going forward fixed costs. As indicated above, accepting an RMR Contract and any RMR Contract extension is mandatory, not voluntary. Commission precedent is clear that where an ISO or RTO makes accepting a reliability backstop designation mandatory, full fixed cost of service pricing is appropriate, not going forward cost pricing.²⁹⁷ The CAISO's fixed cost compensation scheme for RMR resources follows this precedent.

²⁹⁷ The Commission has previously found that where a CAISO has an exclusively mandatory RMR regime that can require a unit needed for reliability to remain in service, the CAISO should "provide for compensation at a full cost-of-service rate." *N.Y. Indep. Sys. Operator Corp.*, 150 FERC ¶ 61,116 at P 17 (2015), *order on compliance and reh'g*, *N.Y. Indep. Sys. Operator Corp.*, 155 FERC ¶ 61,076 at P 84 (2016); *Midcontinent Indep. Sys. Operator, Inc.*, 148 FERC ¶ 61,057 at P 84 (2014) (finding it unjust and unreasonable to not allow system support resources, *i.e.*, RMR-type resources, to receive compensation for the fixed costs of existing plant given MISO's authority to unilaterally require a generator that seeks to retire or suspend operations to remain online to address reliability concerns). The NYISO precedent arose in a Section 206 proceeding where the Commission, among other things, stated that NYISO could adopt either a mandatory or a voluntary RMR regime. The Commission stated that if NYISO adopted a mandatory RMR regime that required a unit to remain in service, "NYISO's proposal should provide for compensation at a full cost-of-service rate." *N.Y. Indep. Sys. Operator Corp.*, 150 FERC ¶ 61,116 at P 17. The MISO precedent also arose in the context of a Section 206 complaint proceeding. The Commission found MISO's tariff was unjust and unreasonable because it did not compensate reliability resources for the fixed costs of existing plant even though the tariff required the generator that sought to retire or suspend operation to remain online to address reliability concerns. The Commission stated that where a unit is operating voluntarily in the competitive marketplace, MISO need only provide it the opportunity to recover its costs, such as embedded costs, but when a unit seeks to retire or suspend operations, and MISO requires it to remain online to maintain reliability, MISO must revise its tariff to provide that "SSR compensation should not exceed a resource's full cost-of-service, including the fixed costs of existing plant (rather than providing that this compensation must not exceed a resource's going-forward costs)." *Midcontinent Indep. Sys. Operator, Inc.*, 148 FERC ¶ 61,057 at PP 84-87. See also

Full cost of service pricing is also appropriate because the CAISO is requiring the RMR owner to keep the generating unit in service and make any necessary capital additions and repairs to ensure the generating unit can meet the CAISO's reliability needs. Thus, the CAISO is essentially mandating the RMR owner to invest in its generating unit, thus depriving the RMR owner of other potential business opportunities and preventing it from making other business decisions it may prefer. Full cost of service pricing is appropriate under these circumstances. In MISO, the Commission rejected arguments that "allowing recovery of embedded costs would allow Ameren to receive a windfall at the expense of customers in the MISO region, or otherwise provide an incentive to keep SSRs in operation for as long as possible."²⁹⁸ The Commission stated that in circumstances where MISO determines a generating unit is needed for reliability and assesses other alternatives to continued operation of the generating unit, recovery of fixed costs is not a windfall.²⁹⁹

The CAISO also notes that the Commission recently approved Constellation Mystic Power, LLC's cost-of-service agreement for continued operation to provide fuel security service in ISO-NE. That agreement was based on the resource's full cost-of-service, including a return on investment (that the Commission directed be determined in a paper hearing that is ongoing).³⁰⁰

b. Existing Commission-Approved RMR Provisions Adequately Address Toggling Concerns

The CAISO recognizes that the Commission has expressed concern in other ISO/RTO markets with RMR resources toggling between cost of service recovery and market recovery. In that regard, the Commission has stated that rules governing RMR status should be designed to "eliminate, or at least minimize, incentives for a generator needed for reliability to toggle" between

AmerenEnergy Resources Generating Co. v. MISO, 153 FERC ¶ 61,062 at P 35 (2015) (finding that because MISO has the ability to force a generator that wishes to retire to continue to provide utility service to meet reliability needs, even though it may be uneconomic for the generator to do so, "a generator would effectively be denied the opportunity to recover its fixed costs if it were only permitted to recover going-forward costs. Therefore, when a generator in the MISO region is forced to continue to operate for reliability reasons under the Tariff, even though it has made a business decision to suspend or retire due to economic or other reasons, the generator should be provided an opportunity to recover its fixed costs through a full cost of service rate" (citation omitted)).

²⁹⁸ *Midcontinent Indep. Sys. Operator, Inc.*, 148 FERC ¶ 61,057 at P 86.

²⁹⁹ *Id.*

³⁰⁰ *Constellation Mystic Power, LLC*, 165 FERC ¶ 61,267 (2018).

RMR and market status.³⁰¹ On the other hand, the Commission has also stated that terms for re-entering the market when RMR status ends should not be so unattractive that they will “discourage an otherwise efficient generator from continuing to operate to the detriment of customers.”³⁰²

The CAISO’s existing, Commission-approved *pro forma* RMR Contract already has provisions to address toggling effectively. The CAISO is retaining those existing anti-toggling measures in the revised *pro forma* RMR Contract. Accepting an RMR Contract and any RMR Contract extension offered by the CAISO is mandatory. The CAISO holds the sole option to extend an RMR Contract for another year.³⁰³ An RMR owner can unilaterally terminate an RMR Contract only in very limited circumstances: (1) the CAISO defaults, (2) the generating unit is condemned by a governmental entity, (3) the owner loses its license or other necessary authorizations, or if the license or other necessary authorizations are reissued or modified so it becomes illegal, uneconomical or otherwise impractical for the owner to continue operating the generating unit, or (4) the CAISO rejects a proposed capital item or repair not reversed by alternative dispute resolution, it would be uneconomical, impractical, or illegal for the generating unit to continue operation under such circumstances, and the owner obtains Commission authorization (if required by law to do so) to terminate the agreement.³⁰⁴ Otherwise, the CAISO controls the resource’s status once it becomes an RMR resource. Thus, the RMR Contract prevents a resource owner from voluntarily switching back and forth between RMR and the market or between RMR and CPM for economic reasons. The RMR Contract has an initial term of one Contract Year defined as a calendar year with expiration at the end of the calendar year.³⁰⁵ The CAISO has the unilateral option of extending the RMR Agreement for an additional calendar year or can terminate the RMR Contract if the CAISO finds the RMR resource is no longer needed for reliability or the CAISO finds a more cost effective solution to replace it. As the MSC Opinion recognizes, in those circumstances, the resource returning to the market no longer has any market power as the conditions that lead to the RMR designation have been fully mitigated.³⁰⁶

³⁰¹ *N. Y. Indep. Sys. Operator, Inc.*, 150 FERC ¶ 61,116 at P 9 (2015). The Commission stated that its approval was subject to the conditions described in the order. *Id.*

³⁰² *N. Y. Indep. Sys. Operator, Inc.*, 155 FERC ¶ 61,076 at PP 127-128 (2016).

³⁰³ CAISO Tariff, Appendix G, *Pro Forma* Reliability Must run Contract, Section 2.1 (b); revised *pro forma* RMR Contract at Section 2.1.

³⁰⁴ CAISO Tariff, Appendix G, *Pro Forma* Reliability Must run Contract, Section 2.2 (b); revised *pro forma* RMR Contract at Section 2.2.

³⁰⁵ CAISO Tariff, Appendix G, *Pro Forma* Reliability Must run Contract, Section 2.1 (a) and Article 1; revised *pro forma* RMR Contract at Section 2.1.

³⁰⁶ MSC Opinion at 3, 13.

One stakeholder expressed concern during the stakeholder process that the existing RMR provisions are not adequate to deter a resource from “toggling” between RMR procurement and market participation. The stakeholder points to the Commission’s decisions regarding the NYISO’s RMR program.³⁰⁷ There, the Commission identified two toggling concerns: (1) a resource deactivating earlier than it otherwise would have in expectation of being needed for reliability and therefore receiving more revenues under an RMR service agreement than remaining in the market; and (2) a generating resource re-entering the market after having received accelerated recovery of the cost of additional investments being made under the RMR agreement. The NYISO addressed the second toggling concern by requiring the RMR owner to reimburse the NYISO for the capital expenditure costs, less depreciation, a condition for operating after termination of the RMR agreement. The Commission found this did not deter toggling by resources that do not require capital expenditures during the term of an RMR agreement. The Commission directed the NYISO to provide that if an RMR generator wishes to continue operating after its RMR agreement it must pay the NYISO the higher of (1) the capital expenditures less depreciation, that NYISO reimbursed the generator to remain in service during the term of the RMR agreement, or (2) the above-market payments the generator received during the term of the RMR agreement.³⁰⁸ The NYISO complied with the order by providing a formula that claws-back the above-market revenues from an RMR generator that exceed the going-forward cost rate calculated by the NYISO.³⁰⁹

Concerns that the CAISO’s existing anti-toggling measures are inadequate are misplaced. The CAISO’s RMR compensation rules follow Commission guidance and address toggling incentives appropriately. The CAISO’s RMR framework differs significantly from the NYISO’s RMR framework. First, the CAISO’s RMR framework is mandatory; the NYISO’s RMR framework is voluntary. Thus, RMR resources cannot voluntarily “toggle” between RMR and the market year-by-year. If the CAISO offers an RMR agreement to a resource or an extension of an existing RMR agreement, the resource owner must accept it. To prevent resources from “fishing” for an RMR contract, if the CAISO finds the resource is not needed for reliability, the CAISO will expect the resource to retire or mothball consistent with its affidavit.

Second, as discussed in Section III.B *supra*, Commission precedent provides that full cost of service pricing is appropriate for mandatory RMR schemes; whereas, voluntary RMR schemes, like the NYISO’s, need only provide for going forward cost recovery. Because the CAISO’s RMR regime is mandatory, the

³⁰⁷ *N. Y. Indep. Sys. Operator, Inc.*, 150 FERC ¶ 61,116 (2015), *order on compliance and reh’g*, 155 FERC ¶ 61,076 (2016).

³⁰⁸ *N. Y. Indep. Sys. Operator, Inc.*, 155 FERC ¶ 61,076 at P 126.

³⁰⁹ See NYISO Compliance Filing, Docket No. ER16-120-005 (Jan. 16, 2018) approved by Commission Letter Order dated April 24, 2018.

CAISO compensates RMR resources based on their full annual cost of service, not their going forward costs.

Third, CAISO settlements mechanisms particularly under the historic Condition 2 form and the proposed new *pro forma* RMR contract, ensure that RMR resources are not compensated above their established cost of service. All market revenues above the RMR Contract cost of service entitlement are applied to offset fixed costs payable under the RMR Contract.³¹⁰ Thus, CAISO RMR resources cannot recover amounts in excess of their Commission-approved fixed cost of service and actual variable costs.³¹¹

Fourth, the CAISO differs significantly from New York in that the CAISO does not up-front fund all capital addition costs. The accelerated, up-front payment of needed capital improvements that exists in the NYISO does not exist in the CAISO. Rather, the RMR owner must up-front fund or finance all capital additions. Each capital addition will have a depreciation schedule with the RMR compensation limited to the *pro rata* annual contribution for each year the resource remains under an RMR agreement. Thus, the CAISO only compensates the RMR owner for a one-year portion of its capital addition costs for each year of RMR service based on the Commission-approved depreciation schedule.³¹²

An RMR owner's ability to terminate the RMR Contract is extremely limited. On the other hand, the CAISO has the option to extend the contract for an additional year or terminate the contract if it is no longer necessary, or a cheaper solution is available.³¹³ Once the RMR agreement is terminated, the CAISO's contribution towards any balance of unpaid capital additions costs terminates if the resource returns to the market. If the resource retires following RMR service, the CAISO must pay a termination fee under section 2.5 of the RMR Contract (and the revised RMR Contract) if the resource closes within six months following the termination of the RMR agreement and stays closed for 36 months. The CAISO pays the termination fee (which includes the undepreciated portion of any previously approved capital costs) in 36 equal monthly installments. However, the termination fee is calculated differently from the annual capital additions payments. The capital additions compensation includes a return on investment. The termination fee does not include this return on investment. The termination fee consists solely of the unpaid balance of cost of the capital addition, plus interest at the FERC rate. A generating unit that is out of service for 36 months also loses its deliverability and must re-enter the interconnection queue. The RMR owner

³¹⁰ *Pro forma* RMR Contract, Sections 3.1(ii) and 9.1.

³¹¹ Under the RAIM mechanism, resource can be penalized for non-performance or earn a share of revenues from penalties collected from non-performers, for performing well.

³¹² *Id.*, Sections 7.4 and Schedule L-1.

³¹³ *Id.*, Sections 2.1 (b).

recovers its costs over a 36-month period with no return on the investment it made for the capital addition. RMR owners have complained about this existing provision and have wanted a higher rate of return on investment and/or accelerated recovery of its costs. Given that the RMR agreement must provide for capital additions for reliability and safe operations, which generators may see as a benefit of RMR not provided by CPM or single year RA agreements, the CAISO has minimized any incentives for resources owners to desire RMR just for the termination fee provision.

In addition, the Commission has recognized that each market is different, and thus there is no “one size fits all” approach appropriate for all RMR regimes.³¹⁴ The CAISO notes that the Commission recently rejected arguments it should impose the NYISO anti-toggling scheme on the cost of service agreement for Constellation Mystic Unit addressing fuel security needs in New England, and instead found that applying the MISO anti-toggling mechanism was just and reasonable.³¹⁵ Under the MISO anti-toggling mechanism, if a resource owner re-enters the market after its cost-of-service agreement terminates, it must refund, with interest at the Commission-approved rate, all costs less, less depreciation, for repairs and capital expenditures needed to continue operation of the generating unit as an RMR unit.³¹⁶

The CAISO believes its approach of (1) only paying a one-year depreciable slice of capital addition costs and (2) clawing back all net market revenues above the RMR contract rate follows the Commission’s guidance regarding toggling. When combined with the mandatory nature of the CAISO’s RMR construct and the fact the CAISO alone holds the option to extend an RMR Contract, these features provide adequate anti-toggling protections and do not permit a resource owner voluntarily to toggle back and forth between RMR, CPM, and the market. There is no basis or need to change these existing, unchanged anti-toggling provisions. Any changes to the CAISO’s existing – and unchanged -- anti-toggling provisions must be effectuated under Section 206 of the Federal Power Act.

c. There Is No Basis to Change the Depreciation Provisions of the RMR Contract

The Department of Market Monitoring (DMM) and the California Public Utilities Commission (CPUC) suggest that RMR owners have too much discretion in

³¹⁴ *PJM Interconnection, LLC*, 107 FERC ¶ 61,112 at P 15 (2004).

³¹⁵ *Constellation Mystic Power, LLC*, 165 FERC ¶ 61,267 at P 208 (2018) (citing MISO FERC Electric Tariff, Module C, Section 38.2.7.e(ii)).

³¹⁶ *Id.* at P 208.

selecting the depreciation schedule used for RMR compensation, and that they will seek to maximize RMR compensation. DMM suggests that the CAISO “should consider refining its RMR policy to at least prevent resources from choosing one depreciation method and set of input parameters for tax filings or financial statements and then choosing a different method and input parameters to maximize RMR compensation.”³¹⁷ The CPUC states that the RMR agreement allows generators to use short book lives for tax purposes and long book lives for cost-of-service compensation thus maximizing their compensation. The CPUC requests that the CAISO require the RMR owner to use the finance life of the asset to develop depreciation book costs, not the service life of the generating unit.

The CAISO notes that although the RMR owner includes a depreciation schedule in its RMR Contract filing with the Commission, the Commission ultimately determines the just and reasonable depreciation rate and net plant value to be utilized under the contract consistent with Commission precedent and policy. The RMR owner does not – and cannot -- dictate the depreciation rates and net plant value used in setting RMR rates. All stakeholders can intervene in the RMR contract filing proceedings at the Commission and to litigate (or settle) the issue of just and reasonable depreciation. The Commission can, and will, reject depreciation rates and plant values that are not justified based on the specific facts and/or inconsistent with Commission policy. Interveners opposed, and the Commission recently rejected, plant values and depreciation rates proposed for the Constellation Mystic Power plant.³¹⁸ The Commission determined the appropriate method for determining the depreciation period, depreciation rate, and net plant values for the Mystic units. The same Section 205 scrutiny the Commission applied in that proceeding applies to Section 205 RMR filings not settled by the parties.

Depreciation is a complicated issue that turns on many factors. Ultimately, depreciation and net plant determinations are issues for the Commission to decide based on the facts and Commission policy, and the CAISO is reluctant in a Section 205 filing to unilaterally dictate a specific depreciation period that must be filed (and used by the Commission), just as it is reluctant to retain the “hardwired” rate of return in the RMR Contract. The CAISO has reviewed the NYISO’s *pro forma* RMR agreement,³¹⁹ MISO’s *pro forma* SSR agreement,³²⁰ and ISO-NE’s Form of cost-of service agreement³²¹

³¹⁷ Memorandum to ISO Board of Governors, *DMM Comments—Decision on reliability must-run and capacity procurement mechanism enhancements proposal*, at 8 (Mar. 20, 2019).

³¹⁸ *Constellation Mystic Power, LLC*, 165 FERC ¶ 61,267 at PP 53-71 (2018).

³¹⁹ NYISO Open Access Transmission Tariff, Attachment FF, Appendix C.

³²⁰ MISO FERC Electric Tariff, Attachment Y-1, Form of System Support Resource (SSR) Agreement.

³²¹ ISO-NE Tariff, Market Rule 1, Appendix I.

and none have a “hardwired” methodology or specified depreciation period for determining net plant values and depreciation rates. Rather, these backstop procurement agreements leave it to the Commission to decide the matter, as does the CAISO’s *pro forma* RMR Contract, as part of the RMR owner’s rate case following its filing of an RMR rate schedule

Finding that an RMR Contract for a generating unit meets a reliability need is comparable in certain ways to the CAISO approving a transmission facility to meet a reliability need. The CAISO does not dictate the depreciation rates of its Participating Transmission Owners; rather, facility owners make Section 205 rate filings with the Commission proposing depreciation rates and plant values, and the Commission approves just and reasonable values, which may, or may not be the rate proposed by the transmission owner. RMR Contracts function similarly. The RMR owner must make a Section 205 rate filing with the Commission, and the Commission must determine the just and reasonable rate and individual components of that rate.

The CAISO notes that the Commission’s Uniform System of Accounts and its ratemaking precedent base depreciation on a facility’s useful service life.³²² Schedule F of the existing and revised *pro forma* RMR agreement requires the RMR owner to follow the Commission’s Uniform System of Accounts to determine Gross Plant Investment, Depreciation Reserve, and Depreciation Expense used in establishing the fixed annual revenue requirement under the RMR Contract. Further, accelerated depreciation for tax purposes and a longer depreciation term for ratemaking purposes is not a new issue for the Commission.³²³ The Commission has recognized that a public utility’s income taxes to the IRS during any period differ from its income tax allowance used for ratemaking during the same period, largely because utilities can utilize accelerated depreciation for tax purposes by calculating rates based on straight line depreciation. The difference between the income taxes paid by the public utility based on straight-line depreciation and the actual income taxes paid by the public utility generally are reflected in an accumulated deferred income tax (ADIT) account under the Uniform System of Accounts. Benefits from accelerated depreciation are passed on to customers throughout the asset’s life, *i.e.*, tax normalization. Schedule F of the existing and revised RMR Contract requires RMR owners to apply ADIT, in accordance with the Uniform System of Accounts, to determine Net Investment recoverable through the RMR Contract. The CAISO does not believe that any changes to the RMR Contract are required or warranted.

³²² See *Depreciation Accounting*, Order No. 618, FERC Stats. & Regs, ¶ 30,104 at 31,694 (2000); *Constellation Mystic Power, LLC*, 165 FERC ¶ 61,267 at PP 64-65, 70, 153 (2018).

³²³ See, *e.g.*, *Inquiry Regarding the Effect of the Tax Cuts and Jobs Act on Commission-Jurisdictional Rates*, 162 FERC ¶61,223 at PP 9-12 (2018).

C. CPM Compensation Changes Recommended by Certain Stakeholders Are Beyond the Scope of This Filing

As indicated above, this initiative focused on three areas: (1) modernizing the RMR agreement, (2) clarifying when the CAISO will use CPM procurement authority and when it will use RMR procurement authority; and (3) addressing retirement-related backstop procurement (*i.e.*, RMR and risk of retirement CPM). Certain stakeholders proposed unrelated and far-reaching changes to the CPM compensation scheme that the CAISO declined to adopt and is not proposing in this tariff amendment. These changes include changing the level of the CPM soft offer cap, changing the pricing for 12-month CPM designations to require RMR-type pricing, and applying a three-pivotal supplier test to all accepted bids in the CPM competitive solicitation process. These stakeholders' proposals would require new tariff sections or changes to tariff sections that the CAISO does not propose to change in this filing, and are beyond the scope of the tariff changes the CAISO proposes herein and actively considered in the underlying stakeholder initiative. The only CPM-related tariff changes the CAISO proposes in this tariff filing involve removing the risk of retirement provisions from the CPM tariff in Section 43A.³²⁴ Changes these stakeholders desire can be pursued under Section 206 of the Federal Power Act. As shown in Section II.D., *supra*, CAISO never intended these specific issues to be within the scope of this stakeholder initiative and tariff amendment filing.

Also, CAISO tariff section 43A.4.1.1.2 requires the CAISO (or the California Energy Commission) to conduct a cost of generation study and for the CAISO to convene a stakeholder process to consider the study results before determining whether to change the CPM soft offer cap. There are no such study results to consider at this time and, as such, the prerequisite in the CAISO tariff for changing the soft offer cap has not been satisfied.

At the March 27, 2019 Board meeting where the CAISO Board authorized filing the instant tariff amendments, the CAISO indicated its intent to undertake the requisite cost of service study under tariff section 432A.4.1.1.2 this year, and to commence a stakeholder process to assess the study results and consider changes to the CPM soft offer cap. The additional CPM compensation-related changes certain stakeholders seek are best addressed in connection with the discussion of the cost of service study results so any changes to CPM pricing at or below the CPM soft offer cap can be addressed in a single initiative and be informed by current cost data.

³²⁴ In the near future, the CAISO will be making a targeted tariff filing to make some minor clarifications to the CPM tariff and to revise compensation for CPM resources with cost offers above the CPM soft offer cap. Those tariff changes stand-alone from the RMR and risk of retirement CPM changes the CAISO proposes in this filing.

The CAISO also notes that in the entire history of CAISO backstop procurement (Reliability Capacity Services Tariff, Transitional Capacity Procurement Mechanism, Interim Capacity Procurement Mechanism, and CPM) there have never been additional mitigation measures beyond setting the CPM soft offer cap or, before that, the CPM administrative price paid to all resources. The administrative prices and the soft offer cap have always been established based on comprehensive and detailed California Energy Commission cost of service studies. The current CPM soft offer cap is based on the going forward fixed costs of a mid-cost, combined cycle resource, plus a twenty percent adder to permit resources to have some opportunity for fixed cost recovery.³²⁵

IV. SEVERABILITY OF THE PROPOSED TARIFF PROVISIONS

From a substantive perspective, the proposed tariff amendment filing contains many revisions that are discrete and can stand on their own. Such tariff provisions are merely separate elements of a multi-part filing severable from each other and are not interrelated, interdependent, or affected by Commission actions on any other element of the filing. These discrete revisions are found in separate tariff or *pro forma* RMR Contract provisions. The Commission should evaluate the justness and reasonableness of these provisions based on their individual merits.

There are also certain elements of this filing that are interrelated so material changes adopted by the Commission to one element potentially could affect other elements. To assist the Commission in its review of this filing, the CAISO identifies below which elements of this filing it believes (1) stand on their own and are severable from all other elements of the filing, or (2) are interrelated with other specific elements of the filing.

The CAISO submits that the following elements of the filing are severable and can be approved, rejected, or materially modified by the Commission without affecting other elements:

- The rate of return provision in Schedule F of the revised pro forma RMR agreement
- The revisions in tariff section 41.1
- The revisions in tariff section 41.2

The CAISO submits that the following elements of the filing are interrelated with other elements of the filing:

- Tariff revisions eliminating the risk of retirement CPM (43A.2 (6), 43A.2.6, 43A.7, 43A.8.7, and 43A.9 (d)) and tariff revisions

³²⁵ *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,001 at P 13 (2015).

implementing a single backstop procurement mechanism for retirement and mothball related backstop procurement (41.2.1 and 41.2.2 are interrelated with each other, but severable from other elements of the filing.

- The RA crediting provision in revised tariff section 41.8, the RMR cost allocation provisions in revised tariff section 41.9, references in the *pro forma* RMR Contract to the Responsible Utility, and related settlements changes in Section 11 regarding the allocation of RMR costs to LSEs instead of Responsible Utilities are interrelated, but severable from other elements of the filing.
- Revisions in tariff section 41.3 and eliminating the provisions of tariff section 41.4 are interrelated with each other, but severable from other elements of the filing.
- Tariff and *pro forma* RMR contract changes pertaining to elimination of Condition 1 RMR, replacing RMR dispatch provisions with a must offer obligation, performance measures for RMR resources (*i.e.*, replacing the existing measures with RAIM), marginal cost bidding, tariff section 11 settlement changes (other than those related to cost allocation), and streamlining changes (other than those related to cost allocation) are interrelated with each, other but severable from other elements.

V. EFFECTIVE DATE

The CAISO respectfully requests that the Commission issue an order by July 19, 2019, accepting the tariff revisions in this filing effective July 22, 2019. The CAISO requests that the Commission grant any and all waivers necessary to approve the filing, as requested.

VI. COMMUNICATIONS

In accordance with the Commission's regulations,³²⁶ correspondence and other communications concerning this filing be served upon the following individuals, whose names should be placed on the official service list established by the Commission with respect to this filing:

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³²⁶ 18 C.F.R. § 385.203(b)(3).

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VII. SERVICE

The CAISO has served copies of this filing on the California Public Utilities Commission, the California Energy Commission, and all parties with Scheduling Coordinator Agreements under the CAISO tariff. In addition, the CAISO has posted a copy of the filing on the CAISO website.

VIII. CONTENTS OF FILING

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

- | | |
|----------------|--|
| Attachment A 1 | Clean CAISO tariff sheets of proposed tariff changes; |
| Attachment A 2 | Clean CAISO tariff sheets the proposed <i>pro forma</i> RMR Contract; |
| Attachment B 1 | Red-lined marked document showing the proposed tariff changes; |
| Attachment B 2 | Red-lined marked document showing the proposed <i>pro forma</i> RMR Contract; |
| Attachment C | March 20, 2019 memorandum to the Board from Keith Casey, Vice President, Market & Infrastructure Development entitled <i>Decision on reliability must-run and capacity procurement mechanism enhancements</i> ; a March 27, 2019 presentation to the Board by Keith Johnson, Infrastructure and Regulatory Policy Manager, entitled <i>Decision on reliability must-run and capacity procurement mechanism enhancements proposal</i> , and; Department of Market Monitoring Comments dated March 20, 2019. |
| Attachment D | MSC Opinion |
| Attachment E | Letter from Mark Smith to Steve Berberich dated November 28, 2016; |

| | |
|--------------|---|
| Attachment F | Letter from Mark Smith to Steve Berberich dated June 2, 2017 |
| Attachment G | NYISO's Generator Deactivation Notice |
| Attachment H | MISO's Attachment Y Notice |
| Attachment I | CAISO Form of Notice of Generating Unit Retirement or Mothball to be included in BPM for Generator Management |

Attachment J 1 Table of Proposed Tariff Revisions relating to Legacy
RMR Units

Attachment J 2 Table of Proposed RMR Contract Revisions

IX. CONCLUSION

The CAISO respectfully requests that the Commission issue an order by July 19, 2019, accepting the tariff changes proposed in this filing to effective July 22, 2019.

Respectfully submitted,

By: /s/ Sidney L. Mannheim

Roger E. Collanton

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Attachment A-1 – Clean Tariff

Reliability Must-Run and Capacity Procurement Mechanism Enhancements

California Independent System Operator Corporation

4.9.13.2 Load-Following or Non Load-Following Election

The MSS Operator has the option to elect to operate a System Unit or Generating Units in the MSS to follow its Load, provided that: (a) the Scheduling Coordinator for the MSS Operator shall remain responsible for purchases of Energy in accordance with the CAISO Tariff if the MSS Operator does not operate its System Unit or Generating Units and bid or schedule imports into the MSS, to match the metered Demand in the MSS and exports from the MSS; and (b) if the deviation between Generation and imports into the MSS and metered Demand and exports from the MSS exceeds the MSS Deviation Band, then the Scheduling Coordinator for the MSS Operator shall pay the additional amounts specified in Section 11.7. If an MSS Operator elects Load-following and net Settlements, all generating resources within the MSS must be designated as Load-following resources. If an MSS Operator elects Load-following and gross Settlements, generating resources within the MSS can be designated as either Load-following or non-Load-following resources. Consistent with these requirements, the MSS Operator may also modify the designation of generating resources within the MSS within the timing requirements specified for such Master File changes as described in the Business Practice Manuals.

If the MSS Operator has elected gross Settlement and is a Load-following MSS: (i) it must designate in the Master File which of its generating resources are Load-following resources, (ii) it must comply with the additional bidding requirements in Section 30.5.2.5, and (iii) the generation resources designated as Load-following resources cannot set Real-Time prices. However, Load-following resources will be eligible to receive Bid Cost Recovery to ensure that the price paid for Energy dispatched by the CAISO is not less than the MSS Operator's accepted Bid price. Bid Cost Recovery for a Load-following MSS resource is only applicable to generation capacity provided to the CAISO Markets by that MSS resource and is not applicable for the generating capacity that is designated or used by an MSS Operator to follow its own Load.

An MSS Operator may designate RMR Resources as Load-following. Load-following RMR Resources must be available to the CAISO for Dispatch up to the RMR Contract Capacity specified in the RMR Contract. Energy shall be accounted for as a delivery from the MSS to the CAISO for the purposes of determining if the MSS Operator followed its metered Demand and exports from the MSS as described in this Section 4.9.13.2 except that Energy from an RMR Resources in a Day-Ahead Schedule can be used

for Load-following to satisfy Day-Ahead scheduled Demand like any other non-RMR Resource Load-following resource. If no RMR Dispatch Notice is received for a Load-following RMR Resource, such Load-following RMR Resource may participate in the CAISO Markets as any other non-RMR Load-following resource subject to Section 30.5.2.5.

* * * * *

6.5.3.1.3 Between 5:00 a.m. and 10:00 a.m., the CAISO will provide feedback to Scheduling Coordinators about their validated ETC and TOR quantities, and calculated Default Energy Bids curves and in addition, the RMR Proxy Bids for Energy and the Minimum Load and Start-Up Cost Bid curves for Legacy RMR Units.

6.5.3.1.4 After the close of the DAM bidding at 10:00 a.m., the CAISO will send a message to the Scheduling Coordinators regarding the outcome of the Bid validation.

6.5.3.1.5 By 1:00 p.m., the CAISO will publish the result of the DAM and the resource will be flagged if it is being dispatched under its Legacy RMR Contract and will be deemed an RMR Dispatch Notice under the Legacy RMR Contract.

* * * * *

6.5.3.1.7 The results of the Day-Ahead Market will be published by 1:00 p.m. and will include:

- (a) Unit Commitment status for resources committed in the IFM;
- (b) Day-Ahead Schedules and prices;
- (c) Day-Ahead AS Awards and prices;
- (d) RUC Awards and RUC Capacity and resource-specific RUC Prices;
- (e) RUC Start-Up Instructions;
- (f) Start-Up Instructions resulting from the ELC Process;
- (g) Post-market summary of Day-Ahead and Real-Time Energy Schedules, Ancillary Service Awards, RMR Dispatches, and Legacy RMR Units;

- (h) Day-Ahead final resource Bid mitigation results; and
- (i) Day-Ahead finally qualified Load following capacity.

6.5.5.1.2 Every five (5) minutes for Target T+10, the CAISO will send Dispatch Instructions via the secure communication system. The Dispatch Instruction will be flagged if a resource is being dispatched under a Legacy RMR Contract.

7.7.2 Market Participant Responsibilities in System Emergencies.

- (a) **Response to CAISO Dispatch Instructions.** All Market Participants shall respond immediately to CAISO Dispatch Instructions during System Emergencies.
- (b) **Responsibilities of UDCs and MSS Operators During a System Emergency.**
 - (1) **Compliance with Directions and Procedures.** In the event of a System Emergency, UDCs and MSS Operators shall comply with all directions from the CAISO concerning the avoidance, management, and alleviation of the System Emergency and shall comply with all procedures concerning System Emergencies set forth in this CAISO Tariff, the Business Practice Manuals, and the Operating Procedures. and shall comply with all procedures concerning System Emergencies set forth in the CAISO Tariff, Business Practice Manuals and Operating Procedures.
 - (2) **Communications.** During a System Emergency, the CAISO shall communicate with the UDCs and MSS Operators through their respective control centers and in accordance with procedures established in individual UDC and MSS Operating Agreements.
 - (3) **Notifications of End-Use Customers.** Each UDC and MSS Operator will notify

its End-Use Customers connected to the UDC's or the MSS's Distribution System of any voluntary curtailments notified to the UDC or to the MSS Operator by the CAISO pursuant to the provisions of the Electrical Emergency Plan.

(c) **Responsibilities of Generating Units, System Units and System Resources During System Emergencies.**

- (1) **In General.** All Generating Units and System Units that are owned or controlled by a Participating Generator are (without limitation to the CAISO's other rights under this CAISO Tariff) subject to control by the CAISO during a System Emergency and the CAISO shall have the authority to instruct a Participating Generator to bring its Generating Unit on-line or off-line or to increase or curtail the output of the Generating Unit and to alter scheduled deliveries of Energy and Ancillary Services into or out of the CAISO Controlled Grid, if such an instruction is reasonably necessary to prevent an imminent or threatened System Emergency or to retain Operational Control over the CAISO Controlled Grid during an actual System Emergency.
- (2) **Prerequisite for Dispatch Instructions.** The CAISO shall, where reasonably practicable, use Ancillary Services which it has the contractual right to instruct and which are capable of contributing to containing or correcting the actual, imminent, or threatened System Emergency prior to issuing instructions to a Participating Generator under this subsection, except that the CAISO need not take such action if it determines such action is unlikely to be effective.
- (3) **Legacy RMR Condition 2 Units.**
 - (A) **Prerequisite for Dispatch Instructions.** The CAISO shall only instruct a Legacy RMR Unit whose owner has selected Condition 2 of its Legacy RMR Contract to start-up and change its output if the CAISO has reasonably used all other available and effective resources to prevent a threatened System Emergency without declaring that a System Emergency exists.

(B) **Compensation.** If the CAISO dispatches a Condition 2 RMR Unit pursuant to subparagraph (A), it shall compensate that unit in accordance with Section 11.5.6.3 and allocate the costs in accordance with Section 11.5.6.3.2.

(4) **Qualifying Facilities.** A Scheduling Coordinator that represents a QF subject to an Existing QF Contract that is not subject to a PGA or Net Scheduled PGA will make reasonable efforts to require such QFs to comply with the CAISO's instructions during a System Emergency without penalty for failure to do so.

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11.2.2.1 Settlement of RUC Availability Payment

Scheduling Coordinators shall receive RUC Availability Payments for all eligible capacity awarded in the RUC process. Resource Adequacy Capacity and RMR Capacity are not eligible for RUC Availability Payments in the DAM. The RUC Availability Payment shall be calculated for each resource based on the product of the RUC Price and the RUC Availability Quantity for the relevant Settlement Period. The RUC Availability Payment amounts are allocated through the RUC Compensation Costs allocation in Section 11.8.6.5.

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11.5.6 Settlement Amounts for RTD Instructed Imbalance Energy from Exceptional Dispatch

For each Settlement Interval, the RTD IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.11 is calculated as the sum of the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant FMM or RTD LMP Settlement price for each type of Exceptional Dispatch as further described in this Section 11.5.6. For MSS Operators the Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches is conducted in the same manner, regardless

of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.11 shall be calculated as set forth in Section 11.5.6.7.

11.5.6.1 Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, to Mitigate Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for System Emergency conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The

Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price subject to Section 39.6.1.4; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for Emergency System conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, is the minimum of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. All Energy costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.1.1 Settlement of Excess Cost Payments for Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, and to Avoid an Imminent System Emergency

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Disruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 for the applicable Exceptional Dispatch at the FMM or RTD LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch. The Excess Cost Payment for incremental Exceptional Dispatches used for System Emergency conditions; for a Market Disruption; or to avoid an imminent System Emergency for an RMR Resource is the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 and one of the following two costs: (1) the RMR Resource's Energy Bid price adjusted to remove Opportunity Costs; or (2) the Default Energy Bid price adjusted to remove Opportunity

Costs.

11.5.6.2 Settlement of Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered by an RMR Resource as a result of Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of: (a) the applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch from an RMR Resource is the minimum of: (a) the FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch

are settled in two payments: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

11.5.6.2.1 [NOT USED]

11.5.6.2.2 [NOT USED]

11.5.6.2.3 Settlement of Excess Cost Payments for Exceptional Dispatches used for Transmission-Related Modeling Limitations

The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following three costs: (1) the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch. The Excess Cost Payment for Exceptional Dispatches for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each RMR Resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following two costs: (1) the resource's Energy Bid Cost adjusted to remove Opportunity Costs; or (2) the Default Energy Bid cost adjusted to remove Opportunity Costs, for the relevant Exceptional Dispatch.

11.5.6.2.4 Exceptional Dispatches for Non-Transmission-Related Modeling Limitations

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of the (a) FMM or RTD LMP; (b) Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. For RMR Resources, the Exceptional Dispatch Settlement price for incremental

FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of: (a) FMM or RTD LMP; (b) Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the (a) FMM or RTD LMP; (b) Energy Bid Price; (c) Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) negotiated price as applicable to System Resources. For RMR Resources; the Exceptional Dispatch Settlement for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the: (a) FMM or RTD LMP; (b) Energy Bid price adjusted to remove Opportunity Costs; or (c) Default Energy Bid price adjusted to remove Opportunity Costs. All costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

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11.5.6.3 Settlement for Instructed Imbalance Energy from Exceptional Dispatches for Condition 2 Legacy RMR Units

11.5.6.3.1 Pricing for Exceptional Dispatch of Legacy RMR Units

If the CAISO dispatch a Legacy RMR Unit that has selected Condition 2 of its Legacy RMR Contract to Start-Up or provide Energy other than a Start-Up or Energy pursuant to the Legacy RMR Contract, the CAISO shall pay as follows:

- (a) if the Owner has elected Option A of Schedule G, two times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and 1.5

times the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instructions;

- (b) if the Owner has elected Option B of Schedule G, three times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instruction.

Equation 1a

$$\text{Energy Price (\$/MWh)} = (AX^3 + BX^2 + CX + D) * P * E \\ X + \text{Variable O\&M Rate}$$

Equation 1b

$$\text{Energy Price (\$/MWh)} = \frac{A * (B + CX + De^{FX})}{X} * P * E \\ X + \text{Variable O\&M Rate}$$

Where:

- for Equation 1a, A, B, C, D and E are the coefficients given in Table C1-7a of the applicable Legacy RMR Contract;
- for Equation 1b, A, B, C, D, E and F are the coefficients given in Table C1-7b of the applicable Legacy RMR Contract;
- X is the Unit output level during the applicable settlement period, MWh;
- P is the Hourly Fuel Price as calculated by Equation C1-8 in Schedule C using the Commodity Prices in accordance with the applicable Legacy RMR Contract;

Variable O&M Rate (\$/MWh): as shown on Table C1-18 of the applicable Legacy RMR Contract.

11.5.6.3.2 Allocation of Costs from Exceptional Dispatch Calls to Condition 2 RMR Units

- (a) All costs associated with Energy provided by a Condition 2 Legacy RMR Unit operating other than according to a RMR Dispatch shall be allocated in accordance with Section 11.5.4.2.
- (b) Start-Up Costs for Condition 2 Legacy RMR Units providing service outside the Legacy RMR Contract shall be treated similar to costs under Section 11.5.6.2.5.2.

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11.8.2.1 IFM Bid Cost Calculation

For each Settlement Interval, the CAISO shall calculate IFM Bid Cost for each Bid Cost Recovery Eligible Resource as the algebraic sum of the IFM Start-Up Cost, IFM Transition Cost, IFM Minimum Load Cost, IFM Pump Shut-Down Cost, IFM Energy Bid Cost, IFM Pumping Cost, and IFM AS Bid Cost. For Multi-Stage Generating Resources, in addition to the specific IFM Bid Cost rules described in Section 11.8.2.1, the CAISO will apply the rules described in Section 11.8.1.3 to further determine the applicable MSG Configuration-based CAISO Market Start-Up Cost, Transition Cost and Minimum Load Cost in any given Settlement Interval. For Multi-Stage Generating Resources, the incremental IFM Start-Up, Minimum Load, and Transition Costs to provide Energy Scheduled in the Day-Ahead Schedule or awarded RUC or Ancillary Service capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the IFM rules specified in Section 31.3. For RMR Resources, the CAISO shall calculate the IFM Bid Cost as the algebraic sum of the IFM Start-Up Cost adjusted to remove Opportunity Costs and Major Maintenance Costs, IFM Transition Cost adjusted to remove Opportunity Costs and Major Maintenance Adder Costs, IFM Minimum Load Costs adjusted to remove Opportunity Costs and Major Maintenance Adder Costs, IFM Energy Bid Cost adjusted to remove Opportunity Costs, and IFM AS Bid Cost.

11.8.2.1.1 IFM Start-Up Cost

The IFM Start-Up Cost for any IFM Commitment Period shall be equal to the Start-Up Costs submitted by the Scheduling Coordinator to the CAISO for the IFM divided by the number of Settlement Intervals within the applicable IFM Commitment Period. For each Settlement Interval, only the IFM Start-Up Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the IFM Start-Up Costs for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration. The following rules shall apply sequentially to qualify the IFM Start-Up Cost in an IFM Commitment Period:

- (a) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is an IFM Self-Commitment Period within or overlapping with that IFM Commitment Period.

- (b) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in the Day-Ahead Market anywhere within the applicable IFM Commitment Period.
- (c) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is no actual Start-Up at the start of the applicable IFM Commitment Period because the IFM Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) If an IFM Start-Up is terminated in the Real-Time within the applicable IFM Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource was starting up, the IFM Start-Up Cost for that IFM Commitment Period shall be prorated by the ratio of the Start-Up Time before termination over the total IFM Start-Up Time.
- (e) The IFM Start-Up Cost is qualified if an actual Start-Up occurs within the applicable IFM Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO IFM Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether the resource's metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3.
- (f) The IFM Start-Up Cost will be qualified if an actual Start-Up occurs earlier than the start of the IFM Commitment Period if the advance Start-Up is a result of a Start-Up instruction issued in a RUC or Real-Time Market process subsequent to the IFM, or the advance Start-Up is uninstructed but is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the targeted IFM Start-Up.
- (g) The Start-Up Costs for a Bid Cost Recovery Eligible Resource that is a Short Start Unit

committed by the CAISO in the IFM and that further receives a Start-Up Instruction from the CAISO in the Real-Time Market to start within the same CAISO IFM Commitment Period, will be qualified for the CAISO IFM Commitment Period instead of being qualified for the CAISO RTM Commitment Period; and Start-Up Costs for subsequent Start-Ups will be further qualified as specified in Section 11.8.4.1.1(h).

11.8.2.1.2 IFM Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost submitted to the CAISO in the IFM, and as modified pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour subject to the rules described below.

- (a) For each Settlement Interval, only the IFM Minimum Load Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery.
- (b) The IFM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is in an IFM Self Commitment Period for the Bid Cost Recovery Eligible Resource; or (2) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule for the applicable Settlement Interval.
- (c) If the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the IFM Minimum Load Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits an RMR Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the sum of IFM Minimum Load Costs, adjusted to remove Minimum Load Opportunity Costs and Minimum Load Major Maintenance Costs, are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4.
- (d) If a Multi-Stage Generating Resource is committed by the CAISO and receives a Day-Ahead Schedule and subsequently is committed by the CAISO to a lower MSG Configuration where its Minimum Load capacity as registered in the Master File in the

Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load as registered in the Master File, the resource's IFM Minimum Load Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits an RMR Multi-Stage Generating Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the sum of IFM Minimum Load Costs, adjusted to remove Minimum Load Opportunity Costs and Minimum Load Major Maintenance Costs, are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4.

- (e) If the conditions in Sections 11.8.2.1.2 (c) and (d) do not apply, then the IFM Minimum Load Cost for any Settlement Interval is zero if the Bid Cost Recovery Eligible Resource is determined to be Off during the applicable Settlement Interval. For the purposes of determining IFM Minimum Load Cost, a Bid Cost Recovery Eligible Resource is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its (i) Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and (ii) the Tolerance Band, and the Metered Energy is greater than zero (0) MWh. Otherwise, such resource is determined to be Off.
- (f) For Multi-Stage Generating Resources, the commitment period is determined based on application of section 11.8.1.3. If application of section 11.8.1.3 dictates that the IFM is the commitment period, then the calculation of the IFM Minimum Load Costs will depend on whether the IFM CAISO Committed MSG Configuration is determined to be On. If it is determined to be On, then, the IFM Minimum Load Costs will be based on the Minimum Load Costs of the IFM committed MSG Configuration. For the purposes of determining IFM Minimum Load Cost for a Multi-Stage Generating Resource, a Bid Cost Recovery Eligible Resource is determined to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its IFM MSG Configuration Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Tolerance Band, and the Metered Energy is greater than zero (0) MWh.

Otherwise, such resource is determined to be Off.

- (g) The IFM Minimum Load Costs calculation is subject to the Shut-Down State Variable and is disqualified as specified in Section 11.17.2.

11.8.2.1.4 IFM Pumping Bid Cost

For Pumped-Storage Hydro Units and Participating Load only, the IFM Pumping Bid Cost for the applicable Settlement Interval shall be the Pumping Cost submitted to the CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour. The Pumping Cost is negative. The Pumping Cost is included in IFM Bid Cost computation for a Pumped-Storage Hydro Unit and Participating Load committed by the IFM to pump or serve Load if it actually operates in pumping mode or serves Load in that Settlement Interval. The IFM Energy Bid Cost for a Participating Load for any Settlement Interval is set to zero for actual Energy consumed in excess of the Day-Ahead Schedule for Demand. The IFM Pumping Cost for any Settlement Interval is zero if: (1) the Settlement Interval is in an IFM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; or (2) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as a Legacy RMR Dispatch in the Day-Ahead Schedule for the applicable Settlement Interval.

11.8.2.1.5 IFM Energy Bid Cost

For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the Bid Cost Recovery Eligible Resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-

Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity as registered in the Master File in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load as registered in the Master File, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM Energy Bid Cost for RMR Resources shall be the integral of the relevant Energy Bid used in the IFM adjusted to remove Opportunity Costs from the higher of the RMR Resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour.

11.8.2.1.6 IFM AS Bid Cost

For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. For any Settlement Interval, the IFM AS Bid Cost for an RMR Resource shall be zero.

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11.8.3.1 RUC Bid Cost Calculation

For each Settlement Interval, the CAISO shall determine the RUC Bid Cost for a Bid Cost Recovery Eligible Resource as the algebraic sum of the RUC Start-Up Cost, RUC Transition Cost, RUC Minimum

Load Cost and RUC Availability Bid Cost. For Multi-Stage Generating Resources, in addition to the specific RUC Bid Cost rules described in Section 11.8.3.1, the rules described in Section 11.8.1.3 will be applied to further determine the applicable MSG Configuration-based CAISO Market Start-Up Cost, Transition Cost, and Minimum Load Cost, as modified pursuant to Section 30.7.10.2, if applicable, in any given Settlement Interval. For Multi-Stage Generating Resources, the incremental RUC Start-Up, Minimum Load Costs, and Transition Costs to provide RUC awarded capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the RUC optimization rules in specified in Section 31.5. For each Settlement Interval, the CAISO shall determine the RUC Bid Cost for an RMR Resource as the algebraic sum of the RUC Start-Up Cost adjusted to remove Opportunity Costs and Major Maintenance Costs, and RUC Transition Cost adjusted to remove Opportunity Costs and Major Maintenance Costs.

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11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource, as adjusted pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost for a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and

disqualified as specified in Section 11.17.2.

11.8.3.1.3 RUC Availability Bid Cost

The RUC Availability Bid Cost is calculated as the product of the RUC Award with the relevant RUC Availability Bid price, divided by the number of Settlement Intervals in a Trading Hour. The RUC Availability Bid Cost for a Bid Cost Recovery Eligible Resource for a Settlement Interval is zero if the Bid Cost Recovery Eligible Resource is operating below its RUC Schedule, and also has a negative Uninstructed Imbalance Energy (UIE) magnitude in that Settlement Interval in excess of: (1) five (5) MWh divided by the number of Settlement Intervals in the Trading Hour; or (2) three percent (3%) of its maximum capacity divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine the RUC Availability Bid Cost based on the Multi-Stage Generating Resource Generating Unit level. The RUC Availability Cost for a Bid Cost for an RMR Resource for a Settlement Interval is zero.

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11.8.4.1 RTM Bid Cost Calculation

For each Settlement Interval, the CAISO shall calculate RTM Bid Cost for each Bid Cost Recovery Eligible Resource, as the algebraic sum of the RTM Start-Up Cost, RTM Minimum Load Cost, RTM Transition Cost, RTM Pump Shut-Down Cost, RTM Energy Bid Cost, RTM Pumping Cost and RTM AS Bid Cost. For each Settlement Interval, the CAISO shall calculate RTM Bid Cost for each RMR Resource as the algebraic sum of the RTM Start-Up Cost adjusted to remove Opportunity Costs and Major Maintenance Costs, RTM Transition Costs adjusted to remove Opportunity Costs and Major Maintenance Costs, RTM Energy Bid Cost adjusted to remove Opportunity Costs and Major Maintenance Costs, and RTM AS Bid Cost. For Multi-Stage Generating Resources, in addition to the specific RTM Bid Cost rules described in Section 11.8.4.1, the rules described in Section 11.8.1.3 will be applied to further determine the applicable MSG Configuration-based CAISO Market Start-Up Cost, Transition Cost, and Minimum Load Cost, as modified pursuant to Section 30.7.10.2, if applicable, in given Settlement Interval. For Multi-Stage Generating Resources, the incremental RTM Start-Up Cost, Minimum Load Cost, as modified pursuant to Section 30.7.10.2, if applicable, and Transition Cost to provide RTM committed Energy or

awarded Ancillary Services capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the RTM optimization rules in specified in Section 34.

11.8.4.1.1 RTM Start-Up Cost

For each Settlement Interval of the applicable Real-Time Market Commitment Period, the Real-Time Market Start-Up Cost shall consist of the Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market divided by the number of Settlement Intervals in the applicable Real-Time Market Commitment Period. For each Settlement Interval, only the Real-Time Market Start-Up Cost in a CAISO Real-Time Market Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RTM Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RTM. The following rules shall be applied in sequence and shall qualify the Real-Time Market Start-Up Cost in a Real-Time Market Commitment Period:

- (a) The Real-Time Market Start-Up Cost is zero if there is a Real-Time Market Self-Commitment Period within the Real-Time Market Commitment Period.
- (b) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource has been manually pre-dispatched under a Legacy RMR Contract or the resource is flagged as a Legacy RMR Dispatch in the Day-Ahead Schedule or Real-Time Market anywhere within that Real-Time Market Commitment Period.
- (c) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.11.2 to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.
- (d) The Real-Time Market Start-Up Cost is zero if there is no Real-Time Market Start-Up at the start of that Real-Time Market Commitment Period because the Real-Time Market Commitment Period is the continuation of an IFM or RUC Commitment Period from the previous Trading Day.
- (e) If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable Real-Time Market Commitment Period through an Exceptional Dispatch Shut-Down Instruction

issued while the Bid Cost Recovery Eligible Resource is starting up, the Real-Time Market Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.

- (f) The Real-Time Market Start-Up Cost shall be qualified if an actual Start-Up occurs within that Real-Time Market Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Interval(s) indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Interval that falls within the CAISO Real-Time Market Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether its metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3. The CAISO will determine that the Multi-Stage Generating Resource is On based on the MSG Configuration that the CAISO has committed in the Real-Time Market.
- (g) The Real-Time Market Start-Up Cost for a Real-Time Market Commitment Period shall be qualified if an actual Start-Up occurs earlier than the start of the Real-Time Market Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the Real-Time Market Start-Up, otherwise the Start-Up Cost is zero for the Real-Time Market Commitment Period.
- (h) For Short-Start Units, the first Start-Up Costs within a CAISO IFM Commitment Period are qualified IFM Start-Up Costs as described above in Section 11.8.2.1.1(g). For subsequent Start-Ups of Short-Start Units after the CAISO Shuts Down a resource and then the CAISO issues a Start-Up Instruction pursuant to a CAISO RTM Commitment within the CAISO IFM Commitment Period, the Start-Up Costs shall be qualified as Real-Time Start-Up costs, provided that the resource actually Shut-Down and Started-Up based on CAISO Shut-Down and Start-Up Instructions.

11.8.4.1.2 RTM Minimum Load Cost

The RTM Minimum Load Cost is the Minimum Load Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market, as adjusted pursuant to Section 30.7.10.2, if

applicable, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under a Legacy RMR Contract or the resource has been flagged as a Legacy RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) for all resources that are not Multi-Stage Generating Resources, that Settlement Interval is included in an IFM or RUC Commitment Period; or (4) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.11.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. A resource's RTM Minimum Load Costs for Bid Cost Recovery purposes are subject to the application of the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of Section 11.8.1.3. For all Bid Cost Recovery Eligible Resources that the CAISO Shuts Down, either through an Exceptional Dispatch or an Economic Dispatch through the Real-Time Market, from its Day-Ahead Schedule that was also from a CAISO commitment, the RTM Minimum Load Costs will include negative Minimum Load Costs for Energy between the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and zero (0) MWhs.

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11.8.4.1.5 RTM Energy Bid Cost

For any Settlement Interval, the RTM Energy Bid Cost for the Bid Cost Recovery Eligible Resource except Participating Loads shall be computed as the sum of the products of each RTD Instructed Imbalance Energy portion, except Standard Ramping Energy, Residual Imbalance Energy, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Energy Bid prices, the Default Energy Bid price, or the Locational Marginal Price, if any, as

further described in Section 11.17, for each Dispatch Interval in the Settlement Interval. For Settlement Intervals for which the Bid Cost Recovery Eligible Resource is ramping up to or down from a ratered Minimum Load that was increased pursuant to Section 9.3.3 for the Real-Time Market, the RTM Energy incurred by the ramping will be classified as FMM Derate Energy or RTD Derate Energy and will not be included in Bid Cost Recovery. For a Bid Cost Recovery Eligible Resource that is ramping up to or down from an Exceptional Dispatch, the relevant Energy Bid Cost related to the Energy caused by ramping will be settled on the same basis as the Energy Bid used in the Settlement of the Exceptional Dispatch that led to the ramping. The RTM Energy Bid Cost for a Bid Cost Recovery Eligible Resource, including Participating Loads and Proxy Demand Response Resources, for a Settlement Interval is subject to the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric as described in Section 11.17. Any Uninstructed Imbalance Energy in excess of FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy is also not eligible for Bid Cost Recovery. For a Multi-Stage Generating Resource the CAISO will determine the RTM Energy Bid Cost based on the Generating Unit level. For RMR Resources, the CAISO will determine the RTM Energy Bid Cost based on the relevant Energy Bid adjusted to remove Opportunity Costs.

11.8.4.1.6 RTM AS Bid Cost

For each Settlement Interval, the Real-Time Market AS Bid Cost shall be the product of the average Real-Time Market AS Award from each accepted AS Bid submitted in the Settlement Interval for the Real-Time Market, reduced by any relevant tier-1 No Pay capacity in that Settlement Interval (but not below zero), with the relevant AS Bid price. The average Real-Time Market AS Award for a given AS in a Settlement Interval is the sum of the 15-minute Real-Time Market AS Awards in that Settlement Interval, each divided by the number of 15-minute Commitment Intervals in a Trading Hour and prorated to the duration of the Settlement Interval (10/15 if the Real-Time Market AS Award spans the entire Settlement Interval, or 5/15 if the Real-Time Market AS Award spans half the Settlement Interval). For a Multi-Stage Generating Resource the CAISO will determine the RTM AS Bid Cost based on the Generating Unit level. The Real-Time Market AS Bid Cost shall also include Mileage Bid Costs. For each Settlement Interval, the Real-Time Mileage Bid Cost shall be the product of Instructed Mileage associated with a Real-Time Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant

Mileage Bid price divided by the number of Settlement Intervals for the Real-Time Market in a Trading Hour. The CAISO will determine and calculate the Real Time Market Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. For an RMR Resource, the RTM AS Bid Cost shall be zero.

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11.10.1.4 Voltage Support

The total payments for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of commitment costs, FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy Settlement as a result of Exceptional Dispatch pursuant to CAISO Tariff Section 11.5.6 and any opportunity costs, if any, due to an Exceptional Dispatch that limits Energy output to enable reactive energy production. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the FMM or RTD LMP minus the higher of the Energy Bid price or the Default Energy Bid price. The Opportunity Cost for an RMR Resource shall be calculated based on the product of the Energy amount that would have cleared the market and the price of the FMM or RTD LMP minus the higher of the Energy Bid price adjusted to remove Opportunity Costs or the Default Energy Bid price adjusted to remove Opportunity Costs.

If applicable, Scheduling Coordinators shall also receive any payments under any long-term contracts due for the Settlement Period. FMM Exceptional Dispatches or RTD Exceptional Dispatches for incremental or decremental Energy needed for Voltage Support procured through Exceptional Dispatch pursuant to Section 34.11.2 will be paid and settled in accordance with Section 11.5.6. RMR Resources and Condition 2 Legacy RMR Units providing Voltage Support are not eligible for an Opportunity Cost pursuant to this Section 11.10.1.4.

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11.13 Settlements of RMR Charges and Payments

This section applies to RMR Resources, which are resources subject to an RMR Contract entered into after September 1, 2018. For Legacy RMR Units, refer to Appendix H.

11.13.1 Daily RMR Settlement

The Daily RMR Settlement for each RMR Resource will include the Daily RMR Capacity Payment plus the Daily Variable Cost Payment plus the Daily Additional Cost Settlement minus the Daily RMR Excess Revenues minus the Daily RMR Exceptional Dispatch Revenues.

11.13.2 Daily RMR Capacity Payment

The Daily RMR Capacity Payment consists of the Daily Availability Payment plus the Daily Surcharge Payment from Schedule B of the applicable RMR Contract.

11.13.3 Daily Variable Cost Payment

For each Trading Day, the CAISO shall calculate IFM Bid Cost Recovery Amount described in Section 11.8.2 and RTM Bid Cost Recovery Amount described in Section 11.8.4 for each RMR Resource while adjusting to remove Major Maintenance Cost and Opportunity Cost adders, calculated pursuant to Section 30.4.1.1.6, including any if the limits used to calculate the Opportunity Cost are established pursuant to Article 6 of the RMR Contract. The RMR Resource shall receive any Unrecovered Bid Cost Uplift Payment(s) as described in Section 11.8.5. The Daily Variable Cost Uplift Settlement is the sum of the IFM Unrecovered Bid Cost Uplift Payment as described in Section 11.8.5.1 and the RUC and RTM Unrecovered Bid Cost Uplift Payment as described in Section 11.8.5.2.

11.13.4 Daily Additional Cost Settlement

For each Trading Day, the CAISO will calculate any additional Costs associated with an RMR Resource responding to a CAISO-issued Exceptional Dispatch pursuant to Section 34.11 to calculate the Daily Additional Cost Settlement.

11.13.5 Daily RMR Excess Revenues

For each Trading Day, the CAISO will calculate the Daily RMR Excess Revenues as the total CAISO daily sum of IFM excess payment, RC excess payment, and RTM excess payment. The RMR Resource will have its RMR Capacity Payment reduced by the IFM excess payment, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2 over a Trading Day is

negative. The RMR Resource will have its RMR Capacity Payment reduced by the RUC excess payment, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3 over a Trading Day is negative. The RMR Resource will have its RMR Capacity Payment reduced by the RTM excess payment, if the net of all RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 over a Trading Day is negative.

11.13.6 Daily RMR Exceptional Dispatch Excess Revenues

Daily Exceptional Dispatch excess payment is the total CAISO daily sum of Settlement Interval Exceptional Dispatch surplus payments. For each Settlement Interval, the Exceptional Dispatch surplus payment is the net of Settlement Bid Cost Amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch and FMM IIE Settlement Amounts and RTD Instructed Imbalance Energy from Exceptional Dispatch pursuant to Section 11.5.6, where Exceptional Dispatch Settlement amounts for exceeds Exceptional Dispatch Bid Cost Settlement amounts. Bid Cost Settlement amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch is calculated as the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant Bid Cost Settlement price. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs.

11.13.7 Daily RMR Cost Allocation

The CAISO shall allocate amounts paid to RMR Resources through the Daily RMR Settlement to Scheduling Coordinators representing Load-Serving Entities that serve load in the TAC Area(s) in which the need for the RMR Contract arose. These amounts paid will be allocated to each such Scheduling Coordinator based on the pro-rated share of each Load-Serving Entity's TAC Area Metered Demand total TAC Area metered Demand recorded in the CAISO settlement system for actual days of any settlement

month period for which the RMR Contract was in effect.

11.13.8 [Not Used]

11.13.9 [Not Used]

11.13.10 [Not Used]

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11.18.6 Submission of Cost Invoices by RMR Owner

Scheduling Coordinators on behalf of RMR Resources that incur costs during a CAISO Commitment Period that are not recoverable pursuant to the CAISO Daily RMR Settlement but are recoverable under the applicable RMR Contract may submit to the CAISO an invoice pursuant to Schedule C of the RMR Contract in the form specified on the CAISO Website with appropriate documentation. The CAISO will review and any amounts accepted will be paid by the CAISO on the next practicable Invoice and allocated pursuant to Section 11.13.5.

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11.29.24.1 Preparation

In September of each year, the CAISO will prepare a draft CAISO Payments Calendar for the following calendar year showing for each Trading Day:

- (a) The date by which Scheduling Coordinators are required to provide Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for all their Scheduling Coordinator Metered Entities for each Settlement Period in the Trading Day;
- (b) The date on which the CAISO will issue Initial Settlement Statements T+3B and Invoices and Payment Advices to Scheduling Coordinators or CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (c) The date on which the CAISO will issue the Recalculation Settlement Statements T+12B;

T+55B, T+9M, T+18M, T+33M, and T+36M, and Invoices and Payment Advices to Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs for that Trading Day;

- (d) The dates by which Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs are required to notify the CAISO of any disputes in relation to their Recalculation Settlement Statements T+12B, T+55B, T+9M, T+18M and T+33M.
- (e) The date and time by which CAISO Debtors are required to have made payments into the CAISO Clearing Account in payment of Invoices for that Trading Day;
- (f) The dates and times on which the CAISO Clearing Account will remit payments to the CAISO Creditors of amounts owing to them for that Trading Day; and
- (g) In relation to RMR Charges and RMR compensation, the details are set out in Sections 11.13 and 41 and Appendix H for Legacy RMR Units.

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12.7 [Not Used]

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30.5.2.5 Supply Bids for Metered Subsystems

Consistent with the bidding rules specified in this Section 30.5, Scheduling Coordinators that represent MSS Operators may submit Bids for Energy and Ancillary Services, including Self-Schedules and Submissions to Self-Provide an Ancillary Service, to the DAM. All Bids to supply Energy by MSS Operators must identify each Generating Unit on an individual unit basis. The CAISO will not accept aggregated Generation Bids without complying with the requirements of Section 4.9.12 of the CAISO Tariff. All Scheduling Coordinators that represent MSS Operators must submit Demand Bids at the relevant MSS LAP. Scheduling Coordinators that represent MSS Operators must comply with Section 4.9 of the CAISO Tariff. Scheduling Coordinators that represent MSS Operators that have opted out of RUC

participation pursuant to Section 31.5 must Self-Schedule one hundred percent (100%) of the Demand Forecast for the MSS. For an MSS that elects Load following, the MSS Operator shall also self-schedule or bid Supply to match the Demand Forecast. All Bids for MSSs must identify each Generating Unit on an individual unit basis or a System Unit. For an MSS that elects Load following consistent with Section 4.9.13.2, the Scheduling Coordinator for the MSS Operator must include the following additional information with its Bids: the Generating Unit(s) that are Load following; the range of the Generating Unit(s) being reserved for Load following; whether the quantity of Load following capacity is either up or down; and, if there are multiple Generating Units in the MSS, the priority list or distribution factors among the Generating Units. The CAISO will not dispatch the resource within the range declared as Load following capacity, leaving that capacity entirely available for the MSS to dispatch. The CAISO uses this information in the IFM runs and the RUC to simulate MSS Load following. The Scheduling Coordinator for the MSS Operator may change these characteristics through the Bid submission process in the RTM. If the Load following resource is also an RMR Unit, the MSS Operator must not specify the RMR Contract Capacity specified in the RMR Contract as Load following up or down capacity to allow the CAISO to access such capacity for RMR Dispatch.

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31.2 Day-Ahead MPM Process

After the Market Close of the DAM, and after the CAISO has validated the Bids pursuant to Section 30.7, the CAISO will perform the MPM process, which is a single market run that occurs prior to the IFM Market Clearing run. The Day-Ahead MPM process determines which Bids need to be mitigated to the applicable Default Energy Bids in the IFM pursuant to Section 31.2.3. For Maximum Net Dependable Capacity of Legacy RMR Units, Bids will be mitigated to the RMR Proxy Bids pursuant to Section 31.2.3. The Day-Ahead MPM process optimizes resources to meet Demand reflected in Demand Bids, including Export Bids and Virtual Demand Bids, and to procure one hundred (100) percent of Ancillary Services requirements based on Supply Bids submitted to the DAM. Virtual Bids and Bids from Demand Response Resources, Participating Load, and Non-Generator Resources are considered in the MPM

process, but are not subject to Bid mitigation. Bids from Participating Load resources that are not subject to Bid mitigation will also be considered in the MPM process. Bids from resources comprised of multiple technologies that include Non-Generator Resources will remain to be subject to all applicable market power mitigation under the CAISO Tariff, including Local Market Power Mitigation. The mitigated or unmitigated Bids and RMR Proxy Bids identified in the MPM process for all resources that cleared in the MPM are then passed to the IFM. The CAISO performs the MPM process for the DAM for the twenty-four (24) hours of the targeted Trading Day.

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31.2.2 [Not Used]

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31.2.3 Bid Mitigation If the non-competitive Congestion component of an LMP calculated in an MPM process is greater than zero (0), then any resource at that Location that is dispatched in that MPM process is subject to Local Market Power Mitigation. Bids on behalf of any such resource, to the extent that they exceed the Competitive LMP at the resource's Location, will be mitigated to the higher of the resource's Default Energy Bid (or RMR Proxy Bid for Legacy RMR Units), as specified in Section 39, or the Competitive LMP at the resource's Location. To the extent a Multi-Stage Generating Resource is dispatched in the MPM process and the non-competitive Congestion component of the LMP calculated at the Multi-Stage Generating Resource's Location is greater than zero, for purposes of mitigation, all the MSG Configurations will be mitigated similarly and the CAISO will evaluate all submitted Energy Bids for all MSG Configurations based on the relevant Default Energy Bids for the applicable MSG Configuration. The CAISO will calculate the Default Energy Bids for Multi-Stage Generating Resources by submitted MSG Configuration. Any market Bids equal to or less than the Competitive LMP will be retained in the IFM.

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31.3.1.4 Eligibility to Set the Day-Ahead LMP

All Generating Units, Participating Loads, non-Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, System Resources, System Units, or Constrained Output Generators subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates, MSG Transitions, Forbidden Operating Regions, or other temporal constraints are eligible to set the LMP, provided that (a) the Schedule for the Generating Unit or Resource-Specific System Resource is between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) the Schedule for the Participating Load, non-Participating Load, Proxy Demand Resources, Reliability Demand Response Resources, non-Resource-Specific System Resource, or System Unit is between zero (0) MW and the highest MW value in its Economic Bid or Generated Bid. If (a) a resource's Schedule is constrained by its Minimum Operating Limit or the highest MW value in its Economic Bid or Generated Bid, (b) the CAISO enforces a resource-specific constraint on the resource due to a Legacy RMR Dispatch of a Legacy RMR Unit or Exceptional Dispatch, (c) the resource is constrained by a boundary of a Forbidden Operating Region or is Ramping through a Forbidden Operating Region, or (d) the resource's full Ramping capability is constraining its inter-hour change in Schedule, the resource cannot be marginal and thus is not eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A Constrained Output Generator will be eligible to set the hourly LMP if any portion of its Energy is necessary to serve Demand.

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31.5.1 RUC Participation

31.5.1.1 Capacity Eligible for RUC Participation

RUC participation is voluntary for capacity that has not been designated as Resource Adequacy Capacity. Scheduling Coordinators may make such capacity available for participation in RUC by submitting a RUC Availability Bid, provided the Scheduling Coordinator has also submitted an Energy Bid

(other than a Virtual Bid) for such capacity into the IFM. Virtual Bids are not eligible to participate in RUC. Capacity from Non-Dynamic System Resources that has not been designated Resource Adequacy Capacity is not eligible to participate in RUC. Capacity from resources including System Resources that has been designated as qualified Resource Adequacy Capacity must participate in RUC. RUC participation is required for Resource Adequacy Capacity to the extent that Resource Adequacy Capacity is not committed following the IFM. System Resources eligible to participate in RUC will be considered on an hourly basis; that is, RUC will not observe any multi-hour block constraints. In RUC the CAISO may commit a Multi-Stage Generating Resource with a Resource Adequacy must-offer obligation at any MSG Configuration with capacity equal to or greater than the MSG Configuration committed in the Integrated Forward Market. RUC will observe the Energy Limits that may have been submitted in conjunction with Energy Bids to the IFM. Legacy RMR Unit capacity will be considered in RUC in accordance with Section 31.5.1.3. MSS resources may participate in RUC in accordance with Section 31.5.2.3. COG resources are accounted for in RUC, but may not submit or be paid RUC Availability Payments. The ELS Resources committed through the ELC Process conducted two days before the day the RUC process is conducted for the next Trading Day as described in Section 31.7 are binding.

31.5.1.2 RUC Availability Bids

Scheduling Coordinators may only submit RUC Availability Bids for capacity (above the Minimum Load as registered in the Master File) for which they are also submitting an Energy Bid (other than a Virtual Bid) to participate in the IFM. Any available Resource Adequacy Capacity, RMR Capacity, and CPM Capacity will be optimized at \$0/MW in RUC. For Multi-Stage Generating Resources that fail to submit a \$0/MW per hour for the Resource Adequacy Capacity, the CAISO will insert the \$0/MW per hour for the resource's Resource Adequacy Capacity at the MSG Configuration level up to the minimum of the Resource Adequacy Capacity or the PMax of the MSG Configuration. Scheduling Coordinators may submit non-zero RUC Availability Bids for the portion of a resource's capacity that is not Resource Adequacy Capacity or CPM Capacity.

31.5.1.3 Legacy RMR Treatment

If a Legacy RMR Unit is determined to have a generation requirement for any Trading Hour of the next day, either by the MPM process or by the CAISO through a Manual RMR Dispatch, and if any portion of

the generation requirement has not been cleared in the IFM, the entire portion of the generation requirement will be represented as a Legacy RMR Generation Self-Schedule in the RUC.

31.5.1.4 Eligibility to Set the RUC Price

All resources that are eligible for RUC participation as described in Section 31.5.1.1 with RUC Bids that are unconstrained due to Ramp Rates or other temporal constraints, including MSG Transitions, are eligible to set the RUC Price, provided that (a) the RUC Schedule for the Generating Unit or Resource-Specific System Resource is between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) the Schedule for the eligible resource other than a Generating Unit or Resource-Specific System Resource is between zero (0) MW and the highest MW value in its Economic Bid or Generated Bid. If (a) a resource's Schedule is constrained by its Minimum Operating Limit or the highest MW value in its Economic Bid or Generated Bid, (b) the CAISO enforces a resource-specific constraint on the resource due to an RMR Dispatch Notice or Exceptional Dispatch or (c) the resource's full Ramping capability is constraining its inter-hour change in Schedule, the resource cannot be marginal and thus is not eligible to set the RUC Price. Resources identified as MSS Load following resources are not eligible to set the RUC Price.

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31.5.6 Eligibility for RUC Compensation

All RUC Capacity is eligible for the RUC Availability Payment except for: (i) RMR Capacity from RMR Resources; (ii) Resource Adequacy Capacity; and (iii) RUC Capacity that corresponds to the resource's Minimum Load, which is compensated through the Bid Cost Recovery as described in Section 11.8. Resources not committed in the IFM that are committed in RUC, including Condition 1 Legacy RMR Units that were not designated for Legacy RMR Dispatches and Resource Adequacy Resources, are also eligible for RUC Cost Compensation, which includes Start-Up, Transition Costs, and Minimum Load Cost compensation, and Bid Cost Recovery, subject to the resource actually following its Dispatch Instructions as verified by the CAISO pursuant to procedures set forth in the Business Practice Manuals.

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34.1.5.2 Fifteen Minute Market MPM

The MPM process for the first fifteen-minute (15) interval for a Trading Hour starts with the unmitigated Bid set as validated pursuant to Section 30.7 and Section 34.1.4. The MPM process produces results for each fifteen (15) minute interval of the Trading Hour and thus may produce up to four mitigated Bids for any given resource for the Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Section 31.2.3 above. If a Bid is mitigated in the MPM process for the first fifteen (15) minute interval for a Trading Hour, the mitigated Bid will be utilized for all market applications for that first fifteen (15) minute interval. If a Bid is not mitigated in the first fifteen (15) minute interval, the CAISO will still mitigate that Bid in subsequent fifteen (15) minute intervals of the Trading Hour if the MPM runs for the subsequent intervals determine that mitigation is needed. For each Trading Hour, any Bid mitigated in a prior fifteen (15) minute interval of that Trading Hour will continue to be mitigated in subsequent intervals of that Trading Hour and may be further mitigated as determined in the MPM runs for any subsequent fifteen (15) minute interval.

34.1.5.3 Hour-Ahead Scheduling Process MPM

For HASP mitigation, a single mitigated Bid for the entire Trading Hour is calculated using the minimum Bid price of the four mitigated Bid curves at each Bid quantity level. For Legacy RMR Units, RMR Proxy Bids resulting from the MPM process will be utilized in all RTM optimization processes for each Trading Hour.

34.1.5.4 Real-Time Dispatch MPM

The RTD MPM process produces results for each five (5) minute interval of a Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each five (5) minute interval, using the methodology set forth in Section 31.2.3 above. The input Bids to the MPM for the first of the three (3) RTD runs corresponding to a particular RTUC interval are the final Bids as mitigated pursuant to Section 34.1.5.2 for the RTD intervals corresponding to the applicable financially binding Fifteen Minute Market run. If a Bid is mitigated in the

MPM process for the first five (5) minute interval for an applicable fifteen-minute (15) RTUC interval, the mitigated Bid will be utilized for all the corresponding RTD intervals in that fifteen-minute (15) RTUC interval. If a Bid is not mitigated in the first five (5) minute interval, the CAISO will still mitigate that Bid in subsequent five (5) minute intervals of the applicable RTUC interval if the MPM runs for the subsequent intervals determine that mitigation is needed. For each fifteen-minute (15) RTUC interval, a bid that is mitigated is maintained through the rest of the RTD intervals corresponding to the same RTUC interval as the original mitigated RTD interval. The input Bids to the RTD MPM process for the second of the three (3) RTD intervals corresponding to the RTUC interval will be the final mitigated bids used in the first RTD intervals. The input bids to the RTD MPM mitigation process for the third of the three RTD interval corresponding to the particular RTUC interval will be the final mitigated Bids used in the second RTD interval.

34.1.5.5 Reliability Must Run Resources

For a Condition 1 Legacy RMR Unit, the use of RMR Proxy Bids is determined based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Section 31.2.3 above. If a Condition 2 Legacy RMR Unit is issued a Manual RMR Dispatch by the CAISO, then RMR Proxy Bids for all of the unit's Maximum Net Dependable Capacity will be considered in the MPM process. For both Condition 1 and Condition 2 Legacy RMR Units, when mitigation is triggered, a RMR Proxy Bid is calculated using the same methodology described above for non-RMR Units. For a Condition 1 Legacy RMR Unit that has submitted Bids and has not been issued a Manual RMR Dispatch, to the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero, and that MPM process dispatches a Condition 1 Legacy RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the Legacy RMR Unit's Location, the resource will be flagged as an RMR Dispatch if it is dispatched pursuant to a Legacy RMR Contract at a level higher than the dispatch level determined by the Competitive LMP. Both Condition 1 and Condition 2 Legacy RMR Units may be issued manual RMR Dispatches at any time to address local reliability needs or to resolve non-competitive constraints.

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34.10 Dispatch of Energy from Ancillary Services

The CAISO may issue Dispatch Instructions to Participating Generators, Participating Loads, Proxy Demand Resources, (via communication with the Scheduling Coordinators of Demand Response Providers) System Units and System Resources contracted to provide Ancillary Services (either procured through the CAISO Markets, Self-Provided by Scheduling Coordinators, or through Exceptional Dispatch or dispatched in accordance with a Legacy RMR Contract) for the Supply of Energy. During normal operating conditions, the CAISO may Dispatch those Participating Generators, Participating Loads, Proxy Demand Resources, System Units and System Resources that have contracted to provide Spinning and Non-Spinning Reserve, except for those reserves designated as Contingency Only, in conjunction with the normal Dispatch of Energy. Contingency Only reserves are Operating Reserve capacity that have been designated, either by the Scheduling Coordinator or the CAISO, as available to supply Energy in the Real-Time only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency. During normal operating conditions, the CAISO may also elect to designate any reserve not previously identified as Contingency Only by Scheduling Coordinator as Contingency Only reserves. In the event of an unplanned Outage, a Contingency or a threatened or actual System Emergency, the CAISO may dispatch Contingency Only reserves. If Contingency Only reserves are dispatched through the RTCD, which as described in Section 34.5.2 only Dispatches in the event of a Contingency, such Dispatch and pricing will be based on the original Energy Bids. If Contingency Only reserves are dispatched in response to a System Emergency that has occurred because the CAISO has run out of Economic Bids when no Contingency event has occurred, the RTED will Dispatch such Contingency Only reserves using maximum Bid prices as provided in Section 39.6.1 as the Energy Bids for such reserves and will set prices accordingly. If a Participating Generator, Participating Load, System Unit or System Resource that is supplying Operating Reserve is dispatched to provide Energy, the CAISO shall replace the Operating Reserve as necessary to maintain NERC and WECC reliability standards, including any requirements of the NRC. If the CAISO uses Operating Reserve to meet Real-Time Energy requirements, and if the CAISO needs Operating Reserves to satisfy NERC and WECC

reliability standards, including any requirements of the NRC, the CAISO shall restore the Operating Reserves to the extent necessary to meet NERC and WECC reliability standards, including any requirements of the NRC through either the procurement of additional Operating Reserve in the RTM or the Dispatch of other Energy Bids in SCED to allow the resources that were providing Energy from the Operating Reserve to return to their Dispatch Operating Target. The Energy Bid Curve is not used by the AGC system when Dispatching Energy from Regulation. For Regulation Up capacity, the upper portion of the resource capacity from its Regulation Limit is allocated to Regulation regardless of its Energy Bid Curve. For a resource providing Regulation Up or Operating Reserves the remaining Energy Bid Curve shall be allocated to any RTM AS Awards in the following order from higher to lower capacity where applicable: (a) Spinning Reserve; and (b) Non-Spinning Reserve. For resources providing Regulation Up, the applicable upper Regulation Limit shall be used as the basis of allocation if it is lower than the upper portion of the Energy Bid Curve. The remaining portion of the Energy Bid Curve, if there is any, shall constitute a Bid for RTM Energy. For Regulation Down capacity, the lower portion of the resource capacity from its applicable Regulation Limit is allocated to Regulation regardless of its Energy Bid Curve.

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34.11.1 System Reliability Exceptional Dispatches

The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, RMR Resources, and Condition 2 Legacy RMR Units pursuant to Section 41.9 in Appendix H, in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has

received a HASP Block Intertie Schedule.

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34.12.2 Decreasing Supply

The scheduling priorities as defined in the RTM optimization to meet the need for decreasing Supply as reflected from higher to lower priority are as follows:

- (a) Non-Participating Load increase;
- (b) Reliability Must Run (RMR) Schedule (Day-Ahead manual pre-dispatch or Manual RMR Dispatches or Dispatches that are flagged as RMR Dispatches following the MPM, for Legacy RMR Units and Exceptional Dispatch for RMR Resources process);
- (c) Transmission Ownership Right (TOR) Self-Schedule;
- (d) Existing Rights (ETC) Self-Schedule;
- (e) Regulatory Must-Run and Regulatory Must-Take (RMT) Self-Schedule;
- (f) Participating Load increase;
- (g) Day-Ahead Supply Schedule; and
- (h) Self-Schedule Hourly Block

These dispatch priorities as defined in the RTM optimization may be superseded by operator actions and procedures as necessary to ensure reliable operations.

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39.7.1.6 Default Energy Bids for RMR Resources

The Scheduling Coordinator for the RMR Resource must rank order its preferences between the Variable Cost Option and the Negotiated Rate Option, which shall be the default rank order if no rank order is specified by the Scheduling Coordinator. These preferences will be used to determine the Default Energy Bids for the capacity for each RMR Resource. RMR Resources are not eligible to receive the ten percent adder under the Variable Cost Option pursuant to Section 39.7.1.1 or the Bid Adder pursuant to Section

39.8.

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39.8.1 Bid Adder Eligibility Criteria

To receive a Bid Adder, a Generating Unit must: (i) have a Mitigation Frequency that is greater than eighty (80) percent in the previous twelve (12) months; and (ii) must not have a contract to be a Resource Adequacy Resource for its entire Net Qualifying Capacity, or be designated under the CPM for its entire Eligible Capacity, or be subject to an obligation to make capacity available under this CAISO Tariff. If a Generating Unit is designated under the CPM for a portion of its Eligible Capacity, the provisions of this section apply only to the portion of the capacity not designated. Scheduling Coordinators for Generating Units seeking to receive Bid Adders must further agree to be subject to the Frequently Mitigated Unit option for a Default Energy Bid. Run hours are those hours during which a Generating Unit has positive metered output. After the first twelve (12) months from the effective date of this Section, the Mitigation Frequency will be based entirely on a Generating Unit being mitigated under the MPM procedures in Sections 31 and 33.

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40.9.2 Exemptions

- (a) **Capacity Exempt from RAAIM - All Provisions.** The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 –
- (1) Resources with a PMax less than 1.0 MW;
 - (2) Non-specified resources that provide Resource Adequacy Capacity under contracts for Energy delivered within the CAISO Balancing Authority Area;
 - (3) Participating Load that is also Pumping Load; and
 - (4) Legacy RMR Units.

(b) **Capacity Exempt from RAAIM - Local/System.**

- (1) The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity –
 - (A) Variable Energy Resources; and
 - (B) Combined Heat and Power Resources.
- (2) The capacity of a resource with a Load-following MSS as its Scheduling Coordinator that is designated on a Load-following MSS's monthly Resource Adequacy Plan is exempt from the RAAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity, to the extent that the resource's capacity is also designated as Resource Adequacy Capacity on the monthly Supply Plan of that Load-following MSS or another Load-following MSS.
- (3) Resources with Existing QF Contracts or Amended QF Contracts that are Resource Adequacy Resources are exempt from the RAAIM provisions in Section 40.9 applicable to local and system capacity –
 - (A) if the QF resource previously provided Resource Adequacy Capacity pursuant to an Existing QF Contract that was executed prior to August 22, 2010 and remained in effect pursuant to California Public Utilities Commission Decision 07-09-040 that extended the term of expiring contracts until such time as the new contracts resulting from that decision are available; or
 - (B) until the QF Resource's Existing QF Contract or Amended QF Contract terminates or if requested by the Scheduling Coordinator for the resource, whichever is earlier.

(c) **Capacity Exempt from RAAIM - Flexible Capacity.**

- (1) The capacity of Use-Limited Resources in a combination under Section 40.10.3.2(b), 40.10.3.3(b) or 40.10.3.4(b) is exempt from the RAAIM provisions in Section 40.9 applicable to Flexible RA Capacity to the extent that the resources

are committed to provide Flexible RA Capacity as a combination on their respective monthly Supply Plans.

- (2) The Capacity of a resource with a Load-following MSS as its Scheduling Coordinator that is designated on a Load-following MSS's monthly Flexible RA Plan is exempt from the RAAIM provisions in Section 40.10 applicable to Flexible RA Capacity, to the extent that the resource's capacity is also designated as Flexible RA Capacity on the monthly Supply Plan of that Load-following MSS or another Load-following MSS.

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40.9.3.6.3 General Provisions on Substitute Capacity

(a) Substitution

- (1) The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on Outage. Certain types of Outages, as defined elsewhere in Section 9 or Section 40, will not subject the Scheduling Coordinator for a Resource Adequacy Resource to RAAIM if it declines to provide RA Substitute Capacity.
- (2) If the Resource Adequacy Resource on Outage and the substituting resource do not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) Availability

- (1) RA Substitute Capacity must be operationally available to the CAISO:
- (2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.

- (3) RMR Capacity, including Legacy RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.
- (4) RA Substitute Capacity shall not qualify to be RMR Capacity, including Legacy RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.
- (5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.6, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.
- (6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) **Timing of Substitution Request**

- (1) **Day-Ahead Market.** Requests for substitution for Forced Outages in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution for Forced Outages in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.
- (2) **Real-Time Market.** Requests for substitution for Forced Outages in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

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40.9.6 Non-Availability Charges and Availability Incentive Payments

- (a) **Non-Availability Charges.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment in accordance with Section 40.9.3 and whose monthly availability calculation under Section 40.9.4 is below the lower bound of the monthly Availability Standard of 94.5 percent will be subject to a Non-Availability Charge for the month.
- (b) **Availability Incentive Payments.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment under Section 40.9.3 and whose availability calculation under Section 40.9.4 is above the upper bound of the monthly Availability Standard of 98.5 percent will be eligible for an Availability Incentive Payment for the month.
- (c) **No Payment or Charge.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment under Section 40.9.3 and whose monthly availability calculation under Section 40.9.4 is equal to or between the lower bound of 94.5 percent and the upper bound of 98.5 percent of the Availability Standard will not be assessed a Non-Availability Charge nor paid an Availability Incentive Payment.
- (d) **Advisory Period.** During an advisory period of April 1, 2018 through May 31, 2018, the CAISO will show the Non-Availability Charges and Availability Incentive Payments on Settlement Statements but will not include those Non-Availability Charges and Availability Incentive Payments on Invoices for financial settlement.
- (e) **Separate Calculation of Payments and Charges for Flexible RA Capacity.** The CAISO will calculate separate Non-Availability Charges and Availability Incentive Payments for Resource Adequacy Resources providing Flexible RA Capacity. For RMR Resources, the Non-Availability Charge will be based on the RMR Contract capacity costs. RMR Capacity is otherwise treated the same way as Resource Adequacy Capacity.

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41. Procurement of RMR Resources

This section applies to RMR Resources, which are resources subject to an RMR Contract entered into after September 1, 2018. For Legacy RMR Units, refer to Appendix H.

41.1 Procurement of Reliability Must-Run Resources by the CAISO

A Reliability Must-Run Contract is a contract entered into by the CAISO with a resource owner that operates a Generating Unit or other resource giving the CAISO the right to call on the Generating Unit or Resource to generate Energy, provide Ancillary Services, Black Start, Voltage Support or similar services to maintain the reliability of the CAISO Controlled Grid.

41.2 Designation of Resources as Reliability Must-Run Resources

The CAISO will, subject to any existing power purchase contracts, have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a Generating Unit or other resource as a Reliability Must-Run Resource. The CAISO will also have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a resource for Reliability Must-Run service that is needed to provide Ancillary Services or other reliability services. A resource so designated shall then be obligated to provide the CAISO with its proposed rates for Reliability Must-Run service for negotiation with the CAISO. A pro forma Reliability Must-Run Contract applicable to resources that receive RMR designations is attached as Appendix G. Such rates shall be authorized by FERC.

41.2.2 Processing Retirement/Mothball Notices

The CAISO will process retirement/mothball notices as follows:

- (a) If the Generating Unit is not a Resource Adequacy Resource in the current Resource Adequacy Compliance Year and is planning to retire or mothball its Generating Unit, the owner may submit its written notice at any time during the year, and the CAISO will inform the owner of the study results after it completes the study specified in Section 41.3. If the owner of a non-Resource Adequacy Resource desires an earlier determination of need, it can submit its written notice to the CAISO before the 90-day deadline specified in the Participating Generator Agreement for terminating the

agreement or removing a resource from the agreement. Under Section 41.3 the CAISO will study whether the Generating Unit is needed for reliability in the current Resource Adequacy Compliance Year or by the end of the upcoming Resource Adequacy Compliance Year. If the CAISO finds that a retiring Generating Unit is needed for reliability in either of these timeframes, the CAISO will designate the Generating Unit as RMR for the remainder of the current Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being procured as Resource Adequacy Capacity. If the CAISO finds a mothballing Generating Unit is needed for reliability in the current Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR designation for the remainder of the current Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being procured as Resource Adequacy Capacity.

- (b) If the Generating Unit is subject to any conditions to provide Resource Adequacy Resource for the upcoming Resource Adequacy Compliance Year and the unit owner is planning to retire or mothball its Generating Unit, the unit owner may submit a notice by the deadline established in the applicable Business Practice Manual which will be in the first quarter of the current Resource Adequacy Compliance Year. The CAISO will study the Generating Unit and post the results of the reliability study to its website by the deadline established in the applicable Business Practice Manual, which will be by the end of the second quarter of the current Resource Adequacy Compliance Year. The CAISO will allow an opportunity of no less than seven (7) days for stakeholders to review and submit comments on the report and will allow Load-Serving Entities the opportunity to procure capacity from the needed Generating Unit. Under Section 41.3, the CAISO will study whether the Generating Unit is needed for reliability in the upcoming Resource Adequacy Compliance Year and may study whether the Generating Unit is needed for reliability by the end of the following Resource Adequacy Compliance Year. If the CAISO finds that a retiring Generating Unit is needed for reliability in either the upcoming

Resource Adequacy Compliance Year or by the end of the following Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR designation for the upcoming Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being shown on annual Resource Adequacy showings for the upcoming Resource Adequacy Compliance Year. If the CAISO finds a mothballing Generating Unit is needed for reliability in the upcoming Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR designation for the upcoming Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being shown on annual Resource Adequacy showings for the upcoming Resource Adequacy Compliance Year. For notices submitted pursuant to this Section 41.2.2, the CAISO will not commence the RMR Contract negotiation process for any Generating Unit the CAISO finds to be needed for reliability until September 1.

If the unit owner of a Resource Adequacy Resource provides notice after the deadline specified in the applicable Business Practice Manual, the CAISO will inform the resource of the study results 60 days prior to expiration of the Resource Adequacy contract or 90 days from the date of the notice, whichever is later.

- (c) If multiple Generating Units file the requisite notice with the CAISO and can meet the reliability need identified by the CAISO, but the CAISO does not need all of the Generating Units to meet the reliability need, the CAISO will ask each unit owner to submit a proposed annual fixed requirement for its Generating Unit plus a total cost for Planned Capital Items pursuant to the rate schedules included in the pro forma RMR Contract. If the Generating Unit that would receive an RMR Contract based on cost-effectiveness criteria faces use limitations such that the unit, in the CAISO's reasonable discretion, poses the risk of being unavailable to fully meet the reliability need identified by the CAISO, then the CAISO may at its reasonable discretion, and giving due regard for meeting cost-effectiveness considerations, instead grant the designation to another unit that fully meets the reliability need. In exercising this discretion, the CAISO will not

unduly discriminative against units with use-limitations. If more than one Generating Unit remain that can meet such criteria, then the CAISO will determine which Generating Unit(s) receives an RMR designation by selecting the Generating Unit(s) with the lowest combined proposed costs for RMR service including Planned Capital Items for the next RMR Contract Year provided that if the total costs of two or more Generating Units are within ten percent of each other, then the CAISO will grant the designation in its discretion based on the following criteria: (1) relative effectiveness of the Generating Units in meeting local and/or zonal constraints or other CAISO system needs; and (2) relative operating characteristics of the Generating Units including dispatch ability, ramp rate, and load following capability. A designated Generating Unit will not be able to propose to FERC – and will not be compensated by the CAISO for any costs higher than – its proposed annual fixed cost revenue requirement, plus any Planned Capital Items provided to the CAISO, respectively. The RMR Owner will still be allowed to recover any costs for items not covered in its proposal, as permitted by the RMR Contract.

41.3 Reliability Studies and Determination of RMR Status

In addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria. Although the CAISO may base an RMR designation on the Local Capacity Technical Study, the CAISO does not use its RMR authority to address Resource Adequacy deficiencies. The CAISO will then determine which resources it requires to continue to be Reliability Must-Run Resources, which resources it no longer requires to be Reliability Must-Run Resources and which Generating Units it requires to become the subject of a Reliability Must-Run Contract which had not previously been so contracted to the CAISO. When making this determination, the CAISO will be evaluating whether there are any more cost-effective options that are available or may be made available to avoid the need for a Reliability Must-Run Contract.

41.4 [Not Used]

41.5 RMR Dispatch

41.5.1 Day-Ahead and RTM RMR Dispatch

RMR Resources will be subject to all of the availability, dispatch, testing, reporting, verification, and any

other applicable requirements imposed under Section 40.6 or Section 40.10.6, as applicable to specific types of Resource Adequacy Resources identified in Resource Adequacy Plans and Flexible RA Capacity resources identified in Resource Flexible RA Capacity Plans. RMR Resources will meet the Day-Ahead availability requirements specified in Section 40.6, the Real-Time availability requirements specified in Section 40.6.2, and the Day-Ahead and Real-Time availability requirements specified under Section 40.10.6.1 for the highest Flexible Capacity Category for which the unit qualifies under Section 40.10.3. Also in accordance with those requirements, RMR Resources that meet the definition of Short Start Units, will be obligated to meet the availability requirements of Section 40.6.2, RMR Resources that meet the definition of Long Start Units will have the rights and obligations specified in Section 40.6.2. If the CAISO has not received an Economic Bid or Self-Schedule for capacity from an RMR Resource, the CAISO will utilize a Generated Bid in accordance with the procedures specified in Section 40.6.8. In addition to Energy Bids, RMR Resources will submit Ancillary Services Bids for the capacity to the extent the resource is certified to provide Ancillary Service.

41.5.2 RMR Payments

RMR Resources will be paid in accordance with the RMR Contract and Sections 11.13 and 11.18.6.

41.5.3 Provisions of Ancillary Services and other Reliability Services

The CAISO may call upon RMR Resources for Ancillary Services or any other reliability service that the RMR Resource is contracted to provide in any amounts and at any time that the CAISO has determined is necessary.

41.6 [Not Used]

41.6.1 [Not Used]

41.6.2 [Not Used]

41.6.3 [Not Used]

41.6.4 [Not Used]

41.6.5 [Not Used]

41.6.6 [Not Used]

41.7 Non-Availability Charges and Availability Incentive Payments

The provisions of Section 40.9 applicable to resources providing Resource Adequacy Capacity and Flexible RA Capacity also apply to RMR Resources. RMR Resources will face a resource-specific Resource Adequacy Availability Incentive Mechanism price under Section 40.9.6. The resource-specific price will be the price that the resources is being paid by the CAISO (\$kW/month) under the RMR Contract. Resource Adequacy Availability Incentive Mechanism payments to RMR Resources will be capped at the general Resource Adequacy Availability Incentive Mechanism rate. RMR Resources can provide RA Substitute Capacity based on the same rules applicable to Resource Adequacy Resources under Section 40.9.

41.8 Allocating Resource Adequacy Credits for RMR Designations

The CAISO will provide Resource Adequacy credits to the Scheduling Coordinators of Load-Serving Entities that serve load in the applicable TAC Area(s) in which the need for the RMR Contract arose equal to the Load-Serving Entity's pro rata share of the eligible net qualifying capacity of the RMR Resource, which shall be based upon each Load-Serving Entity's proportionate share of the Load-Serving Entity's applicable TAC Area Load at the time of the CAISO's annual coincident Peak Demand set forth in the annual Peak Demand Forecast for the next Resource Adequacy Compliance Year. The credited amount will be broken down into monthly values.

41.9 Allocation of Reliability Must-Run Contract Costs

As specified in Section 11.13.5, the CAISO will allocate Reliability Must-Run costs not recovered through market revenues to the Scheduling Coordinators for Load-Serving Entities that serve load in the TAC Area(s) in which the need for the RMR Contract arose. These amounts paid will be allocated to each Scheduling Coordinator based on the pro-rata share of each Load-Serving Entity's TAC Area Metered Demand to total metered Demand recorded in the CAISO settlement system for the actual days of any settlement month period for which the RMR Contract was in effect.

41.9.1 [Not Used]

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43A.2 Capacity Procurement Mechanism Designation

The CAISO shall have the authority to designate Eligible Capacity to provide CPM Capacity services under the CPM to address the following circumstances, as discussed in greater detail in Section 43A:

1. Insufficient Local Capacity Area Resources in an annual or monthly Resource Adequacy Plan;
2. Collective deficiency in Local Capacity Area Resources;
3. Insufficient Resource Adequacy Resources in an LSE’s annual or monthly Resource Adequacy Plan;
4. A CPM Significant Event;
5. A reliability or operational need for an Exceptional Dispatch CPM; and
6. A cumulative deficiency in the total Flexible RA Capacity included in the annual or monthly Flexible RA Capacity Plans, or in a Flexible Capacity Category in the monthly Flexible RA Capacity Plans.

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43A.2.6 [Not Used]

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43A.3.7 [Not Used]

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43A.4 Selection Of Eligible Capacity Under The CPM through Competitive Solicitation Processes (CSP) and General Eligibility Rules

In accordance with Good Utility Practice, the CAISO shall designate and compensate Eligible Capacity as CPM Capacity based on the results of either the Annual CSP, the Monthly CSP, or the Intra-monthly

CSP.

The CAISO shall designate CPM Capacity through the Annual CSP to meet designations triggered under sections 43A.2.1.1, 43A.2.2, or 43A.2.3 (if the failure is to demonstrate sufficient Resource Adequacy capacity in an annual Resource Adequacy Plan), and 43A.2.7(a) (if the failure is to demonstrate sufficient Flexible Resource Adequacy capacity in an annual Flexible Resource Adequacy Plan).

The CAISO shall designate CPM Capacity through the Monthly CSP to meet designations triggered under sections 43A.2.1.2, 43A.2.3 (if the failure is to demonstrate sufficient Resource Adequacy capacity in a monthly Resource Adequacy Plan), or 43A.2.7(b) (if the failure is to demonstrate sufficient Flexible Resource Adequacy capacity in a monthly Flexible Resource Adequacy Plan).

The CAISO shall designate CPM Capacity through the Intra-monthly CSP to meet designations triggered under sections 43A.2.4 or 43A.2.5.

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43A.8.7 [Not Used]

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43A.9 Crediting of CPM Capacity

The CAISO shall credit CPM designations to the resource adequacy obligations of Scheduling Coordinators for Load Serving Entities as follows:

- (a) To the extent the cost of CPM designation under Section 43A.2.1.1 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.1, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards (1) the LSE's Local Capacity Area Resource obligation under Section 40.3.2 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1 and (2) the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM

Capacity designated under Section 43A.2.1.1.

- (b) To the extent the cost of CAISO designation under Section 43A.2.2 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.3, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.2.
- (c) To the extent the cost of CPM designation under Section 43A.2.3 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.4, and the designation is for greater than one month under Section 43A.3.4, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.3.
- (d) The credit provided in this Section shall be used for determining the need for the additional designation of CPM Capacity under Section 43A.2 and for allocation of CPM costs under Section 43A.8.
- (e) For each Scheduling Coordinator that is provided credit pursuant to this Section, the CAISO shall provide information, including the quantity of capacity procured in MW, necessary to allow the CPUC, other Local Regulatory Authority, or federal agency with jurisdiction over the LSE on whose behalf the credit was provided to determine whether the LSE should receive credit toward its resource adequacy requirements adopted by such agencies or authorities.
- (f) To the extent the cost of Flexible Capacity CPM designation under Section 43A.2.7 is allocated to a Scheduling Coordinator for an LSE under Section 43A.8.8, and the designation is for greater than one month under Section 43A.3.8, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Flexible Capacity requirements determined under Section 40 in

an amount equal to the LSE's pro rata share of the Flexible Capacity CPM designated under Section 43A.2.7.

* * * * *

Appendix A

Master Definition Supplement

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- **[Not Used]**

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- **[Not Used]**

* * * * *

- **Competitive LMP**

An LMP calculated in the MPM process minus the Congestion component relating to non-competitive Transmission Constraints, as calculated in accordance with Section 31.2.3.

* * * * *

- **Condition 1 Legacy RMR Unit**

A resource operating pursuant to Condition 1 of its Legacy RMR Contract.

* * * * *

- **Condition 2 Legacy RMR Unit**

A resource operating pursuant to Condition 2 of its Legacy RMR Contract.

* * * * *

- **Daily Additional Cost Settlement**

Exceptional Dispatch revenues determination for RMR Resources as described in Section 11.13.4.

* * * * *

- **Daily Availability Payment**

A component of the Daily RMR Capacity Payment as described in Section 11.13.2 and Schedule B of the applicable RMR Contract.

* * * * *

- Daily RMR Capacity Payment

Description of daily capacity payment for RMR Resources described in Section 11.13.2.

* * * * *

- Daily RMR Excess Revenues

The determination of the amount of Exceptional Dispatch revenues, if any, will be used to reduce the RMR Capacity Payment as described in Section 11.13.5.

* * * * *

- Daily RMR Settlement

Description of daily settlement for RMR Resources as described in Section 11.13.1.

* * * * *

- Daily Surcharge Payment

A component of the Daily RMR Capacity Payment as described in Section 11.13.2 and Schedule B of the applicable RMR Contract.

* * * * *

- Daily Variable Cost Payment

Description of the amount of variable costs recoverable by RMR Resources as described in Section 11.13.3.

* * * * *

- [Not Used]

* * * * *

- Excess Cost Payments

The payments made by the CAISO for costs associated with Exceptional Dispatches for 1) emergency conditions, to avoid Market Disruption and avoid an imminent System Emergency as provided in Section 11.5.6.1.1; 2) transmission-related modeling limitations as provided in Section 11.5.6.2.3; 3) Condition 2 Legacy RMR Units as provided in Section 11.5.6.3.2; and 4) emergency Energy as provided in Section 11.5.8.1.1.

* * * * *

- [Not Used]

* * * * *

- [Not Used]

* * * * *

- **Legacy Reliability Must-Run Contract (RMR Contract)**

A Must-Run Service Agreement between the owner of a Legacy Reliability Must-Run Unit and the CAISO.

* * * * *

- **Legacy Reliability Must-Run Unit (Legacy RMR Unit)**

A Generating Unit of a Participating Generator which is the subject of a Legacy Reliability Must-Run Contract.

* * * * *

- **Legacy RMR Capacity**

The MNDC reflected in Schedule A of a Legacy RMR Contract and maintained in the CAISO Master File.

* * * * *

- **Legacy RMR Contract**

A Reliability Must-Run Contract that a Generating Unit or other resource entered into before September 1, 2018.

* * * * *

- **Legacy RMR Unit**

Legacy Reliability Must-Run Unit

* * * * *

- [Not Used]

* * * * *

- **Maximum Net Dependable Capacity (MNDC)**

A term defined in and used in association with a Legacy RMR Contract.

* * * * *

- [Not Used]

* * * * *

- **Reliability Must-Run Contract (RMR Contract)**

A Must-Run Service Agreement between the owner of a Reliability Must-Run Resource and the CAISO.

* * * * *

- **Reliability Must-Run Resource (RMR Resource)**

A Generating Unit or other resource under an RMR Contract entered into after September 1,2018.

* * * * *

-[Not Used]

* * * * *

- [Not Used]

* * * * *

- [Not Used]

* * * * *

- **RMR Capacity**

The PMax value reflected in Schedule A of an RMR Contract and maintained in the CAISO Master File.

* * * * *

- [Not Used]

* * * * *

- [Not Used]

* * * * *

- **RMR Dispatch**

The quantity of Energy or Ancillary Services that is mandated by the CAISO to be delivered in a given market for a resource by a Legacy RMR Unit under a Legacy RMR Contract or by an RMR Resource under an RMR Contract.

* * * * *

- RMR Dispatch Notice

Dispatch of an RMR Resource or a Legacy RMR Unit under the applicable RMR Contract or Legacy RMR Contract.

* * * * *

- [Not Used]

* * * * *

- RMR Proxy Bid

For Condition 1 Legacy RMR Units, for Energy, an amount calculated based on the hourly variable costs as defined in Schedule C of the applicable Legacy RMR Contract in the form of a monotonically increasing function consistent with the bidding rules in Section 30. For Condition 2 Legacy RMR Units, for Energy, the Energy Bid defined in Schedule M of the Legacy RMR Contract. For Condition 1 and 2 Legacy RMR Units, for Start-Up costs, the amount set forth in Schedule D of the applicable Legacy RMR Contract; and for Minimum Load costs, an amount calculated based on unit specific performance parameters as set for the applicable RMR Contract and the gas price calculated in accordance with Schedule C of the applicable Legacy RMR Contract.

* * * * *

- [Not Used]

* * * * *

- RMR Resource

A Generating Unit or other resource under an RMR Contract entered into after September 1, 2018.

* * * * *

- [Not Used]

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Appendix H

LEGACY RELIABILITY MUST-RUN CONTRACT CAISO TARIFF PROVISIONS

Notwithstanding any other provisions of the CAISO Tariff, the following provisions apply to Legacy Reliability Must-Run Contracts entered into by Reliability Must-Run Units prior to September 1, 2018.

11.13 Settlements and Billing of RMR Charges and Payments

11.13.1 Objectives

The objective of this Section 11.13 is to inform RMR Owners which are responsible for preparation of Invoices, and Responsible Utilities, which are responsible for payment of Reliability Must-Run Charges pursuant to Section 41.7, of the manner in which the RMR Charges referred to in Section 41.6 shall be verified and settled and of the procedures regarding the billing, invoicing and payment of these RMR Charges.

11.13.2 Accounts

11.13.2.1 Facility Trust Account

The CAISO shall establish a Facility Trust Account for each RMR Contract. Each Facility Trust Account shall consist of two segregated commercial bank accounts: (1) an RMR Owner Facility Trust Account, which will be held in trust for the RMR Owner, and (2) a Responsible Utility Facility Trust Account, which will be held in trust for the Responsible Utility. RMR Charges paid by the Responsible Utility to the CAISO in connection with the RMR Contract will be deposited into the RMR Owner Facility Trust Account and RMR Payments from the CAISO to the RMR Owner will be withdrawn from such account, all in

accordance with this Section 11.13, Section 41.6, and the RMR Contract. RMR Refunds received by the CAISO from the RMR Owner in accordance with the RMR Contract will be deposited into the Responsible Utility Facility Trust Account and such RMR Refunds will be withdrawn from such account and paid to the Responsible Utility in accordance with this Section 11.13, Section 41.6, and the RMR Contract. The RMR Owner Facility Trust Account and the Responsible Utility Facility Trust Account shall have no other funds commingled in them at any time.

11.13.2.2 RMR Owner's Settlement Accounts

Each RMR Owner shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fedwire, and, at its option, may also establish and maintain a Settlement Account for transfers via ACH, where payments to and from the Facility Trust Accounts shall be made in accordance with this Section 11.13. Each RMR Owner shall notify the CAISO of its Settlement Account details upon entering into its RMR Contract with the CAISO and may notify the CAISO from time to time of any changes by giving at least fifteen (15) days notice before the new account becomes operational.

11.13.3 RMR Payments Calendar

The CAISO shall issue an RMR Payments Calendar for the purposes of this Section 11.13 which shall contain those dates set forth in Section 9.1 (b) of the RMR Contract and the following information:

- (a) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Estimated RMR Invoice pursuant to their RMR Contract;
- (b) the date on which the CAISO is required to initiate proposed adjustments to the Estimated RMR Invoice to the Responsible Utility and to the RMR Owner;
- (c) the date by which the RMR Owners are required to issue their Revised Estimated RMR Invoice reflecting appropriate revisions to the original Estimated RMR Invoice agreed upon by the Responsible Utility and the RMR Owner (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Estimated RMR Invoice should be deemed as the Revised Estimated RMR Invoice.);
- (d) the date on which the CAISO is required to issue to the Responsible Utility or RMR

- Owner the CAISO Invoice based on the Revised Estimated RMR Invoice;
- (e) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Adjusted RMR Invoice pursuant to their RMR Contract;
 - (f) the date on which the CAISO is required to initiate proposed adjustments to the Adjusted RMR Invoice to the Responsible Utility and the RMR Owner;
 - (g) the date by which the RMR Owners are required to issue their Revised Adjusted RMR Invoice reflecting appropriate revisions to the original Adjusted RMR Invoice agreed upon by the Responsible Utility and the RMR Owner. (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Adjusted RMR Invoice should be deemed as the Revised Adjusted RMR Invoice.);
 - (h) the date on which the CAISO is required to issue to the Responsible Utility or the RMR Owner the CAISO Invoice based on the Revised Adjusted RMR Invoice;
 - (i) the dates by which the Responsible Utility and RMR Owner must have notified the CAISO of any dispute in relation to the CAISO Invoice, Estimated RMR Invoice or Adjusted RMR Invoice (including the Revised Estimated RMR Invoice and Revised Adjusted RMR Invoice) or the CAISO's proposed adjustments;
 - (j) the date and time by which Responsible Utilities or RMR Owners are required to have made payments into the RMR Owner Facility Trust Account or Responsible Utility Facility Trust Account in payment of the CAISO Invoices relating to each Revised Estimated RMR Invoice and each Revised Adjusted RMR Invoice; and
 - (k) the date and time by which the CAISO is required to have made payments into the RMR Owners' Facility Trust Accounts or Responsible Utilities' Facility Trust Accounts in payment of the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice pursuant to their RMR Contract.

If the day on which any CAISO Invoice, any RMR Invoice, or any payment is due is not a Business Day, such statement or invoice shall be issued or payment shall be due on the next succeeding Business Day. Information relating to charges for Energy or Ancillary Services which are payable by the CAISO pursuant

to Sections 8 and 11 to the Scheduling Coordinators representing the RMR Owners will be contained in the RMR Payments Calendar.

11.13.4 Information Provided by RMR Owners to the CAISO

Each RMR Invoice and any Prior Period Change Worksheet shall include, or be accompanied by, information about RMR Payments and RMR Refunds in sufficient detail to enable the CAISO to verify all RMR Charges and all RMR Refunds, and such information shall be copied to the Responsible Utility.

Each RMR Invoice shall separately show the amounts due for services from each Reliability Must-Run Unit.

This information shall be provided in an electronic form in accordance with the RMR Invoice template developed jointly and agreed to by the CAISO, Responsible Utilities and RMR Owners in accordance with the RMR Contracts and the principles in Schedule O to those RMR Contracts, and maintained on the CAISO Website.

11.13.5 Validation of RMR Charges and RMR Refunds

The CAISO shall validate, based on information provided by each RMR Owner pursuant to paragraph 4, the amount due from the relevant Responsible Utility for RMR Charges and the amount due to the relevant Responsible Utility for RMR Refunds applicable to the Reliability Must-Run Generation and Ancillary Services of that RMR Owner, but shall not represent or warrant the accuracy or completeness of the information provided by the RMR Owner. The CAISO shall provide copies of its exception report and information to the relevant Responsible Utility and RMR Owner.

The CAISO shall not be obligated to pay the Responsible Utility any RMR Refunds unless and until the CAISO has received corresponding RMR Refunds into the Responsible Utility Facility Trust Account from the RMR Owner.

11.13.6 Description of the Billing Process

11.13.6.1 Issuance of RMR Invoices by the RMR Owner

Each RMR Owner shall provide any RMR Invoice to the CAISO in the electronic form, mutually agreed by the parties, which may be updated by agreement with the CAISO, Responsible Utilities and RMR Owners from time to time in accordance with the requirements of Schedule O of the RMR Contract, on each of the days specified in the RMR Payments Calendar, and shall send to the relevant Responsible Utility a copy

of that invoice on the day of issue.

11.13.6.2 Review of the RMR Invoice by the CAISO

The CAISO shall review each RMR Invoice within the period specified in the RMR Payments Calendar and is required to initiate proposed adjustments to that invoice to the RMR Owner and the relevant Responsible Utility. Once the CAISO initiates proposed adjustments, the RMR Owner shall issue a Revised Estimated RMR Invoice or Revised Adjusted RMR Invoice.

11.13.6.3 Issuance of CAISO Invoices by the CAISO

The CAISO shall provide to the Responsible Utility and the RMR Owner on the dates specified in the RMR Payments Calendar CAISO Invoices showing:

- (a) the amounts which, on the basis of the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice, as the case may be, and pursuant to Section 11.13, are to be paid by or to the relevant Responsible Utility and RMR Owner;
- (b) the Payment Date, being the date on which such amounts are to be paid and the time for such payment;
- (c) details (including the account number, bank name and Fedwire transfer instructions or, if applicable, ACH transfer instructions) of the RMR Owner Facility Trust Account to which any amounts owed by the Responsible Utility are to be paid, or of the RMR Responsible Utility Facility Trust Account to which any amounts owed by the RMR Owner are to be paid.

11.13.6.4 Resolving Disputes Relating to Invoices

11.13.6.4.1 Review of the Invoices by the Responsible Utility

Each Responsible Utility shall have the review period specified in the RMR Payments Calendar to review RMR Invoices and CAISO Invoices, validate and propose adjustments to such invoices, and notify the CAISO of any dispute. Notwithstanding the above, each Responsible Utility shall have the review time specified in Section 41.6 to dispute such invoice.

11.13.6.4.2 Dispute Notice

If a Responsible Utility disputes any item or calculation relating to any revised RMR Invoice, or any CAISO Invoice, it shall provide the CAISO, with a copy to the RMR Owner, via email or such other

communication mode as the parties may mutually agree upon, a notice of dispute at any time from the receipt of the copy of such invoice from the RMR Owner or the CAISO to the expiration of the period for review set out in Section 11.13. The CAISO shall initiate a corresponding dispute with the RMR Owner under the RMR Contract.

11.13.6.4.3 Contents of Dispute Notice

The notice of dispute shall state clearly the Revised Estimated RMR Invoice, Revised Adjusted RMR Invoice, or CAISO Invoice in dispute, the item disputed (identifying specific Reliability Must-Run Units and time periods), the reasons for the dispute, and the proposed amendment (if appropriate) and shall be accompanied by all available evidence reasonably required to support the claim.

11.13.6.4.4 Prior Period Change Agreed to by the RMR Owner

Subject to Sections 11.13.6.4.5 or 11.13.6.4.6, if the RMR Owner agrees with the proposed change, the change shall be shown in a Prior Period Change Worksheet and included in the next appropriate May or December Estimated RMR Invoice as specified in Article 9.1 of the RMR Contract.

11.13.6.4.5 Dispute Involving the RMR Owner

If the dispute relates to an item originating in any RMR Invoice, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.

11.13.6.4.6 Dispute Involving an Alleged Error or Breach or Default of the CAISO's Obligations Under Section 41.6

If the dispute relates to an alleged error or breach or default of the CAISO's obligations under Section 41.6, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.

11.13.6.4.7 Payment Pending Dispute

Subject to Section 41.6, if there is any dispute relating to an item originating in an RMR Invoice that is not resolved prior to the Payment Date, the Responsible Utility shall be obligated to pay any amounts shown in the relevant CAISO Invoice on the Payment Date irrespective of whether any such dispute has been resolved or is still pending. The Responsible Utility may notify the CAISO that the payment is made under protest, in which case the CAISO shall notify the RMR Owner that payment is made under protest. In accordance with Section 9.6 of the RMR Contract, if such dispute is subsequently resolved in favor of the Responsible Utility that made the payment under protest, then any amount agreed or determined to

be owed by the RMR Owner to the CAISO shall be repaid by the RMR Owner to the CAISO, with interest at the interest rate specified in the RMR Contract from the date of payment by the CAISO to the RMR Owner of the disputed amount to the date of repayment by the RMR Owner, as specified in Section 11.13.6.4.4. If an RMR Owner does not agree to make the change pursuant to Section 11.13.6.4.4, then such repayment shall be made by CAISO's deduction of such amount from the next CAISO Invoices until extinguished, or if the RMR Contract has terminated, by paying a RMR Refund in such amount to the Responsible Utility Facility Trust Account, subject to the limitation of Section 41.6.2.

11.13.7 Payment Procedures

11.13.7.1 Payment Date

The Payment Date for RMR Payments to and RMR Refunds from RMR Owners shall be the due date specified in the RMR Contract and in the RMR Payments Calendar and the same shall be the Payment Date for the CAISO and Responsible Utilities in relation to RMR Charges, provided that the RMR Owner has furnished the Responsible Utility and the CAISO with the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice no less than nine (9) calendar days before the due date. The Payment Date shall be stated on the CAISO Invoice.

11.13.7.2 Payment Method

All payments and refunds by the CAISO to RMR Owners and Responsible Utilities shall be made via Fedwire or, if chosen by the RMR Owner or Responsible Utility, via ACH. However, if the RMR Owner is also the Responsible Utility, at the discretion of the RMR Owner, payments and refunds may be made by memorandum account instead of by Fedwire transfer or ACH.

11.13.7.3 Payment by RMR Owners and Responsible Utilities.

Each RMR Owner shall ensure that the amount shown on the relevant CAISO Invoice as payable by the RMR Owner shall be received into the Responsible Utility Facility Trust Account not later than 10:00 am on the Payment Date.

Subject to Section 41.6, each Responsible Utility shall ensure that the amount shown on the relevant CAISO Invoice as payable by the Responsible Utility shall be received into the RMR Owner Facility Trust Account not later than 10:00 am on the Payment Date.

11.13.7.4 Payment by the CAISO

The CAISO shall verify the amounts available for distribution to Responsible Utilities and/or RMR Owners on the Payment Date and shall give instructions to the CAISO Bank to remit from the relevant Facility Trust Account to the relevant settlement account maintained by each Responsible Utility or RMR Owner the amounts determined by the CAISO to be available for payment to each Responsible Utility or RMR Owner.

11.13.7.5 Payment Default by RMR Owner or Responsible Utility

If by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes the RMR Default Amount has not been received, the CAISO shall immediately notify the RMR Owner and the Responsible Utility. Where the RMR Default Amount was due from the Responsible Utility, the CAISO and RMR Owner shall proceed as set forth in Section 41.6 and the applicable provision of the RMR Contract. Where the RMR Default Amount was due from the RMR Owner, the CAISO and the Responsible Utility shall proceed as set forth in the applicable provision of the RMR Contract.

11.13.7.5.1 Default Relating to Market Payments

For the avoidance of doubt, non payment to RMR Owners, or their respective Scheduling Coordinators, of charges for Energy or Ancillary Services which are payable by the CAISO to Scheduling Coordinators representing such RMR Owners shall be dealt with pursuant to Sections 11.3 to 11.30 (inclusive).

11.13.7.6 Set-off

11.13.7.6.1 Set-off in the Case of a Defaulting Responsible Utility

The CAISO is authorized to apply any amount to which any defaulting Responsible Utility is or will be entitled from the Responsible Utility Facility Trust Account in or towards the satisfaction of any amount owed by that Responsible Utility to the RMR Owner Facility Trust Account arising under the settlement and billing process set out in this Section 11.13.

For the avoidance of doubt, neither the CAISO nor any Responsible Utility will be authorized to set off any amounts owed by that Responsible Utility in respect of one Facility Trust Account against amounts owed to that Responsible Utility in respect of another Facility Trust Account or any amounts owed by that Responsible Utility under this Section 11.13 against amounts owed to that Responsible Utility except as provided by Section 41.6.

11.13.7.6.2 Set-off in the Case of a Defaulting RMR Owner

The CAISO is authorized to apply any amount to which any defaulting RMR Owner is or will be entitled from the RMR Owner Facility Trust Account in or towards the satisfaction of any amount owed by that RMR Owner to the Responsible Utility Facility Trust Account in accordance with Article 9 of the RMR Contract and Sections 41.6 and 11.10.2.

For the avoidance of doubt, neither the CAISO nor any RMR Owner will be authorized to set off any amounts owed by that RMR Owner in respect of one Facility Trust Account against amounts owed to that RMR Owner in respect of another Facility Trust Account or any amounts owed by that RMR Owner under this Section 11.13 against amounts owed to that RMR Owner under the RMR Contract.

11.13.7.7 Default Interest

Responsible Utilities shall pay interest on RMR Default Amounts to the CAISO at the interest rate specified in the RMR Contract for the period from the relevant Payment Date to the date on which the payment is received by the CAISO.

RMR Owners shall pay interest to the CAISO on RMR Default Amounts at the interest rate specified in the RMR Contract for the period from the date on which payment was due to the date on which the payment is received by the CAISO.

The CAISO shall pay interest to RMR Owners at the interest rate specified in the RMR Contract for the period from the date on which payment is due under the RMR Contract to the date on which the payment is received by the RMR Owner.

The CAISO shall pay interest to Responsible Utilities at the interest rate specified in the relevant RMR Contract for the period from the date following the date it received an RMR Refund from the relevant RMR Owner to the date in which the payment is received by the relevant Responsible Utility.

Where payment of an RMR Default Amount is made by exercise of a right of set-off or deduction, payments shall be deemed received when payment of the sum which takes that set-off or deduction into account is made.

11.13.8 Overpayments

The provisions of Sections 11.29.19.3 and 11.29.19.4 shall apply to RMR Owners and Responsible Utilities which have been overpaid by the CAISO and references to CAISO Creditors in these sections and in the relevant Sections of the CAISO Tariff shall be read, for the purposes of this Section 11.13, to

mean RMR Owners and Responsible Utilities as applicable. Disputed amounts shall not be considered to be overpayments until and unless the dispute is resolved.

11.13.9 Communications

11.13.9.1 Method of Communication

CAISO Invoices will be issued by the CAISO via the CAISO's secure communication system. RMR Invoices and Prior Period Change Worksheets will be issued by the RMR Owner in an electronic form mutually agreed by the parties and maintained on the CAISO Website. The CAISO shall also post Prior Period Change examples and Prior Period Change guidelines as specified in Article 9.1 of the RMR Contract.

11.13.9.2 Emergency Procedures

11.13.9.2.1 Emergency Affecting the CAISO

In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may deem any Estimated RMR Invoice or any Adjusted RMR Invoice to be correct without thorough verification and may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13.

11.13.9.2.2 Emergency Affecting the RMR Owner

In the event of an emergency or a failure of any of the RMR Owner's systems, the RMR Owner may use Estimated RMR Invoices as provided in the applicable section of the RMR Contract or may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13 and its RMR Contract. Details of the variation will be published on the CAISO Website. Communications of an emergency nature on a due date or a Payment Date relating to payments shall be made by the fastest practical means including by telephone.

11.13.10 Confidentiality

The provisions of Sections 11.29.10.5 and 20.5 shall apply to this Section 11.13 between and among the RMR Owners, the CAISO and Responsible Utilities. Except as may otherwise be required by applicable law, all confidential information and data provided by RMR Owner or the CAISO to the Responsible Utility pursuant to the RMR Contract, Section 41.6 or this Section 11.13 shall be treated as confidential and proprietary to the providing party to the extent required by Section 12.5 and Schedule N of the RMR

Contract and will be used by the receiving party only as permitted by such Section 12.5 and Schedule N.

* * * * *

41. Procurement of RMR Generation

41.1 Procurement of Reliability Must-Run Generation by the CAISO

A Reliability Must-Run Contract is a contract entered into by the CAISO with a Generator which operates a Generating Unit giving the CAISO the right to call on the Generator to generate Energy and, only as provided in this Section 41.1, or as needed for Black Start or Voltage Support required to meet local reliability needs, or to procure Ancillary Services from Potrero power plant to meet operating criteria associated with the San Francisco local reliability area, to provide Ancillary Services from the Generating Units as and when this is required to ensure that the reliability of the CAISO Controlled Grid is maintained.

41.2 Designation of Generating Unit as Reliability Must-Run Unit

The CAISO will, subject to any existing power purchase contracts of a Generating Unit, have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a Generating Unit as a Reliability Must-Run Unit. A Generating Unit so designated shall then be obligated to provide the CAISO with its proposed rates for Reliability Must-Run Generation for negotiation with the CAISO. Such rates shall be authorized by FERC or the Local Regulatory Authority, whichever authority is applicable.

41.3 Reliability Studies and Determination of RMR Units Status

In addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria. The CAISO will then determine which Generating Units it requires to continue to be Reliability Must-Run Units, which Generating Units it no longer requires to be Reliability Must-Run Units and which Generating Units it requires to become the subject of a Reliability Must-Run Contract which had not previously been so contracted to the CAISO. None of the Generating Units owned by Local Publicly Owned Electric Utilities are planned to be designated as Reliability Must-Run Units by the CAISO as of the CAISO Operations

Date but are expected to be operated in such a way as to maintain the safe and reliable operation of the interconnected transmission system comprising the CAISO Balancing Authority Area. However, in the future, Local Publicly Owned Electric Utilities may contract with the CAISO to provide Reliability Must-Run Generation.

41.4 Reliability Must-Run Contracts

A pro forma of the Reliability Must-Run Contract is attached as Appendix G. From the CAISO Operations Date all Reliability Must-Run Units will be placed under the "As Called" conditions, but the parties may, pursuant only to the terms of the Reliability Must-Run Contract, transfer any such unit to one of the alternative forms of conditions under specific circumstances. The CAISO will review the terms of the applicable forms of agreement applying to each Reliability Must-Run Unit to ensure that the CAISO will procure Reliability Must-Run Generation from the cheapest available sources and to maintain System Reliability. The CAISO shall give notice to terminate Reliability Must-Run Contracts that are no longer necessary or can be replaced by less expensive and/or more competitive sources for maintaining the reliability of the CAISO Controlled Grid.

41.5 RMR Dispatch

41.5.1 Day-Ahead and RTM RMR Dispatch

RMR Dispatches will be determined in accordance with the RMR Contract, the MPM process addressed in Sections 31 and 33 and through manual RMR Dispatch Notices to meet Applicable Reliability Criteria. The CAISO will notify Scheduling Coordinators for RMR Units of the amount and time of Energy requirements from specific RMR Units in the Trading Day prior to or at the same time as the Day-Ahead Schedules and AS and RUC Awards are published, to the extent that the CAISO is aware of such requirements, through an RMR Dispatch Notice or flagged RMR Dispatch in the IFM Day-Ahead Schedule. The CAISO may also issue RMR Dispatch Notices after Market Close of the DAM and through Dispatch Instructions flagged as RMR Dispatches in the Real-Time Market.

The Energy to be delivered for each Trading Hour pursuant to the RMR Dispatch Notice an RMR Dispatch in the IFM or Real-Time shall be referred to as the RMR Energy. Scheduling Coordinators may submit Bids in the DAM or the RTM for RMR Units operating under Condition 1 of the RMR Contract in accordance with the bidding rules applicable to non-RMR Units. A Bid submitted in the DAM or the RTM

for a Condition 1 RMR Unit shall be deemed to be a notice of intent to substitute a market transaction for the amount of MWh specified in each Bid for each Trading Hour pursuant to Section 5.2 of the RMR Contract. In the event the CAISO issues an RMR Dispatch Notice or an RMR Dispatch in the IFM or Real-Time Market for any Trading Hour, any MWh quantities cleared through the MPM shall be considered as a market transaction in accordance with the RMR Contract. RMR Units operating as Condition 2 RMR Units may not submit Bids until and unless the CAISO issues an RMR Dispatch Notice or issues an RMR Dispatch in the IFM, in which case a Condition 2 RMR Unit shall submit Bids in accordance with the RMR Contract in the next available market for the Trading Hours specified in the RMR Dispatch Notice or Day-Ahead Schedule.

41.5.2 RMR Payments

RMR Units operating as Condition 1 RMR Units or Condition 2 RMR Units that receive an RMR Dispatch Notice will be paid in accordance with the RMR Contract.

41.5.3 RMR Units and Ancillary Services Requirements

The CAISO may call upon RMR Units in any amounts that the CAISO has determined is necessary at any time after the issuance of Day-Ahead Schedules for the Trading Day if: (i) the CAISO determines that it requires more of an Ancillary Service than it has been able to procure, except that the CAISO shall not be required to accept Ancillary Services Bids that exceed the price caps specified in Section 39 or any other FERC-imposed price caps; and (ii) the CAISO has notified Scheduling Coordinators of the circumstances existing in this Section 41.5.3, and after such notice, the CAISO determines that a bid insufficiency condition in accordance with the RMR Contract exists in the RTM and the CAISO requires more of an Ancillary Service. The CAISO must provide the notice specified in sub paragraph (ii) of this Section 41.5.3 as soon as possible after the CAISO determines that additional Ancillary Services are needed for which Bids are not available. The CAISO may only determine that a Bid insufficiency exists after the Market Close of the RTM, unless an earlier determination is required in order to accommodate the RMR Unit's operating constraints. For the purposes of this Section 41.5.3, a Bid insufficiency exists in RTM if, and only if: (i) Bids in the RTM for the particular Ancillary Service that can be used to satisfy that particular Ancillary Services requirement that remain after first procuring the megawatts of the Ancillary Service that the CAISO had notified Scheduling Coordinators it would procure in the HASP ("remaining Ancillary

Services requirement") represent, in the aggregate, less than two times such remaining Ancillary Services requirement; or (ii) there are less than two unaffiliated bidders to provide such remaining Ancillary Services requirement. If the CAISO determines that a Bid insufficiency condition exists as described in this Section 41.5.3, the CAISO may nonetheless accept available Bids if it determines in its sole discretion that the prices specified in the Bids and the Energy Bid Curves created by the Bids indicate that the Scheduling Coordinators were not attempting to exercise market power.

41.6 Reliability Must-Run Charge

The CAISO shall prepare and send to each Responsible Utility in accordance with Section 11.13, a CAISO Invoice as provided in the RMR Contract in respect of those costs incurred under each Reliability Must-Run Contract that are payable to the CAISO by such Responsible Utility or payable by the CAISO to such Responsible Utility pursuant to Section 41.7. The CAISO Invoices as provided in the RMR Contract shall reflect all reductions or credits required or allowed under or arising from the Reliability Must-Run Contract or under this Section 41.6. The CAISO Invoice as provided in the RMR Contract shall separately show the amounts due for services from each RMR Owner. Each Responsible Utility shall pay the amount due under each CAISO Invoice as provided in the RMR Contract by the due date specified in the CAISO Invoice as provided in the RMR Contract, in default of which interest shall become payable at the interest rate provided in the Reliability Must-Run Contract from the due date until the date on which the amount is paid in full. For each Reliability Must-Run Contract, the CAISO shall establish two segregated commercial bank accounts under the Facility Trust Account referred to in Section 11.13.2.1 and Article 9 of the Reliability Must-Run Contract. One commercial bank account, the RMR Owner Facility Trust Account, shall be held in trust by the CAISO for the RMR Owner. The other commercial bank account, the Responsible Utility Facility Trust Account, shall be held in trust by the CAISO for the Responsible Utility. Payments received by the CAISO from the Responsible Utility in connection with the Reliability Must-Run Contract, including payments following termination of the Reliability Must-Run Contract, will be deposited into the RMR Owner Facility Trust Account and payments from the CAISO to the RMR Owner will be withdrawn from such account, in accordance with this Section 41.6, Article 9 of the Reliability Must-Run Contract and Section 11.13. Any payments received by the CAISO from the RMR Owner in connection with the Reliability Must-Run Contract will be deposited into the Responsible Utility Facility Trust Account.

Any payments due to the Responsible Utility of funds received from the RMR Owner in connection with the Reliability Must-Run Contract will be withdrawn from the Responsible Utility Facility Trust Account, in accordance with this Section 41.6, Section 11.13, and Article 9 of the Reliability Must-Run Contract.

Neither the RMR Owner Facility Trust Account nor the Responsible Utility Facility Trust Account shall have other funds commingled in it at any time. The CAISO shall not modify this Section or Section 11.13 as it applies to procedures for the billing, invoicing and payment of charges under Reliability Must-Run Contracts without the Responsible Utility's consent, provided, however, that no such consent shall be required with respect to any change in the method by which costs incurred by the CAISO under RMR Contracts are allocated to or among Responsible Utilities.

41.6.1 No Offsets to Responsible Utility's CAISO Invoice Payments

Except where the Responsible Utility is also the RMR Owner, the Responsible Utility's payment of the CAISO Invoice as provided in the RMR Contract shall be made without offset, recoupment or deduction of any kind whatsoever. Notwithstanding the foregoing, if the CAISO fails to deduct an amount required to be deducted under Section 41.6.2, the Responsible Utility may deduct such amount from payment otherwise due under such CAISO Invoice as provided in the RMR Contract.

41.6.2 Refunds of Disputed Amounts on RMR Invoices

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, Revised Estimated RMR Invoice, or Revised Adjusted RMR Invoice, or Final Invoice, it shall pay the CAISO Invoice as provided in the RMR Contract but may pay under protest and reserve its right to seek a refund, with interest, from the CAISO. If resolution of the dispute results in an amount paid by the Responsible Utility under protest being due from the CAISO to the Responsible Utility and from the RMR Owner to the CAISO, and such amount was paid to the RMR Owner by the CAISO, then such amount, with interest at the interest rate specified in the applicable Reliability Must-Run Contract from the date of payment until the date on which the amount is repaid in full, shall be refunded by the RMR Owner to the CAISO and from the CAISO to the Responsible Utility, pursuant to Article 9 of the Reliability Must-Run Contract and Section 11.13, by the RMR Owner's inclusion of such refund amount in the appropriate invoice. If the RMR Owner does not include such refund amount (including interest) in the appropriate invoice, then such refund amount shall be deducted by the CAISO from the next succeeding amounts otherwise due

from the Responsible Utility to the CAISO and from the next succeeding amounts otherwise due from the CAISO to the RMR Owner with respect to the applicable Reliability Must-Run Contract or, if such RMR Contract has terminated, such amount shall be refunded by the CAISO to the Responsible Utility; provided, however, that if and to the extent that such resolution is based on an error or breach or default of the RMR Owner's obligations to the CAISO under the Reliability Must-Run Contract, then such refund obligation shall extend only to amounts actually collected by the CAISO from the RMR Owner as a result of such resolution. If resolution of the dispute requires the CAISO, but not the RMR Owner, to pay the Responsible Utility, then such award shall be recovered from any applicable insurance proceeds, provided that to the extent sufficient funds are not recoverable through insurance, the amount of the award (whether determined through settlement, or the CAISO ADR Procedures or otherwise) shall be collected by the CAISO pursuant to Section 13.5, and in any event, the award shall be paid by the CAISO to the Responsible Utility pursuant to Section 13.5.

41.6.3 Time-Frame for Responsible Utility to Dispute RMR Invoices

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, or part thereof, based in whole or in part on an alleged error by the RMR Owner or breach or default of the RMR Owner's obligations to the CAISO under the Reliability Must-Run Contract, the Responsible Utility shall notify the CAISO of such dispute within twelve (12) months of its receipt of the applicable Revised Adjusted RMR Invoice or Final Invoice from the CAISO, except that the Responsible Utility may also dispute a Revised Estimated RMR Invoice, Revised Adjusted RMR Invoice, or Final Invoice for the reasons set forth above in this Section 41.6.3, within sixty (60) days from the issuance of a final report with respect to an audit of the RMR Owner's books and accounts allowed by a Reliability Must-Run Contract.

41.6.4 Disputes After Operational Compliance Review

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, based in whole or in part on an alleged error by the CAISO or breach or default of the CAISO's obligations to the Responsible Utility, the Responsible Utility shall notify the CAISO of such dispute prior to the later to occur of: (i) the date twelve (12) months following the date on which the CAISO submitted such invoice to the Responsible

Utility for payment or (ii) the date sixty (60) days following the date on which a final report is issued in connection with an operational compliance review, pursuant to Section 22.1.2.2, of the CAISO's performance of its obligations to Responsible Utilities under this Section 41.6.4 conducted by an independent third party selected by the CAISO Governing Board and covering the period to which such alleged dispute relates. The CAISO or any Responsible Utility shall have the right to request, but not to require, that the CAISO Governing Board arrange for such an operational compliance review at any time.

41.6.5 Invoice Disputes Subject to RMR Contract Resolution Process

Notwithstanding Section 13, any Responsible Utility dispute relating to a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, a Final Invoice, or a RMR Charge, RMR Payment or RMR Refund shall be resolved through the dispute resolution process specified in the relevant RMR Contract. If the Responsible Utility fails to notify the CAISO of any dispute as provided above, it shall be deemed to have validated the invoice and waived its right to dispute such invoice.

41.6.6 RMR Owner's Rights as a Third Party Beneficiary

The RMR Owner shall, to the extent set forth herein, be a third party beneficiary of, and have all rights that the CAISO has under the CAISO Tariff, at law, in equity or otherwise, to enforce the Responsible Utility's obligation to pay all sums invoiced to it in the CAISO Invoices as provided in the RMR Contract but not paid by the Responsible Utility, to the extent that, as a result of the Responsible Utility's failure to pay, the CAISO does not pay the RMR Owner on a timely basis amounts due under the Reliability Must-Run Contract. The RMR Owner's rights as a third party beneficiary shall be no greater than the CAISO's rights and shall be subject to the dispute resolution process specified in the relevant RMR Contract.

Either the CAISO or the RMR Owner (but not both) will be entitled to enforce any claim arising from an unpaid CAISO Invoice as provided in the RMR Contract, and only one party will be a "disputing party" under the dispute resolution process specified in the relevant RMR Contract with respect to such claim so that the Responsible Utility will not be subject to duplicative claims or recoveries. The RMR Owner shall have the right to control the disposition of claims against the Responsible Utility for non-payments that result in payment defaults by the CAISO under a Reliability Must-Run Contract. To that end, in the event of non-payment by the Responsible Utility of amounts due under the CAISO Invoice as provided in the

RMR Contract, the CAISO will not take any action to enforce its rights against the Responsible Utility unless the CAISO is requested to do so by the RMR Owner. The CAISO shall cooperate with the RMR Owner in a timely manner as necessary or appropriate to most fully effectuate the RMR Owner's rights related to such enforcement, including using its best efforts to enforce the Responsible Utility's payment obligations if, as, to the extent, and within the time frame, requested by the RMR Owner. The CAISO shall intervene and participate where procedurally necessary to the assertion of a claim by the RMR Owner.

41.7 Responsibility for Reliability Must-Run Charge

Except as otherwise provided in Section 41.8 , the costs incurred by the CAISO under each Reliability Must-Run Contract shall be payable to the CAISO by the Responsible Utility in whose PTO Service Territory the Reliability Must-Run Units covered by such Reliability Must-Run Contract are located or, where a Reliability Must-Run Unit is located outside the PTO Service Territory of any Responsible Utility, by the Responsible Utility or Responsible Utilities whose PTO Service Territories are contiguous to the Service Area in which the Generating Unit is located, in proportion to the benefits that each such Responsible Utility receives, as determined by the CAISO. Where costs incurred by the CAISO under a Reliability Must-Run Contract are allocated among two or more Responsible Utilities pursuant to this section, the CAISO will file the allocation under Section 205 of the Federal Power Act.

41.8 Responsibility for RMR Charges Associated with SONGS

If the CAISO procures Reliability Must-Run Generation from the San Onofre Nuclear Generation Station Units 2 or 3, it shall determine prior to the operation of such facilities as Reliability Must-Run Generation the appropriate allocation of associated charges, if any, among Responsible Utilities. The allocation of such charges shall be based on the reliability benefits that the CAISO reasonably identifies through studies and analysis as accruing to the respective Service Areas of the Responsible Utilities.

41.9 Exceptional Dispatch of Condition 2 RMR Units

The CAISO may Dispatch an RMR Unit that has currently selected Condition 2 of its RMR Contract to provide Energy through an Exceptional Dispatch under this CAISO Tariff for reasons other than as prescribed in the RMR Contract under the following conditions:

- (1) The CAISO projects that it will require Energy from the Condition 2 RMR Unit to (a) meet forecast Demand and operating reserve requirements or (b) manage Congestion and no

other Generating Unit that is available is capable of meeting the identified requirement;

41.9.1 Notification Required Before Condition 2 RMR Unit Dispatch

Before dispatching a Condition 2 RMR Unit in accordance with this Section, the CAISO must notify Market Participants of (a) the situation for which the CAISO is contemplating dispatching a Condition 2 RMR Unit in accordance with this Section, and (b) the date and time the CAISO requires the Condition 2 RMR Unit so dispatched to be operating. The CAISO shall provide such notice as far in advance as practical and prior to directing the Condition 2 RMR Unit to Start-Up

Notwithstanding anything to the contrary in the applicable RMR Contract, all MWh, Start-Ups and service hours provided by a Generating Unit that has currently selected Condition 2 of its RMR Contract pursuant to this Section 41.9.1 through an Exceptional Dispatch outside of the RMR Contract shall not be used to determine future "Annual Service Limits" as defined in the RMR Contract. Payment for Dispatches pursuant to this Section 41.9.1 is governed by Section 11.

* * * * *

Appendix A

Master Definition Supplement

* * * * *

- Adjusted RMR Invoice

The monthly invoice issued by the RMR Owner to the CAISO for adjustments made to the Revised Estimated RMR Invoice pursuant to the RMR Contract reflecting actual data for the billing month.* * * * *

- CAISO Invoice

The invoices issued by the CAISO to the Responsible Utilities or RMR Owners based on the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice.

* * * * *

- Condition 1 RMR Unit

A resource operating pursuant to Condition 1 of its RMR Contract.

* * * * *

- Condition 2 RMR Unit

A resource operating pursuant to Condition 2 of its RMR Contract.

* * * * *

- Estimated RMR Invoice

The monthly invoice issued by the RMR Owner to the CAISO for estimated RMR Payments or RMR Refunds pursuant to the RMR Contract.

* * * * *

- Facility Trust Account

For each RMR Contract, the account established and operated by the CAISO to and from which all payments under Section 11.13 shall be made. Each Facility Trust Account will have two segregated commercial bank accounts, an RMR Owner Facility Trust Account and a Responsible Utility Facility Trust Account.

* * * * *

- Final Invoice

The invoice due from a RMR Owner to the CAISO at termination of the RMR Contract.

* * * * *

- Maximum Net Dependable Capacity (MNDC)]

A term defined in and used in association with an RMR Contract.

* * * * *

- MNDC

Maximum Net Dependable Capacity.

* * * * *

- Prior Period Change

Any correction, surcharge, credit, refund or other adjustment pertaining to a billing month pursuant to an RMR Contract which is discovered after the Revised Adjusted RMR Invoice for such billing month has been issued.

* * * * *

- Prior Period Change Worksheet

A worksheet prepared by the RMR Owner and submitted to the CAISO following discovery of a necessary change to an RMR Invoice after the Revised Adjusted RMR Invoice for the billing month has been issued.

* * * * *

- RMR Dispatch

The quantity of Energy or Ancillary Services that is mandated by the CAISO to be delivered in a given market for a resource by an RMR Unit under an RMR Contract.

* * * * *

- Manual RMR Dispatch

An RMR Dispatch Notice issued by the CAISO other than as a result of the MPM process.

* * * * *

- Reliability Must-Run Charge (RMR Charge)

The sum payable by a Responsible Utility to the CAISO pursuant to Section 41 for the costs, net of all applicable credits, incurred under the Reliability Must-Run Contract.

* * * * *

- Reliability Must-Run Contract (RMR Contract)

A Must-Run Service Agreement between the owner of a Reliability Must-Run Unit and the CAISO.

* * * * *

- Reliability Must-Run Unit (RMR Unit)

A Generating Unit of a Participating Generator which is the subject of a Reliability Must-Run Contract.

* * * * *

- Responsible Utility

The utility which is a party to the Transmission Control Agreement in whose PTO Service Territory the Reliability Must-Run Unit is located or whose PTO Service Territory is contiguous to the PTO Service Territory in which a Reliability Must-Run Unit owned by an entity outside of the CAISO Controlled Grid is located.

* * * * *

- Responsible Utility Facility Trust Account

A segregated commercial bank account under the Facility Trust Account containing funds held in trust for the Responsible Utility under an RMR Contract.

* * * * *

Revised Adjusted RMR Invoice

The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting any appropriate revisions to the Adjusted Reliability Must-Run Invoice based on the CAISO's validation and actual data for the billing month.

* * * * *

- Revised Estimated RMR Invoice

The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting appropriate revisions to the Estimated Reliability Must-Run Invoice based on the CAISO's validation of the Estimated Reliability Must-Run Invoice.

* * * * *

- RMR Default Amount

Any amount due to be received into the relevant Facility Trust Account from the RMR Owner or the Responsible Utility in accordance with an RMR Contract.

* * * * *

- RMR Energy

Total Expected Energy under RMR Dispatch. RMR Energy is calculated independent of other Expected Energy types and it may overlap with any other Expected Energy type. It is used for RMR Contract based settlement as provided in Section 11.13.

* * * * *

- RMR Invoice

Any Estimated RMR Invoice, Revised Estimated RMR Invoice, Adjusted RMR Invoice, or Revised Adjusted RMR Invoice under an RMR Contract.

* * * * *

- RMR Owner

The provider of services under a Reliability Must-Run Contract.

* * * * *

- RMR Owner Facility Trust Account

The commercial bank account held in trust by the CAISO for the benefit of the owner of an RMR Unit subject to an RMR Contract as required and specified in Section 9.2 of the pro forma RMR Contract.

* * * * *

- RMR Payment

Any amounts which the CAISO is obligated to pay to RMR Owners under the RMR Contracts, net of any applicable credits under the RMR Contracts.

* * * * *

- RMR Security

The form of security provided by a Responsible Utility to cover its liability under Section 11.13.

Attachment A-2 – Clean Tariff Pro Forma Agreement
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation

Appendix G

Pro Forma Reliability Must-Run Contract

MUST-RUN SERVICE AGREEMENT

THIS MUST-RUN SERVICE AGREEMENT is made as of the ___ day of _____, 20___, between _____, a [corporation/limited liability company/municipal corporation] organized under the laws of the State of _____ (the "Owner"), and the CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION, a nonprofit public benefit corporation incorporated under the laws of the State of California (the "CAISO").

RECITALS

- A. Owner is the owner or lessee of, or is otherwise entitled to dispatch and market the Energy, Ancillary Services, Black Start, and other reliability services produced from and provided by, the electrical generating Units located at the Facility described in Schedule A to this Agreement;
- B. Under Section 345 of the California Public Utilities Code, CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid;
- C. CAISO has determined that it needs the ability to dispatch Units under the terms and conditions of this Agreement to have Owner deliver Energy into or provide Ancillary Services, Black Start, or other reliability services to the CAISO Controlled Grid when required by CAISO to ensure the reliability of the CAISO Controlled Grid; and
- D. Each Unit covered by this Agreement has been designated as a Reliability Must-Run Unit.

In consideration of the covenants and agreements contained in this Agreement, the Parties agree as follows:

ARTICLE 1

DEFINITIONS

Terms, when used with initial capitalization in this Agreement and the attached schedules shall have the meanings set out below. The singular shall include the plural and vice versa. "Includes" or "including" shall mean "including without limitation." References to a section, article or schedule shall mean a section, article or schedule of this Agreement, unless another agreement or instrument is specified. Unless the context otherwise requires, references to any law shall be deemed references to such law as amended, replaced or restated from time to time. Unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal identity. References to "Owner" or "CAISO" shall, unless the context otherwise requires, mean Owner and CAISO respectively and their permitted assigns and successors. References to sections or provisions of the CAISO Tariff include any succeeding sections or provisions of the CAISO Tariff.

"ADR" means alternative dispute resolution pursuant to Section 11.1 and Schedule K.

"Agreement" means this Must-Run Service Agreement, including schedules, as amended from time to time.

"Ancillary Services" is defined in Appendix A to the CAISO Tariff.

"Applicable UDC Tariff" means the applicable retail tariff(s), of the utility distribution company in whose service territory the Unit is located, under which the Unit is eligible to purchase power to

meet its auxiliary power requirements, whether or not the Unit actually purchases auxiliary power under the tariff(s). The Applicable UDC Tariff for the Facility is set out on Schedule C.

“Black Start” is defined in Appendix A to the CAISO Tariff.

“BPM” is defined in Appendix A to the CAISO Tariff.

“Business Day” is defined in Appendix A to the CAISO Tariff.

“CAISO Controlled Grid” is defined in Appendix A to the CAISO Tariff.

“CAISO’s Repair Share” is defined in Section 7.5 (g).

“CAISO Tariff” means the California Independent System Operator Tariff on file with FERC and in effect from time to time.

“CPUC” means the California Public Utilities Commission, or its successor.

“Capital Item” means an addition or modification to, change in or repair, replacement or renewal of plant, equipment or facilities used by Owner to fulfill Owner’s obligations under this Agreement. A Capital Item does not include Repairs to such plant, equipment or facilities. A Capital Item does not include an Upgrade, unless recovery of costs of the Upgrade has been approved by CAISO. For purposes of this Agreement, Capital Items are “retirement units” or other items the costs of which are properly capitalized in accordance with the FERC Uniform System of Accounts, 18 C.F.R. Part 101.

“Closed” is defined in Section 2.5.

“Commitment Costs” is defined Appendix A to the CAISO Tariff.

“Confidential Information” is defined in Section 12.5.

“Contract Year” means a calendar year; provided, however, that the initial Contract Year shall commence on the Effective Date and expire at the end of the calendar year in which the Effective Date occurred. If the Agreement terminates during a calendar year, the last Contract Year shall end on the termination date.

“Daily Availability Payment” is defined in Schedule B.

“Daily Payment” is defined in Schedule B.

“Day-Ahead Schedule” is defined in Appendix A to the CAISO Tariff.

“Delivery Point” means the point identified in Section 4 of Schedule A where Energy and Ancillary Services are to be delivered.

“Direct Contract” means a contract between Owner and one or more identified persons for the sale of Energy or Ancillary Services other than under this Agreement, and shall in no event include a transaction in a market run by CAISO.

“Distribution Grid” means the radial lines, distribution lines and other facilities used to transmit or distribute Energy from the Facility other than the CAISO Controlled Grid.

“Effective Date” means the date this Agreement becomes effective pursuant to Section 2.1 thereof.

“Energy” means electrical energy.

“Energy Bid” is defined in Appendix A to the CAISO Tariff.

“Exceptional Dispatch” is defined in Appendix A to the CAISO Tariff.

“Facility” means the electrical generating facility described in Schedule A. A hydroelectric facility may include one or more electric generating facilities which are hydraulically linked by a common water system.

“FERC” means the Federal Energy Regulatory Commission, any successor agency, or any other agency to whom authority under the Federal Power Act affecting this Agreement has been delegated.

“Financing Agreement” means agreements for financing the Facility or any portion of the Facility.

“Force Majeure Event” means any occurrence beyond the reasonable control of a Party which causes the Party to be unable to perform an obligation under this Agreement in whole or in part and which could not have been avoided by the exercise of Good Industry Practice. Force Majeure Event includes an act of God, war, civil disturbance, riot, strike or other labor dispute, acts or failures to act of Governmental Authority, fire, explosion, flood, earthquake, storm, drought, lightning and other natural catastrophes. A Force Majeure Event shall not include lack of finances or the price of fossil fuel.

“Gas Price Index” is defined in Appendix A to the CAISO Tariff.

“Good Industry Practice” means any of the practices, methods, and acts engaged in or approved by a significant portion of the electric power industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in the light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Industry Practice does not require use of the optimum practice, method, or act, but only requires use of practices, methods, or acts generally accepted in the region covered by the Western Systems Coordinating Council.

“Governmental Authority” means the government of any nation, any state or other political subdivision thereof, including any entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to a government.

“Interest Rate” means the lesser of the rate of interest per annum calculated in accordance with 18 C.F.R. 35.19a of the FERC’s Regulations or the maximum rate permitted by law.

“Local Capacity Area” is defined in Appendix A to the CAISO Tariff.

“Maser File” is defined in Appendix A to the CAISO Tariff.

“Month” means a calendar month.

“Motoring Charge” means the payment in accordance with Schedule E for the Energy required to spin a generator or condenser that is electrically connected to the CAISO Controlled Grid or Distribution Grid to provide Ancillary Services in circumstances where the generator is not producing Energy.

“MW” means one megawatt.

“MWh” means one megawatt hour.

“Net Repair Costs” is defined in Section 7.5(a).

“Operating Procedures” is defined in Appendix A to the CAISO Tariff.

“Opportunity Costs” as defined in Appendix A to the CAISO Tariff.

“Owner’s Repair Cost Obligation” is an allowance for Repairs to be made during the Contract Year calculated pursuant to Section 7.5 (k). Owner’s Repair Cost Obligation is set out in Section 13 of Schedule A.

“Party” means either CAISO or Owner, and **“Parties”** means CAISO and Owner.

“PMax” is defined in Appendix A to the CAISO Tariff.

“Proxy Cost” is defined in Appendix A to the CAISO Tariff.

“Proxy Cost Methodology” is defined in Appendix A to the CAISO Tariff.

“Reasonable Efforts” is defined in Appendix A to the CIAOS Tariff.

“Repair” means repairs or replacement required to remedy or prevent any loss or damage that impairs the capability of the Unit to Deliver Energy or Ancillary Services, the cost of which is properly treated as an expense in accordance with the FERC Uniform System of Accounts, 18 C.F.R. Part 101.

“Repair Payment Factor” is determined pursuant to Section 7.5(g).

“Requested Operation Period” means the time during which CAISO requests that a Unit Deliver Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement, pursuant to an RMR Dispatch Notice.

“Residual Unit Commitment,” or **“RUC,”** is defined in Appendix A to the CAISO Tariff.

“Response Notice” is defined in Section 14.3(b)(ii).

“RMR Contract Capacity” means the PMax value reflected in Schedule A of this Agreement and maintained in the CAISO Master File.

“RMR Dispatch” is as defined in Appendix A to the CAISO Tariff.

“RMR Dispatch Notice” means a notice delivered manually by CAISO to Owner’s Scheduling Coordinator on a daily, hourly, or real-time basis requesting dispatch of one or more Unit(s) to provide Ancillary Services, Voltage Support or Black Start under this Agreement.

“RMR Invoice” is defined Schedule C.

“Scheduling Coordinator” means an entity certified by CAISO for the purposes of undertaking the functions specified in Section 4.5 of the CAISO Tariff with respect to a unit.

“Small Project Estimate” is defined in Section 7.4 (b).

“Termination Fee” means amounts determined pursuant to the termination fee formula contained in Section 2.5(b).

“Termination Fee Invoice” is defined in Section 9.9(a).

“Unit” means an individual electricity generating unit which has been designated a Reliability Must-Run Unit and is part of the Facility identified in Schedule A.

“Unplanned Capital Item Notice” is defined in Section 7.6(b).

“Unplanned Repair Notice” is defined in Section 7.5(b).

“Upgrade” means any change or modification to the Facility that increases the nameplate capacity rating of an existing Unit or adds a new unit.

“Variable Cost Default Energy Bid” is defined in Appendix A to the CAISO Tariff.

“Variable Cost Payment” means the payment to Owner for delivery of Energy and Ancillary Services as described in Section 8.

“Voltage Support” is defined in Appendix A to the CAISO Tariff.

“WECC” is defined in Appendix A to the CAISO Tariff.

ARTICLE 2

TERM

2.1 Term

- (a) This Agreement shall become effective on the later of January 31, 2020, or the date it is permitted to become effective by FERC, and shall continue in effect for one Contract Year.
- (b) CAISO may extend the term of this Agreement for an additional calendar year as to one or more Unit by notice given not later than October 1 of the expiring Contract Year. CAISO may extend the term for less than a full calendar year as to one or more Unit but only if CAISO gives notice not less than 12 months prior to the date to which it proposes to extend the term.

2.2 Termination

- (a) Subject to any necessary authorization from FERC, this Agreement may be terminated as to one or more Unit in accordance with this Section 2.2; provided, however, that if this Agreement applies to a Facility having hydroelectric Unit, this Agreement may be terminated only as to all hydroelectric Units at the Facility. If this Agreement terminates as to fewer than all Units, the Agreement shall remain in effect as to the remaining Units. If this Agreement terminates as to all Units, the Agreement shall terminate.
- (b) This Agreement may be terminated as to one or more Units:
 - (i) by CAISO pursuant to Section 11.4 in the event of default by Owner;
 - (ii) by Owner pursuant to Section 11.4 in the event of default by CAISO;
 - (iii) by Owner pursuant to Section 7.4 (f), 7.5 (i) or 7.6 (h);

- (iv) by Owner or CAISO, if the Unit is condemned by a Governmental Authority; or
 - (v) by Owner or CAISO, if Owner's authorization from a Governmental Authority (including, where applicable, licenses under Part I of the Federal Power Act) that is necessary to site, operate or obtain access to such Unit is terminated or expires or is reissued or modified so that it becomes illegal, uneconomical or otherwise impractical for the Owner to continue operating the Facility. Owner shall be obligated to use its best efforts to renew and keep effective its licenses and authorizations and to oppose conditions or modifications which would make continued operation illegal, uneconomical or otherwise impractical.
- (c) To the extent that Owner transfers the right to control the dispatch of the Facility or Unit which right is necessary to satisfy its obligations under this Agreement, Owner shall assign this Agreement to the transferee in accordance with Section 13.1.
- (d) If CAISO terminates the Agreement or does not extend the term of the Agreement as to a Unit, CAISO shall not redesignate the same Unit, or designate another non-reliability must-run unit at the same Facility, as a Reliability Must-Run Unit during the one year period following termination or expiration of the Agreement as to that Unit unless (i) CAISO demonstrates that the unit is required to maintain the reliability of the CAISO Controlled Grid or any portion thereof and the need to designate the unit as a Reliability Must-Run Unit is caused by an extended outage of a generation or transmission facility not known to CAISO at the time of the termination or expiration or (ii) the unit is selected through an CAISO competitive process in which Owner participated. For purposes of the foregoing, CAISO's need for spinning reserves, nonspinning reserves, replacement reserves or regulation as defined in the CAISO Tariff shall not be grounds for redesignating the Unit or designating another unit at the Facility as a Reliability Must-Run Unit.
- (e) Subject to any necessary authorization from FERC, this Agreement shall terminate as to any Unit leased by Owner in the event that, for any reason, the lease expires or is terminated unless Owner acquires ownership of such Unit upon such expiration or termination. Any termination under this Section 2.2 (e) shall not affect any right CAISO may have thereafter to designate such Unit as a Reliability Must-Run Unit and the conditions in Section 2.2 (d) shall not apply to such redesignation.

2.3 Effective Date of Expiration or Termination

If FERC authorization is required to give effect to expiration or termination of this Agreement as to one or more Units, the effective date of the expiration or termination shall be the date FERC permits the expiration or termination to become effective. Owner shall promptly file for the requisite FERC authorizations to terminate service under this Agreement as of the proposed effective date of expiration or termination; provided, that nothing in this Agreement shall prejudice the right of either Party to contest the other Party's claim that a termination or expiration has occurred. If FERC authorization is not required to terminate service under this Agreement, the effective date of expiration or termination shall be the later of (i) the date specified in CAISO or Owner's notice of termination or (ii) the date that all conditions to the termination or expiration have been satisfied.

2.4 Effect of Expiration or Termination

Expiration or termination of this Agreement shall not affect the accrued rights and obligations of either Party, including either Party's obligations to make all payments to the other Party pursuant to this Agreement or post-termination audit rights under Section 12.2.

2.5 Termination Fee

(a) CAISO shall pay Owner a Termination Fee calculated pursuant to Section 2.5 (b) if the Unit is Closed within six months after the Unit ceases to be subject to this Agreement as a result of termination pursuant to Sections 2.2 (b) (ii), (iii), (iv) or (v) or because CAISO does not extend the term under Section 2.1 (b). Within 60 days after the Unit is Closed, Owner will send CAISO a notice stating (i) the date the Unit Closed and (ii) the amount of the Termination Fee due Owner pursuant to this Section 2.5 including detailed calculations of each component of the formula in Section 2.5(b) identifying the source of each input used. For purposes of this Section, "Closed" shall mean that the Unit is not producing Energy or providing capacity and there are no Direct Contracts obligating any entity to deliver Energy or provide capacity from the Unit during the 36 month period beginning at the date the Unit Closed. A Unit shall cease to be Closed if, during the 36 month period beginning at the date the Unit Closed, any entity: (i) sells Energy or capacity; (ii) executes a Direct Contract for service or (iii) obtains a new permit from any Governmental Authority for operations, in each case that would involve use of the Capital Item for which a Termination Fee is being paid.

(b) The Termination Fee shall be determined using the following formula:

$$T = \text{NCI} + \text{CWIP} - S$$

Where:

T = Termination Fee (\$)

NCI = Undepreciated portion of the cost of Capital Items which constitute part of the Closed Unit which were approved in accordance with Section 7.4 or 7.6 and were in service at the date the Unit Closed with the cost and depreciation rates determined under Section 7.4 or 7.6, as applicable. In calculating NCI, the undepreciated cost of each Capital Item shall be multiplied by the Surcharge Payment Factor applicable to that Capital Item.

CWIP = The actual cost, at the date the Unit Closed, of Capital Items for the Closed Unit which were approved in accordance with Section 7.4 or 7.6, as applicable, but were not in service at the date the Unit Closed, plus the cost to pay or terminate any remaining obligations incurred in connection with installation of the Capital Items. In calculating CWIP, the cost of each Capital Item shall be multiplied by the Surcharge Payment Factor applicable to that Capital Item.

S = The salvage value, if any, of the Capital Items included in the calculation of either NCI or CWIP.

The cost for each Capital Item shall be determined by agreement or ADR pursuant to Section 7.4 or 7.6. Except for those items for which a ten-year depreciation life is specified in Section 7.4 of this Agreement, the depreciation rate for each Capital Item shall be determined by agreement or ADR in connection with the applicable Capital Item approval process under Section 7.4 or 7.6.

(c) The Termination Fee shall be payable in 36 equal monthly installments calculated using the following formula:

$$M = T [r/1-(1+r)^{-36}]$$

Where

- M = the monthly payment,
- T = Termination Fee under Section 2.5(b), and
- r = an annual discount rate equal to the interest rate used by FERC for the calculation of refunds (as set forth in 18 C.F.R. § 35.19a) in effect on the date that Owner provides notice to the CAISO pursuant to Section 2.5(a) of this Agreement, divided by 12.

- (d) If the Unit ceases to be Closed at any time within 36 months following the date the Unit Closed, CAISO shall cease payment of Termination Fee installments as of the Month in which the Unit ceased to be Closed, but Owner shall not be obligated to refund installments for any Month in which the Unit was Closed. Once a Unit has ceased to be Closed, CAISO shall not be required to pay any remaining Termination Fee installments even if the Unit again Closes.
- (e) Any dispute regarding an element of the Termination Fee (e.g. salvage value) not resolved at the time the Capital Item was approved shall be subject to ADR.

ARTICLE 3

INTENTIONALLY LEFT BLANK

3.1 Intentionally left blank.

3.2 Intentionally left blank.

ARTICLE 4

DISPATCH OF UNITS

4.1 CAISO's Right to Dispatch

- (a) CAISO will dispatch the Units in accordance with Day-Ahead Market and Real-Time Market awards in accordance with the CAISO Tariff and Article 6.
- (b) CAISO has the right to issue any dispatch notice for any product and service pursuant to the terms and conditions of the CAISO Tariff that the Unit is capable of providing.
- (c) CAISO has the right to issue Exceptional Dispatch instructions for any Energy product or service pursuant to the CAISO Tariff, including but not limited to CAISO Tariff Section 34.11. An Exceptional Dispatch instruction issued to a Unit is not eligible for compensation under the Capacity Procurement Mechanism, CAISO Tariff Section 43A.

4.2 RMR Dispatch Notices for Ancillary Services, Voltage Support, and Black Start

CAISO can issue AN RMR Dispatch Notices to the Owner's Scheduling Coordinator for Ancillary Services, Voltage Support (including synchronous condenser operation), Black Start, or any other reliability service available under this Agreement to meet reliability requirements.

4.3 Form and Content of RMR Dispatch Notices

For any product or service available under the CAISO Tariff, CAISO will issue the appropriate CAISO Tariff instruction. If CAISO needs to dispatch the resource for any product or service that is not available under the CAISO Tariff but is available under this Agreement, CAISO will issue an RMR Dispatch Notice.

4.4 Non-complying RMR Dispatch Notices

Owner shall not be obligated to comply with a RMR Dispatch Notice that does not comply with Section 4.3 or 4.6 and Owner shall not be liable, suffer any penalties or suffer any reduction in payments for failure to comply with an RMR Dispatch Notice which is not in compliance with those Sections, provided that Owner promptly notifies CAISO that the notice does not comply with Section 4.3 or 4.6 and provides the reasons the RMR Dispatch Notice does not comply. Owner may provide such notice after the Requested Operation Period if the notice concerns an RMR Dispatch Notice given during, or less than one-half hour prior to, the Requested Operation Period. Compliance with an RMR Dispatch Notice shall not be deemed a waiver of objections to the RMR Dispatch Notice.

4.5 Intentionally left blank.

4.6 Limitations on CAISO's Right to Dispatch

CAISO will honor performance characteristics in accordance with the CAISO Tariff.

4.7 Intentionally left blank.

4.8 Intentionally left blank.

4.9 Unit Testing

(a) Availability Tests (PMax test)

(i) CAISO may from time to time test the PMax of a Unit by requiring the Unit to Deliver Energy pursuant to an Exceptional Dispatch instruction provided to Owner's Scheduling Coordinator using the procedures described for PMax testing in CAISO BPM rules and Operating Procedures. CAISO, without cause, may request one Availability Test each Contract Year. CAISO may request additional Availability Tests if the Unit fails to comply fully with an Exceptional Dispatch instruction for the Availability Test. Start-up and min-load cost for any re-test of an Availability Test shall not be recoverable by the Owner within the Contract Year.

(ii) Owner may request an Availability Test at any time and CAISO shall conduct the Availability Test in accordance with the applicable CAISO BPM rules and Operating Procedures for PMax testing. Start-up and min-load cost for any Owner-requested Availability Test shall not be recoverable by the Owner within the Contract Year.

(b) Other Tests

The CAISO and the Owner can request and conduct all other tests for the Unit in accordance with the CAISO Tariff, CAISO BPMs, and Operating Procedures.

4.10 Intentionally left blank.

4.11 Intentionally left blank.

ARTICLE 5

DELIVERY OF ENERGY AND ANCILLARY SERVICES, VOLTAGE SUPPORT, AND BLACK START BY OWNER

5.1 Owner's Delivery of Energy and Ancillary Services

- (a) In accordance with the CAISO Tariff and this Agreement and subject to limits in this Agreement, the Owner shall provide Energy, Ancillary Services, Voltage Support, Black Start, or other reliability service available under this Agreement, in accordance with each RMR Dispatch Notice, CAISO Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches. Owner shall deliver the requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability service at the Delivery Point or such other point(s) reasonably acceptable to CAISO.

- (b) If Owner would have been able to deliver the requested Energy, Ancillary Services, Voltage Support, or Black Start but for an outage in the CAISO Controlled Grid or Distribution Grid beyond Owner's reasonable control, Owner shall be deemed to have complied with the RMR Dispatch Notice, CAISO Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, for purposes of Section 5.4.

5.2 Intentionally left blank.

5.3 Intentionally left blank. Rules for Calculating Counted Start-ups, Counted MWh and Counted Service Hours

5.4 Owner's Failure to Deliver Requested Ancillary Services, Voltage Support, or Black Start

- (a) Owner shall promptly notify CAISO if Owner will not be able to deliver in accordance with its RMR Dispatch Notice, CAISO's Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, for requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services available under this Agreement, from the Unit identified in the RMR Dispatch Notice.

- (b) If a Unit fails to deliver the full amount of its RMR Dispatch Notice, CAISO Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, for Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement, CAISO's only other remedies for Owner's failure to deliver the requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement as set out in Sections 8.5, 11.3, and 12.6.

5.5 Intentionally left blank.

ARTICLE 6

OBLIGATIONS TO PARTICIPATE IN CAISO MARKETS

6.1 Must-Offer Obligation

- (a) All Units are subject to all applicable CAISO Tariff provisions based on resource type and all applicable Resource Adequacy CAISO Tariff provisions, including the must-offer obligation to submit Energy, Ancillary Services, and Residual Unit Commitment bids for all RMR Contract Capacity in all hours as applicable. Consistent with Section 40 of the CAISO Tariff, Units subject to this Agreement will be subject to Resource Adequacy bid

generation provisions unless otherwise exempted pursuant to CAISO Tariff Section 40.

- (b) All Units must seek to establish a major maintenance adder pursuant to CAISO Tariff Section 30.4.1.1.4.
- (c) If the Unit has an eligible use limit Owner must establish an Opportunity Cost, if applicable under CAISO Tariff Section 30.4.1.1.6. In addition, Owner must provide on Schedule L, on an annual basis, the number of remaining start-ups, run hours and MWhs for each Unit prior to the need for Capital Items to perform major maintenance. If the resource can safely provide the reliability service that is needed for the Contract Year in issue, CAISO may direct Owner to include these limits in the Opportunity Cost calculation process established under CAISO Tariff Section 30.4.1.1.6.
- (d) Owner has the obligation to submit marginal cost-based bids that include 100 percent of Commitment Costs using the Proxy Cost Methodology set forth in CAISO Tariff Section 30.4.1.1, including any major maintenance adder and Opportunity Cost using limits established under Section 6.1(c) and calculated pursuant to CAISO Tariff Section 30.4.1.1. Marginal cost-based Commitment Cost and Energy Bids must be based on the same cost-based components used in CAISO's generated Proxy Costs and Variable Cost Default Energy Bids set forth in the CAISO Tariff and applicable CAISO BPM, plus 100 percent of any approved adders. Cost-based Ancillary Services and Residual Unit Commitment bids must equal \$0/MW. Units may not exercise any bidding flexibility with respect to Commitment Cost or Energy bidding with the exception of fuel costs, where the fuel cost component can be higher than the price reflected in the CAISO Gas Price Index if the actual fuel costs exceed the Gas Price Index. The Owner shall procure all required fuel for operation of the Unit using prudent and good utility practice.
- (e) For Units exempt from bid insertion, CAISO will monitor compliance with the bidding obligation.
- (f) If the Unit has eligible use-limits under the CAISO Tariff or this Agreement, CAISO may order Owner to submit an appropriate outage card pursuant to the applicable CAISO BPM if CAISO determines that participation in CAISO Markets would impair CAISO's ability to dispatch the Unit to meet reliability needs at other times during the Contract Year.

ARTICLE 7

OPERATION AND MAINTENANCE

7.1 Owner's Obligation

Owner shall fuel, operate and maintain each Unit, or cause the Unit to be fueled, operated and maintained, in accordance with applicable law and Good Industry Practice and with due regard for the reliability purpose of this Agreement

7.2 Outages and Overhauls

Owner shall be entitled to take a Unit out of operation or reduce the Availability of the Unit to repair and maintain the Unit in accordance with Good Industry Practice by taking outages in accordance with the requirements of Section 9 of the CAISO Tariff.

7.3 Intentionally left blank.

7.4 Planned Capital Items

- (a) On or before March 1 of each year, Owner shall provide CAISO a preliminary report in the form required by this Section 7.4 showing Owner's proposed Capital Items for the next Contract Year and a five-year forecast of anticipated Capital Items in the Form attached as Schedule L-1, assuming the Agreement will be extended. Owner shall submit a final report in the form required by this Section 7.4 reflecting updated information by August 1 of each year. Owner may, but shall not be obligated to, include an Upgrade as a proposed Capital Item in either the preliminary or final report.
- (b) The preliminary and final reports for proposed Capital Items for the next Contract Year shall be submitted on the form attached as Schedule L-1. Owner shall provide additional information requested by the CAISO necessary to evaluate the proposal. Each preliminary and final report shall separately list individual projects expected to cost more than \$500,000 and shall include two "Small Project Estimates." One Small Project Estimate shall identify Capital Items (projected to cost less than \$500,000 each) required to maintain or enhance reliability. The second Small Project Estimate shall identify all other Capital Items projected to cost less than \$500,000 each. Individual Capital Items projected to cost more than \$50,000 shall be identified separately in one of the two Small Project Estimates. All Capital Items covered by the Small Project Estimate will be depreciated over 10 years.
- (c) Within 60 days after submission of the final report, CAISO will notify Owner of the proposed Capital Items CAISO has approved and the Capital Items it has not approved. If CAISO fails to provide notice within such 60 day period, all Capital Items included in the final report shall be deemed approved as proposed by Owner. Approval constitutes CAISO agreement that the CAISO's share of the estimated cost of the Capital Item will be recovered through Surcharge Payment under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. If the actual cost of the Capital Item exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay through Surcharge Payments or as a Termination Fee any portion of the overrun found to be unreasonable in such ADR proceeding. If CAISO contests the additional costs, Owner shall have the burden of proving that the additional costs were reasonable. If CAISO does not initiate ADR or makes a separate agreement with Owner, the additional costs shall be deemed reasonable and CAISO shall be obligated to pay CAISO's share of the actual costs through Surcharge Payments or as a Termination Fee.
- (d) If a proposed Capital Item is not approved, CAISO shall provide Owner a detailed statement of the reasons for the disapproval and, if the proposal would be acceptable with modifications, a detailed list of the proposed modifications. Owner may accept the modifications proposed by CAISO, or CAISO or Owner may initiate an ADR proceeding to review CAISO's rejection or proposed modification if the Capital Item is necessary for Owner to meet its obligations under this Agreement. In such proceeding, CAISO may not support its disapproval on any basis not shown in its detailed statement of the reasons for disapproval. Any Capital Items approved through such ADR proceeding shall be recovered by Owner through Surcharge Payments under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. Owner shall not be obligated to install any Capital Item unless CAISO is obligated to pay a Surcharge Payment for the Capital Item.
- (e) The preliminary and final reports and all additional information about proposed Capital Items provided to CAISO shall be treated as Confidential Information in accordance with Section 12.5.

- (f) If CAISO rejects a proposed Capital Item, such rejection is not reversed by ADR and it would be uneconomical, impractical or illegal to continue operation without the Capital Item, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor, except as provided in Section 2.4.

7.5 Unplanned Repairs

- (a) In the event of any loss or damage to the Facility that impairs the capability of one or more Units to deliver Energy, Ancillary Services, Voltage Support, Black Start, or any other reliability service available under this Agreement, Owner shall, without additional charge, make necessary Repairs, to the extent that:
 - (i) the total cost (net of proceeds received by Owner from Insurers and other third parties pursuant to applicable insurance, warranties and other contracts in connection with all Repairs and excluding costs covered by clause (ii)) of all Repairs for all Units ("Net Repair Costs") during the Contract Year does not exceed Owner's Repair Cost Obligation for the Facility; or
 - (ii) the loss or damage impairing the Unit's capability to produce Energy, Ancillary Services, Voltage Support, Black Start, or any other reliability service available under this Agreement, was caused by Owner's failure to comply with Good Industry Practice or by any wrongful act or omission by Owner. The reference to "Units" in clause (i) includes all Reliability Must-Run Units located at the Facility, but no other Reliability Must-Run Units. Except as provided above, Owner shall not be obligated to make any Repairs unless CAISO is obligated to pay CAISO's Repair Share for the Repairs.
- (b) If the Net Repair Costs incurred by Owner for all Repairs since the beginning of the Contract Year exceed Owner's Repair Cost Obligation, then Owner shall provide a notice thereof ("Unplanned Repair Notice") in the form attached as Schedule L-1 to CAISO. Owner shall provide such additional information as CAISO may reasonably require to evaluate such proposed Repairs.
- (c) CAISO shall submit a written acceptance or objection to Owner's proposal within 21 days of receipt of an Unplanned Repair Notice. CAISO shall be deemed to have accepted Owner's proposal in the Unplanned Repair Notice if CAISO does not submit a written objection within 21 days after receipt of the Unplanned Repair Notice, as provided above. Any objection shall be based on one or more of the following grounds:
 - (i) the loss or damage was caused by Owner's failure to comply with Good Industry Practice;
 - (ii) the loss or damage was caused by a wrongful act or omission by Owner;
 - (iii) the Repairs are not required or are more extensive than required in order to make good the loss or damage concerned or to comply with applicable law;
 - (iv) the Net Repair Costs for the Contract Year will not exceed or has not exceeded the Owner's Repair Cost Obligation;
 - (v) the estimated cost of Repairs exceeds that which is reasonably necessary to effect such Repairs;
 - (vi) the Repair will not result in benefits to CAISO as compared to alternatives available to CAISO;

- (vii) Owner's proposals for carrying out the Repairs or the proposed CAISO's Repair Share are unreasonable;
 - (viii) Owner's proposal includes estimated costs which are not properly treated as an expense under FERC's Uniform System of Accounts; or
 - (ix) Owner has not provided sufficient information to evaluate Owner's proposal. In addition to providing the basis of the objection, any objection of CAISO shall include a list of all changes CAISO contends should be made to Owner's proposal and justification of all such changes.
- (d) If CAISO submits an objection to an Unplanned Repair Notice, the Parties shall attempt to reach agreement on changes to Owner's proposal. If the Parties have not reached agreement within 30 days after CAISO's receipt of the Unplanned Repair Notice, Owner or CAISO may refer the matter to ADR under a schedule (specified by the arbitrator if the participants cannot agree) requiring a decision within 30 days following appointment of the arbitrator. The ADR decision will be effective without delay.
 - (e) Owner shall proceed with the Repairs if it is agreed or determined pursuant to ADR that CAISO will pay CAISO's Repair Share or that Owner is otherwise obligated to make the Repairs. Owner shall keep full and detailed records of the cost of the Repairs and shall make them available to CAISO for inspection upon reasonable request.
 - (f) If the actual cost of the Repairs exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay any portion of the additional cost found to be unreasonable in such ADR proceeding. Owner shall have the burden of proving that the additional costs were reasonable.
 - (g) If it is agreed or determined pursuant to ADR that CAISO will pay for a Repair, CAISO shall pay CAISO's Repair Share of the actual cost as a lump sum within 60 days after the later of (i) the completion of the Repair and (ii) the effective date of authorization by FERC, if any is necessary, for Owner to charge such cost to CAISO. "CAISO's Repair Share" means the Repair Payment Factor for the Repair at issue multiplied by the amount by which (i) the agreed or determined cost of Repairs at issue plus the Net Repair Costs of all prior Repairs for the Contract Year minus the cost of all prior Repairs for which CAISO is obligated to pay CAISO's Repair Share during the Contract Year exceeds (ii) Owner's Repair Cost Obligation. The Repair Payment Factor shall be as agreed to by Owner and CAISO.
 - (h) Owner shall use commercially reasonable efforts to recover its full entitlements under applicable insurance policies, warranties and other contracts even after CAISO has paid CAISO's Repair Share. Owner shall keep CAISO informed of the status of such recovery efforts and will refund to CAISO any portions of CAISO's Repair Share payment that is later recovered from any other party as a credit to CAISO on the next invoice with interest at the Interest Rate from the date such proceeds are received by Owner to the Due Date of such next invoice, or if this Agreement is terminated, as a payment upon submission of the Final Invoice.
 - (i) If Owner is not obligated to make a Repair and does not do so, and if it would be uneconomical, impractical or illegal to continue operation without the Repair, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor, except as provided in Section 2.4.
 - (j) If Owner makes a Repair notwithstanding that CAISO is not obligated to pay for the

Repair, Owner shall not be entitled to recover the costs of the Repair from CAISO unless FERC approves recovery of the costs.

- (k) Owner's Repair Cost Obligation shall be an amount computed as follows:
 - (i) Intentionally left blank
 - (ii) The Owner's Repair Cost Obligation shall be equal to 3% of the fixed operation and maintenance costs for all Units at the Facility, underlying the rates in effect at the beginning of the Contract Year.

7.6 Unplanned Capital Items

- (a) To the extent a Capital Item is required to remedy or prevent impairment of the Unit's capability to deliver Energy, Ancillary Services, Voltage Support, Black Start, or other reliability service available under this Agreement, and the impairment was caused by Owner's failure to comply with Good Industry Practice or by any wrongful act or omission by Owner, Owner shall install such Capital Item at Owner's expense. Otherwise, Owner shall not be obligated to install any Capital Item unless CAISO is obligated to pay a Surcharge Payment for the Capital Item. The issue of whether Owner is obligated to install a Capital Item is subject to ADR.
- (b) If, during the Contract Year, Owner determines it is necessary to install Capital Items not approved under Section 7.4 and Owner has expended all amounts covered by the approved Small Project Estimates under Section 7.4, Owner shall provide a notice thereof ("Unplanned Capital Item Notice") on the form attached as Schedule L-1 to CAISO. Owner shall provide such information as CAISO may reasonably require in order to evaluate the proposed Capital Items.
- (c) CAISO shall submit a written acceptance or objection to Owner's proposal within 21 days after receipt of a complete Unplanned Capital Item Notice provided that if the proposal does not involve either loss or damage to the Facility or a Capital Item required by law or regulation, CAISO shall respond within 60 days. If CAISO fails to provide notice within such period, Owner's proposal in the Unplanned Capital Item Notice shall be deemed approved. Any objection shall be based on one or more of the following grounds:
 - (i) the impairment being remedied or prevented was caused by Owner's failure to comply with Good Industry Practice;
 - (ii) the impairment being remedied or prevented was caused by a wrongful act or omission by Owner;
 - (iii) the Capital Item is not required or is more extensive than required in order to remedy or prevent impairment to the Facility or to comply with applicable law;
 - (iv) the estimated cost of the Capital Item exceeds that which is reasonably necessary;
 - (v) installation of the Capital Item will not result in benefits to CAISO as compared to alternatives available to CAISO;
 - (vi) Owner's proposals for installing or testing the Capital Item are unreasonable;
 - (vii) Owner's proposals for depreciation of the cost of the Capital Item or calculation of the Annual Capital Item Cost and Surcharge Payment Factor are unreasonable; or

- (viii) Owner has not provided sufficient information to evaluate Owner's proposal. In addition to providing the basis of the objection, any objection of CAISO shall include a list of all changes CAISO contends should be made to Owner's proposal and justification of all such changes.
- (d) If CAISO submits an objection to an Unplanned Capital Item Notice, the Parties shall attempt to reach agreement on changes to Owner's proposal. If Owner's proposal involves either loss or damage to the Facility or the Capital Item is required by law and the Parties have not reached agreement 30 days after CAISO's receipt of the Unplanned Capital Item Notice, either Owner or CAISO may refer the matter to ADR under a schedule (specified by the arbitrator if the participants cannot agree) requiring a decision within 30 days following appointment of the arbitrator. The ADR decision will be effective without delay. Failure to agree on other proposed Capital Items may also be referred to ADR but without an expedited schedule.
- (e) Owner shall proceed to install the Capital Item if it is agreed or determined pursuant to ADR that CAISO will pay a Surcharge Payment for the Capital Item or that Owner is otherwise required to install the Capital Item. Owner shall keep full and detailed records of the cost of the Capital Item and shall make them available to CAISO for inspection upon reasonable request.
- (f) If the actual cost of the Capital Item exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay any portion of the additional cost found to be unreasonable in such ADR proceeding. Owner shall have the burden of proving that the additional costs were reasonable.
- (g) If it is agreed or determined pursuant to ADR that CAISO will pay for the Capital Item, CAISO shall be deemed to have agreed that the cost of the Capital Item will be recovered through a Surcharge Payment under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. The costs included in Surcharge Payments and Termination Fees to be paid by CAISO shall be net of all proceeds received by Owner from insurers and other third parties pursuant to applicable insurance, warranties and other contracts after deducting all costs Owner incurred to collect the proceeds. Owner shall use commercially Reasonable Efforts to recover its full entitlements under applicable insurance policies, warranties and other contracts. Owner shall keep CAISO informed of the status of such recovery efforts and will adjust future Surcharge Payments to reflect proceeds later recovered from any other party.
- (h) If the capability or performance of a Unit is impaired, if Owner is not obligated to install a Capital Item to remedy such impairment under Section 7.6(a) and does not do so, and if it would be uneconomical, impractical or illegal to continue operation without the Capital Item, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor except as provided in Section 2.4.
- (i) If Owner installs a Capital Item notwithstanding that CAISO is not obligated to pay for the Capital Item, Owner shall not be entitled to recover the costs of the Capital Item from CAISO unless FERC approves recovery of the costs.
- (j) Notwithstanding any other provision of this Agreement, if a Capital Item is required to remedy impairment of the Facility, the Unit's Daily Payment shall not be decreased for any of the period of time during which Owner is waiting for CAISO's response to an Unplanned Capital Item Notice or during which ADR concerning an Unplanned Capital Item Notice is pending unless it is determined that Owner is required to install the Capital Item pursuant to Section 7.6 (a).

7.7 Adjustments to Performance Characteristics

- (a) If Owner installs any Capital Item or makes any Repairs the costs of which are paid by CAISO under this Agreement, Owner shall modify the RMR Contract Capacity, Unit Availability Limit, and performance characteristics of the affected Unit to reflect the resulting changes in operating costs effective as of the date CAISO's payment of CAISO's Repair Share of the Repairs is made, or in the case of a Capital Item, the date the cost of the Capital Item is included in a Surcharge Payment or the rates paid by CAISO.
- (b) If FERC authorization is required to permit Owner to recover the CAISO's Repair Share from CAISO or to include the costs of a Capital Item in a Surcharge Payment or the rates paid by CAISO hereunder, Owner shall make a Section 205 filing limited to recovery of the costs and implementation of related changes to performance characteristics, shall request that the filing become effective as of the date the Capital Item or Repair was placed in service and request expedited consideration of the filing. If CAISO has approved the Capital Item or Repair, CAISO shall intervene in support of such filing including support of requests to place the change in effect without suspension or hearing.
- (c) If Owner makes Repairs or installs a Capital Item when not required to do so and CAISO has not agreed or is not required by ADR to pay for such Repair or Capital Item, Owner may either:
 - (i) make an appropriate adjustment to the RMR Contract Capacity and performance characteristics of the affected Unit to reflect the capability the Unit would have had if the Capital Item had not been installed or the Repairs had not been made; or
 - (ii) make appropriate adjustment to the RMR Contract Capacity and performance characteristics of the affected Unit to reflect the Repairs or installation of the Capital Item.

7.8 Upgrades of Generating Units

Owner may Upgrade any Unit at the Facility, provided that no Upgrade shall release Owner from Owner's performance obligations under this Agreement. CAISO shall secure no rights under this Agreement to any capacity or services increased or enhanced by any Upgrade unless the Parties agree as to the terms of CAISO's rights and the amount of CAISO's payment for such Upgrade. If the Parties so agree, the RMR Contract Capacity and performance characteristics of the affected Unit shall be adjusted to reflect CAISO's agreed upon rights to the Upgrade, with any changes of performance characteristics of the Unit being reflected in the Master File. If FERC authorization is required to permit Owner to recover the portion of the Upgrade cost CAISO has agreed to pay for the agreed revisions to the Unit characteristics, Owner shall make a Section 205 filing limited to recovery of the costs and implementation of related changes to the RMR Contract Capacity and performance characteristics, shall request that the filing become effective as of the date CAISO begins paying its agreed portion of the cost of the Upgrade and request expedited consideration of the filing. CAISO shall intervene in support of such filing including support of requests to place the change in effect without suspension or hearing.

7.9 Third-Party Participation in CAISO Review Process

- (a) Subject to fulfillment of the requirements of Section 7.9 (b), CAISO shall consult with the CPUC prior to approving Capital Items or Repairs. CAISO may approve Capital Items or Repairs for the Facility in a Contract Year without approval of the CPUC.
- (b) The requirement of Section 7.9 (a) relating to the CPUC shall apply only if and to the extent that the CPUC agrees to waive its right to challenge Owner's recovery of costs

associated with the proposed Repairs or Capital Item on any grounds not set out in written objections provided by the CPUC to CAISO and Owner within 30 days of the CPUC's receipt of the preliminary and final reports under Section 7.5 or Section 7.6.

- (c) Provided that the CPUC is bound by the provisions of the Confidentiality and Non-disclosure Agreement attached as Schedule N and make the waivers required in Section 7.9 (b), Owner will provide copies of the required reports and notices under Section 7.4, Section 7.5 or Section 7.6, and any additional information provided to the CAISO pursuant to Sections 7.4, 7.5 and 7.6, as the case may be, to the CPUC at the same time as the reports, notices and information are provided to CAISO, and CAISO will provide copies of all information provided to Owner pursuant to such Sections to the CPUC.

ARTICLE 8

RATES AND CHARGES

8.1 Owner Rates and Charges

CAISO shall pay Owner:

- (a) the Daily RMR Capacity Payment, which shall be equal to the Daily Availability Payment plus the Daily Surcharge Payment. In no event shall (i) the Daily RMR Capacity Payment for any day be less than zero, (ii) the sum of the Daily Availability Payments for a Contract Year exceed the Annual Fixed Revenue Requirement for the Contract Year, or (iii) the sum of the Daily Surcharge Payments for the Contract Year exceed the Annual Capital Item Cost (as defined in Schedule B) for the Contract Year. The Daily Availability Payment and the Daily Surcharge Payment shall each be computed in accordance with Schedule B, and the Daily RMR Capacity Payment shall be adjusted by RMR Excess Revenues pursuant to CAISO Tariff Section 11.13.5;
- (b) the Daily Variable Cost Payment computed in accordance with CAISO Tariff Section 11.13.3;
- (c) Daily Additional Cost Settlement for variable cost associated with Exceptional Dispatches pursuant to CAISO Tariff Section 11.13.4; and
- (d) the RMR Invoice payment for RMR costs payable pursuant to this Agreement that are not recoverable through the CAISO Tariff shall be paid in accordance Schedule C and CAISO Tariff Section 11.18.6.

8.2 Intentionally left blank.

8.3 Intentionally left blank.

8.4 Intentionally left blank.

8.5 Availability Incentive Mechanism

Units shall be subject to the same availability incentive mechanism that Resource Adequacy Resource are subject to in the CAISO Tariff. In the event CAISO determines the default availability incentive mechanism is inadequate with respect to reliability needs and the performance characteristics of the Unit, CAISO will off an alternative availability incentive mechanism.

8.6 Intentionally left blank.

ARTICLE 9

STATEMENTS AND PAYMENTS

9.1 Settlement Statements and Invoicing

- (a) The settlement, invoicing, market clearing, and payments and charges will be under CAISO Tariff Section 11 generally, including the settlement, invoicing, and market clearing processes, as well as the resolution process for settlement-related disputes. The payments and charges pursuant to this Agreement shall be provided in this Agreement and Section 11.18.6 and Section 41 of the CAISO Tariff. CAISO shall not modify any provision of Section 41 or Section 11.13 of Section 11.18.6 of the CAISO Tariff as they apply to this Agreement without Owner's consent, provided that Owner's consent shall not be required for a change of allocations of RMR costs among market participants under the CAISO Tariff.
- (b) For any other charges payable by CAISO to Owner pursuant to this Agreement, and not recovered through Section 11.13 of the CAISO Tariff, Owner will invoice the CAISO pursuant to Schedule C of this Agreement and Section 11.18.6 of the CAISO Tariff.

9.2 Intentionally left blank.

9.3 Intentionally left blank.

9.4 Payment Default

Payment default is subject to CAISO Tariff Section 11.29.

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9.6 Intentionally left blank.

9.7 Intentionally left blank.

9.8 Intentionally left blank.

9.9 Payment of Termination Fee

- (a) Each Month during the period in which any Termination Fee is payable under Section 2.5, Owner shall submit an invoice ("Termination Fee Invoice") in accordance with Schedule C for all Termination Fee amounts due for the Month. Each Termination Fee Invoice shall: (i) be broken down by Unit and (ii) clearly identify the source of each input used.
- (b) CAISO shall pay Owner amounts invoiced under this Section 9.9 in accordance with Schedule C and CAISO Tariff Section 11.18.6. If CAISO or has disputed the amount of a Termination Fee stated in a Termination Fee Invoice, then CAISO shall not be required to give notice of the same disputed amount as to subsequent Termination Fee Invoices.

9.10 Intentionally left blank.

ARTICLE 10

FORCE MAJEURE EVENTS

10.1 Notice of Force Majeure Events

If either Party is unable to perform its obligations under this Agreement due to a Force Majeure Event, the Party unable to perform shall notify the other Party of the Force Majeure Event promptly after the occurrence thereof. The Party's notice may be given orally but shall promptly be confirmed in writing or electronically.

10.2 Effect of Force Majeure Event

- (a) If a Force Majeure Event prevents a Party from performing, in whole or in part, its obligations under this Agreement, such Party's obligations, other than obligations to pay money (unless the means of transferring funds is affected), shall be suspended and such Party shall have no liability with respect to such obligations; provided, that the suspension of the Party's obligations is of no greater scope and of no longer duration than is required by the Force Majeure Event.
- (b) If a Force Majeure Event (other than a flood, storm or drought affecting a hydroelectric Unit) reduces the Availability of a Unit, the Availability shall be determined as if the Unit were available up to the Unit Availability Limit in effect prior to the Force Majeure Event through the earlier of the 120th day following the Force Majeure Event or until the Unit's Availability is restored, whichever occurs first. If a flood or storm Force Majeure Event reduces the Availability of a hydroelectric Unit, the Availability shall be determined as if the Unit were available up to its Unit Availability Limit in effect prior to the Force Majeure Event through the earlier of the 120th day following the Force Majeure Event or until the Unit's Availability is restored, and as if the Unit were available up to one-half of such Unit Availability Limit from the 120th day through the earlier of the 240th day or the date on which the Unit's Availability is restored. If a drought Force Majeure Event reduces the Availability of a hydroelectric Unit, the Availability shall be determined as if the Unit were available up to its Unit Availability Limit in effect prior to the Force Majeure Event until the Unit's Availability is restored following the end of the drought Force Majeure Event.

10.3 Remedial Efforts

The Party that is unable to perform by reason of a Force Majeure Event shall use commercially Reasonable Efforts to remedy its inability to perform and to mitigate the consequences of the Force Majeure Event as soon as reasonably practicable; provided, that no Party shall be required to obtain replacement power or to settle any strike or other labor dispute on terms which, in the Party's sole discretion, are contrary to its interest and Owner shall not be required to obtain or use fuel oil to operate a Unit. The Party unable to perform shall advise the other Party of its efforts to remedy its inability to perform and to mitigate the consequences of the Force Majeure Event, and shall advise the other Party of when it believes it will be able to resume performance of its obligations under this Agreement.

ARTICLE 11

REMEDIES

11.1 Dispute Resolution

The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. Unless this Agreement expressly provides that a particular type of dispute is not subject to ADR, the Parties shall use ADR procedures in Schedule K to resolve all disputes which are not otherwise settled. Owner and CAISO will promptly join with all other owners of Reliability Must-Run Units and all

Responsible Utilities to jointly develop ADR procedures to be used in connection with such disputes. Following unanimous agreement of Owner, CAISO and Responsible Utilities to the ADR procedures, such procedures shall be posted on CAISO Website. Until there is unanimous agreement on such procedures, the Parties shall use the ADR procedures contained in Schedule K.

11.2 Waiver of Damages

- (a) Except for the obligations set forth in Section 11.4 (Termination for Default) and Section 12.6 (Indemnity), neither Party shall be liable to the other Party for any claim, loss or damage of any nature arising out of or relating to the performance or breach of this Agreement including replacement power costs, loss of revenue, loss of anticipated profits or loss of use of, or damage to, plant or other property, personal injury, or death; provided, however, that this waiver of liability shall not include or cover any claim, damage or loss arising out of the willful misconduct of either Party. Amounts that are specifically payable or reimbursable by the other Party under the terms of this Agreement shall not be considered "claims, losses or damages" for purposes of this Section.
- (b) Neither Party shall be liable to the other for any special, indirect, incidental or consequential damages suffered by the other Party or by third parties arising out of, or relating to, this Agreement or the performance of, or breach of any obligation under, this Agreement, or the negligence of any Party. This limitation shall apply even if the Party is advised of the possibility of these damages.
- (c) Except for the obligations to make or adjust payments or pay penalties expressly provided in Section 2.5 (Termination Fee), Section 7.4 (Planned Capital Items), Section 7.5 (Unplanned Repairs), Section 7.6 (Unplanned Capital Items), Section 7.8 (Upgrades of Generating Units), Article 8 (Rates and Charges) and Article 9 (Statements and Payments), of this Agreement, either Party's maximum aggregate liability for any and all claims arising out of or relating to performance or breach of this Agreement during the Contract Year, whether based upon contract, tort (regardless of degree of fault or negligence), strict liability, warranty, or otherwise, including any liability for Owner's failure to deliver Requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services available under this Agreement, shall not exceed \$20 million.

11.3 Injunctive Relief

In addition to any other remedy to which a Party may be entitled by reason of the other Party's breach of this Agreement, the Party not in default shall be entitled to seek temporary, preliminary and permanent injunctive relief from any court of competent jurisdiction restraining the other Party from committing or continuing any breach of this Agreement.

11.4 Termination For Default

- (a) If either Party shall fail to perform any material obligation imposed on it by this Agreement and that obligation has not been suspended pursuant to Section 10, the other Party, at its option, may terminate this Agreement by giving the Party in default notice setting out specifically the circumstances constituting the default and declaring its intention to terminate this Agreement. If the Party receiving the notice disputes the notice, it shall notify the other Party within 14 days after receipt of the notice setting out specifically the grounds of such disputes. Time is of the essence in remedying a default. If the Party receiving the notice does not, within 30 days after receiving the notice, remedy the default or refer the dispute to ADR, the Party not in default shall be entitled by a further notice to terminate this Agreement. The Party not in default shall have a duty to mitigate damages.

- (b) Termination of this Agreement pursuant to this Section 11.4 shall be without prejudice to the right of Owner or CAISO to collect any amounts due to it prior to the time of termination. If CAISO terminates this Agreement as to any Unit(s) due to Owner's default, Owner shall reimburse to CAISO the amount, if any, by which costs incurred by CAISO as a direct result of the termination through the end of the then current Contract Year exceed the costs which CAISO would have incurred absent such termination.

11.5 Cumulative and Nonexclusive

Except as provided in Section 5.4(b), each remedy provided for in this Agreement shall be cumulative and not exclusive.

11.6 Beneficiaries

Except as is specifically set forth in this Agreement, nothing in this Agreement, whether express or implied, confers any rights or remedies under, or by reason of, this Agreement on any persons other than the Parties and their respective successors and assigns, nor is anything in this Agreement intended to relieve or discharge the obligations or liability of any third party, nor give any third person any rights of subrogation or action against any Party. The owner of title to a Unit that is leased to Owner is an intended beneficiary of Section 2.2(e).

ARTICLE 12

COVENANTS OF THE PARTIES

12.1 Insurance [Parties may negotiate custom terms]

12.2 Books And Records

- (a) For a period of 36 months from creation of the records, Owner shall maintain and make available for audit by CAISO complete operations records for each Unit. Such records shall include:
 - (i) information for each Daily Settlement Period on the Availability of the Units, delivered Energy, Ancillary Services, Voltage Support, Black Start, and other reliability services available under this Agreement,
 - (ii) outages,
 - (iii) Facility licenses and permits,
 - (iv) copies of operating and maintenance agreements for the Unit,
 - (v) a list of citations filed against the Unit by any environmental, air quality, health and safety, or other regulatory agency in the last 36 months,
 - (vi) a list of any resolved and unresolved WECC log items from the last 36 months pertaining to the Unit,
 - (vii) maintenance, overhauls and inspections performed, and
 - (viii) books, accounts and all documents required to support Owner's statements, invoices, charges and computations made pursuant to this Agreement.

CAISO may audit Owner's books, accounts and documents relating to invoices, statements, charges and computations no more frequently than once each Contract

Year, and only one time following expiration or termination of this Agreement.

- (b) For a period of 36 months from the creation of the records, CAISO shall maintain and make available for audit by Owner all operations records required to permit Owner to verify that CAISO has complied with its obligations to Owner under this Agreement.
- (c) In addition to the audit rights under Section 12.2 (a), if Owner's rates are determined pursuant to the formula contained in Schedule F, representatives of CAISO shall have the right to audit the records, accounts and supporting documents of Owner to verify (i) the accuracy of any arithmetic calculation and (ii) application of the formula.
- (d) If Owner's rates are determined pursuant to the formula contained in Schedule F, the CPUC shall have the right to audit the records, accounts and supporting documents of Owner or CAISO to verify the accuracy of any arithmetic calculation and application of the formula, including the accuracy of allocation to accounts under the FERC Uniform System of Accounts, 18 C.F.R. Part 101.
- (e) Any entity exercising its right to audit under this Section 12.2 shall give the audited entity not less than 30 days prior written notice of the audit. Books or records requested in any audit shall be available for inspection by the auditing entity at the offices of the entity being audited between 9:00 A.M. and 5:00 P.M. on Business Days. Any audit under this Section 12.2 shall be completed not more than 36 months after the records were created. Any audit right herein shall be limited to the books and accounts of Owner or CAISO and shall not extend to the books and accounts of the parent or any other affiliate of Owner or CAISO. The expense of any audit shall be borne solely by the auditing Party or entity.
- (f) No adjustments to payments shall be required as a result of an audit unless, and then only to the extent that, CAISO, Owner, or another entity making such an audit under this Section 12.2 takes written exception to the books and accounts and makes a claim upon Owner or CAISO for any discrepancies disclosed by such audit within 60 days following issuance of the final audit report.
- (g) All information provided during the course of an audit shall be treated as Confidential Information in accordance with Section 12.5.
- (h) Nothing in this Agreement shall override any obligation Owner or CAISO may have under applicable law to maintain books and records for periods longer than 36 months nor shall this Agreement override any obligation Owner or CAISO may have to make books and records available for audit by FERC or any other entity. Nothing in this Agreement is intended to limit in any manner (i) the authority of FERC to audit the books and records of Owner or CAISO or the manner in which such audit is noticed or conducted or (ii) CAISO's right to audit market participants (including Owner) under the CAISO Tariff.

12.3 Representations And Warranties

- (a) CAISO represents and warrants to Owner as follows:
 - (i) CAISO is a validly existing corporation with full authority to enter into this Agreement.
 - (ii) CAISO has taken all necessary measures to have the execution and delivery of this Agreement authorized, and upon the execution and delivery of this Agreement shall be a legally binding obligation of CAISO.
- (b) Owner represents and warrants to CAISO as follows:
 - (i) Owner is a validly existing [limited liability company][corporation] [municipal

corporation] with full authority to enter into this Agreement.

- (ii) Owner has taken all necessary measures to have the execution and delivery of this Agreement authorized, and upon the execution and delivery this Agreement shall be a legally binding obligation of Owner.

12.4 Responsibilities

Each Party shall be responsible for protecting its facilities from possible damage by reason of electrical disturbances or faults caused by the operation, faulty operation, or non-operation of the other Party's facilities. The other Party shall not be liable for any damages so caused.

12.5 Confidentiality

- (a) Except as may otherwise be required by applicable law, all information and data provided by the Parties to one another pursuant to this Agreement and marked "Confidential" or otherwise identified with specificity in writing as confidential at the time of disclosure ("Confidential Information") shall be treated as confidential and proprietary material of the providing Party and will be kept confidential by the receiving Party and used solely for purposes of this Agreement. Confidential Information will not include information that is or becomes available to the public through no breach of this Agreement, information that was previously known by the receiving Party without any obligation to hold it in confidence, information that the receiving Party receives from a third party who may disclose that information without breach of law or agreement, information that the receiving Party develops independently without using the Confidential Information, and information that the disclosing Party approves for release in writing. The receiving Party shall keep such information confidential and shall limit the disclosure of any such Confidential Information to only those personnel within its organization with responsibility for using such information in connection with this Agreement. The receiving Party shall assure that personnel within its organization read and comply with the provisions of this Section 12.5 and any Confidentiality Agreement implementing this Section 12.5. The Parties shall use all reasonable efforts to maintain the confidentiality of the Confidential Information in any litigation, shall promptly notify the providing Party of any attempt by a third party to obtain the Confidential Information through legal process or otherwise. A Party or third party beneficiary under Article 9 which has received Confidential Information may use that information in litigation or regulatory proceedings related to this Agreement but only after notice to the other Party and affording the other Party an opportunity to obtain a protective order or other relief to prevent or limit disclosure of the Confidential Information.
- (b) The Parties may provide any Confidential Information (i) to any entity with audit rights under Section 12.2 or review rights specified in other provisions of this Agreement, (ii) on a need-to-know basis, to Owner's Scheduling Coordinator, financial institutions, agents, lessors of the Unit and potential purchasers of interests in a Unit; and, (iii) as required for settlement and billing, to Scheduling Coordinators responsible for paying for services provided under this Agreement. As a condition to receiving any Confidential Information under this Section 12.5, the recipient shall execute a Confidentiality Agreement in the applicable form contained in Schedule N and thereby agree to be subject to the non-disclosure and other obligations contained in this Section 12.5.
- (c) The obligation to provide confidential treatment to Confidential Information shall not be affected by the inadvertent disclosure of Confidential Information by either Party.

12.6 Indemnity

Subject to the limitations in Section 11.2 (b), each Party shall indemnify, defend and hold harmless the other Party and its officers, directors, employees, agents, contractors and sub-contractors, from and against all third party claims, judgments, losses, liabilities, costs, expenses (including reasonable attorneys' fees) and damages for personal injury, death or property damage, caused by the negligence or willful misconduct related to this Agreement or breach of this Agreement of the indemnifying Party, its officers, directors, agents, employees, contractors or sub-contractors, provided that this indemnification shall be only to the extent such personal injury, death or property damage is not attributable to the negligence or willful misconduct related to this Agreement or breach of this Agreement of the Party seeking indemnification, its officers, directors, agents, employees, contractors or sub-contractors. This indemnification shall not include or cover any claim covered by any workers' compensation law. This indemnification shall be for an amount not exceeding the deductible of the indemnifying Party's commercial general liability insurance in the case of Owner and errors and omission insurance in the case of CAISO, if applicable. The indemnified Party shall give the other Party prompt notice of any such claim. The indemnifying Party shall have the right to choose competent counsel, control the conduct of any litigation or other proceeding, and settle any claim. The indemnified Party shall provide all documents and assistance reasonably requested by the indemnifying Party. Section 14 of the CAISO Tariff shall not apply to this Agreement.

12.7 Owner Financial Requirements

- (a) Through the term of the Agreement, Owner shall maintain an investment grade rating by Moody's or Standard and Poor's or provide documentation from a financial institution or corporate owner acceptable to the CAISO that there is an equity position described below. The CAISO shall not unreasonably withhold acceptance of the documentation.
 - (i) An equity to debt ratio of at least 30%, or
 - (ii) An equity to total asset ratio of at least 30% or
 - (iii) Demonstrate to the CAISO's reasonable satisfaction that other factors, including, without limitations, commercial financing arrangements, and working capital positions, mitigate the risk of Owner failing to meet the performance requirements under this Agreement.
- (b) If the Owner does not possess and maintain an investment grade rating, an equity position or make other arrangements as described in Section 12.7 (a), then it must provide one of the following:
 - (i) Proof of insurance to cover the financial exposure to the CAISO for one year of Capital Items, Repairs, fuel and any other operating expenses; or
 - (ii) Security to cover the financial exposure to the CAISO for one year of Capital Items, Repairs, fuel and any other operating expenses in one of the following forms:
 - (A) standby letter of credit;
 - (B) corporate guarantee;
 - (C) cash deposit;
 - (D) security bond; or
 - (E) other form of assurance reasonably acceptable to CAISO.

ARTICLE 13

ASSIGNMENT

13.1 Assignment Rights and Procedures

Neither Party shall assign its rights or delegate its duties under this Agreement without the prior written consent of the other Party, which shall not be unreasonably withheld. CAISO shall be entitled to deny consent to a proposed assignment by Owner only if the assignee does not meet the financial criteria set out in Section 13.2 (a) or the technical criteria set out in Section 13.2 (b). Notwithstanding the foregoing, if FERC approves an assignment, then the non-assigning Party shall be deemed to have consented to the assignment, subject to the non-assigning Party's right to seek judicial review of a FERC decision. Each Party shall give the other Party prompt notice of any proposed assignment or delegation, together with such information as the other Party may reasonably request with respect to the proposed assignment or assignee. Each Party shall be deemed to consent to the assignment or delegation unless it submits a written objection to the assignment or delegation within 14 days of receiving the notice and all financial and technical information as required in Sections 13.2(a) and 13.2(b). In the event of an assignment of this Agreement pursuant to a Financing Agreement, CAISO will execute for the benefit of the bank, financial institution or other entity with an interest in the Financing Agreement, a consent to such assignment reasonably acceptable to CAISO and Owner. An assignment of this Agreement by Owner in connection with the sale of a Unit shall terminate Owner's rights and obligations under this Agreement prospectively from the effective date of the assignment.

13.2 Limitation on Right to Withhold Consent

- (a) CAISO shall not withhold consent to assignment of this Agreement on financial grounds if the assignee meets the financial requirements in Section 12.7(a) or provides financial security pursuant to Section 12.7(b).
- (b) CAISO shall not withhold consent to an assignment on grounds that the assignee is not technically qualified if the assignee was previously an Owner of a Reliability Must-Run Unit or the assignee submits appropriate documentation to the CAISO to establish that it has sufficient resources and expertise to be able to:
 - (i) Secure the necessary fuel and transportation for the fuel for the Facility;
 - (ii) Secure all necessary support services, including water supply, communications, waste disposal, etc. for the Facility;
 - (iii) Provide service from the Facility in compliance with the terms of this Agreement;
 - (iv) Provide the engineering and other technical services required to support operation and maintenance of the Facility;
 - (v) Obtain as necessary, and comply with all permits or licenses required to operate or maintain the Facility; and
 - (vi) Provide environmental services required for the operation and maintenance of the Facility.
- (c) The proposed assignee shall provide the last two years' annual audited financial statements and quarterly financial statements (unaudited) prior to the proposed date of purchase. If the proposed assignee is a new company and there are no historical financial statements, then a financial institution or corporate owner must provide pro forma financial statements in a form acceptable to the CAISO.

13.3 Intentionally left blank.

ARTICLE 14

MISCELLANEOUS PROVISIONS

14.1 Notices

Except as otherwise expressly provided in this Agreement or required by law, all notices, consents, requests, demands, approvals, authorizations and other communications provided for in this Agreement shall be in writing and shall be sent by electronic mail with receipt confirmed, personal delivery, certified mail, return receipt requested, facsimile transmission or by recognized overnight courier service, to the intended Party at such Party's address set forth in Schedule J. Any notices which may be given orally and are given orally shall be confirmed in writing. All such notices shall be deemed to have been duly given and to have become effective: (a) upon receipt if delivered in person or by facsimile; (b) two days after having been delivered to an air courier for overnight delivery; (c) seven days after having been deposited in the United States mail as certified or registered mail, return receipt requested, all fees pre-paid; or if by electronic mail, upon receipt confirmation, addressed to the applicable address(es) set forth in Schedule J.

14.2 Effect of Invalidation

Each covenant, condition, restriction and other term of this Agreement is intended to be, and shall be construed as, independent and severable from each other covenant, condition, restriction and other term. If any covenant, condition, restriction or other term of this Agreement is held to be invalid by any court or regulatory body having jurisdiction, the invalidity of such covenant, condition, restriction or other term shall not affect the validity of the remaining covenants, conditions, restrictions or other terms hereof unless the invalidity has a material impact upon the rights and obligations of the Parties. If an invalidity has a material impact on the rights and obligations of the Parties, the Parties shall make a good faith effort to renegotiate and restore the benefits and burdens of this Agreement as they existed prior to the determination of an invalidity.

14.3 Amendments

- (a) Any amendments or modifications of this Agreement shall be made only in writing and, except for changes authorized by the FERC under Sections 205 or 206 of the Federal Power Act, shall be duly executed by both Parties. To the extent that any amendments or modifications are subject to FERC approval, such amendments or modifications shall become effective when permitted to be effective by FERC.
- (b) Where Owner's rates are not subject to FERC jurisdiction, either CAISO or Owner may, not later than 90 days prior to the end of each Contract Year, serve a notice on the other Party stating that it requires a review of the terms of this Agreement, including any rates, prices and charges contained therein ("Review Notice").
 - (i) The Review Notice shall, as a minimum requirement, set forth the following:
 - (A) the precise nature of the proposed revisions (indicating, where possible, the relevant Article, Section and Schedule); and
 - (B) justification for each proposed revision.
 - (ii) The Party in receipt of the Review Notice shall respond to such notice within 30 days of its receipt by issuing a notice in response ("Response Notice"). The Response Notice shall, as a minimum requirement, set forth the following:

- (A) those revisions set forth in the Review Notice that are accepted as proposed;
 - (B) those revisions set out in the Review Notice that are not accepted;
 - (C) alternative proposals (if any) to the proposed revisions set out in the Review Notice;
 - (D) any revisions required by the responding party not covered by (A) through (C) above; and
 - (E) its justification for any of the matters raised under Sections 14.3 (b) (ii) (B) (C) or (D).
- (iii) Any Party failing to respond to a Review Notice shall be deemed to have accepted the revisions set out in the Review Notice.
 - (iv) Following receipt of the Response Notice the duly authorized representatives of the Parties shall meet to negotiate in good faith any revisions to this Agreement.
 - (v) In the event that the Parties are unable to reach agreement on the revisions to be made to this Agreement within 60 days of the date of the Review Notice, either Party may refer the matter for resolution through ADR. The arbitrator shall determine the revisions, if any, to the Agreement on the basis that:
 - (A) the purpose of the Agreement is to maintain the reliability of CAISO Controlled Grid; and
 - (B) costs and charges payable by CAISO should reflect the costs of providing services to the CAISO.
 - (vi) In the event that the Parties agree to the revisions, or such matters are determined through ADR, or a Party fails to respond to a Review Notice, the agreed, determined or deemed accepted revisions shall take effect and the rights and obligations of the Parties shall be amended as from the beginning of the ensuing Contract Year or from such other date and time agreed between the Parties or determined through ADR, and following such time the Parties shall act in accordance with the terms and conditions of this Agreement as amended.

14.4 Filings Under Sections 205 or 206 of the Federal Power Act

Nothing contained in this Agreement shall be construed as affecting the right of Owner unilaterally to make application to FERC for a change in rates, terms and conditions under Section 205 of the Federal Power Act and pursuant to FERC rules and regulations promulgated thereunder. CAISO may challenge such application or may submit complaints concerning Owner's rates, terms and conditions under Section 206 of the Federal Power Act and pursuant to FERC rules and regulations promulgated thereunder.

14.5 Construction

The language in all parts of this Agreement shall in all cases be construed as a whole and in accordance with its fair meaning, and shall not be construed strictly for or against either of the Parties.

14.6 Governing Law

This Agreement shall be interpreted and construed under and pursuant to the laws of the State of California, without regard to conflicts of laws principles.

14.7 Parties' Representatives

Both Parties shall ensure that throughout the term of this Agreement, a duly appointed Representative is available for communications between the Parties. The Representatives shall have full authority to deal with all day-to-day matters arising under this Agreement. If a Party's Representative becomes unavailable, the Party shall promptly appoint another Representative. Acts and omissions of Representatives shall be deemed to be acts and omissions of the Party. Owner and CAISO shall be entitled to assume that the Representative of the other Party is at all times acting within the limits of the authority given by the Representative's Party. Owner's Representatives and CAISO's Representatives shall be identified on Schedule J.

14.8 Merger

This Agreement constitutes the sole and entire agreement of the Parties with respect to the subject matter hereto and supersedes all prior and contemporaneous understanding and agreements, both written and oral, with respect to such subject matter.

14.9 Independent Contractors

Nothing contained in this Agreement shall create any joint venture, partnership or principal/agent relationship between the Parties. Neither Party shall have any right, power or authority to enter into any agreement or commitment, act on behalf of, or otherwise bind the other Party in any way.

14.10 Conflict with CAISO Tariff

The CAISO Tariff shall govern matters relating to the subject matter of this Agreement which are not set forth in this Agreement. In all other circumstances, this Agreement shall govern. In the event of a conflict between the terms and conditions of this Agreement and any terms and conditions set forth in the CAISO Tariff the terms and conditions of this Agreement shall prevail.

14.11 Waiver

The failure to exercise any remedy or to enforce any right provided in this Agreement shall not constitute a waiver of such remedy or right or of any other remedy or right provided herein. A Party shall be considered to have waived any remedies or rights hereunder only if such waiver is in writing.

14.12 Assistance

During the term of this Agreement, each Party shall provide such reasonable assistance and cooperation as the other Party may require in connection with performance of the duties and obligations of each Party under this Agreement, including, but not limited to, assistance in securing any necessary regulatory approvals and in facilitating necessary financing.

14.13 Headings

Article and section headings used in this Agreement are inserted for convenience only and are not intended to be a part hereof or in any way to define, limit, describe or to otherwise be used in interpreting the scope and intent of the particular provisions to which they refer.

IN WITNESS WHEREOF, this Agreement has been executed as of the date first above written.

[OWNER]

By: _____

Name: _____

Title: _____

The California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

FERC

RELIABILITY MUST-RUN SCHEDULES

| | |
|--------------|--|
| Schedule A | Unit Characteristics and Limitations |
| Schedule B | Daily RMR Capacity Payment |
| Schedule C | Invoicing for Costs Payable under this Agreement but not Recoverable in CAISO Market Revenues (RMR Invoices) |
| Schedule D | Not Used |
| Schedule E | Not Used |
| Schedule F | Determination of Annual Revenue Requirements of Must-Run Generating Units |
| Schedule G | Not Used |
| Schedule H | Not Used |
| Schedule I | Insurance Requirements |
| Schedule J | Notices |
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| Schedule L-1 | Request for Approval of Capital Items or Repairs |
| Schedule L-2 | Capital Item and Repair Progress Reports |
| Schedule M | Not Used |
| Schedule N-1 | Not Used |
| Schedule N-2 | Non-Disclosure and Confidentiality Agreement for Entities Other than Responsible Utilities |
| Schedule O | Not Used |
| Schedule P | Not Used |

Schedule A

Unit Characteristics and Limitations

1. Description of Facility

Provide the following information for all units at the Facility, regardless of their RMR designation status. Information regarding units not designated as Reliability Must-Run Units is required only if and to the extent that the information is used to allocate Facility costs between Reliability Must-Run Units and other units.

| Unit | RMR (Y/N) | RMR Contract Capacity | Fuel Type |
|------|-----------|-----------------------|-----------|
| | | | |

For this Facility, the Owner will use _____ [insert either MW, MWhs, or service hours] in Schedule B to allocate Annual Fixed Revenue Requirements to and among Units. This election shall be applicable to all Facilities containing Reliability Must Run Units subject to any “RMR contract” as defined in the CAISO Tariff executed by Owner or any of its affiliates as defined in 18 CFR § 161.2.

Ambient temperature derates and rerates shall be managed by Owner in accordance with Section 9 of the CAISO Tariff and through CAISO’s outage management system.

2. Description of RMR Units

Provide the address(es) of the Units at the Facility and the following tabular information:

| | Unit |
|---|------|
| Type (fossil, combustion turbine, etc.) | |
| Synchronous Condenser Capability (Y/N) | |
| Power Factor Range (lead to lag) | |
| Maximum Reactive Power Leading, MVar | |
| Maximum Reactive Power Lagging, MVar | |
| Load at Maximum MVar Lagging, MW | |
| Load at Maximum MVar Leading, MW | |
| Black Start Capable (Y/N) | |
| Automatic Start or Ramp (Y/N)* | |
| Upgrade Capacity Paid by CAISO, MW | |

* If “Y”, describe the conditions under which the Unit will start or ramp automatically.

3. Operational and Regulatory Limitations of Units:

Air Emissions Limitations

List applicable NO_x, CO, SO₂, particulate, and other appropriate emissions limits; note the name and address of the lead agency; the agency’s applicable rule number(s); and note those pollutants for which an emissions cap applies. For Units that are use-limited, Owner shall follow the use-limit process as described in Section 6.1(b) of this Agreement.

4. Delivery Point

| Unit | Transmission Node (Station Name) | Delivery Point * | Voltage |
|------|----------------------------------|------------------|---------|
| | | | |

* Delivery Point should be the Point of Delivery (POS) of the Unit as provided in the Master File.

5. Metering and Related Arrangements

| Unit | Meter Location | Meter (Manufacturer & Model No.) | Meter ID* |
|------|----------------|----------------------------------|-----------|
| | | | |

* As reflected in the Meter Services Agreement.

6. Unit Performance Characteristics

All performance characteristics of the Unit will be reflected in CAISO systems including the Master File. Any changes to the Unit proposed by Owner shall be reviewed and approved by CAISO to ensure service under this Agreement is maintained.

9. Owner's Repair Cost Obligation

Owner's Repair Cost Obligation for the current Contract Year is \${ }.

Schedule B

Daily RMR Capacity Payment

The formulas and values used to compute the Monthly Option Payment in accordance with Section 8.1 and Section 8.2 for each Unit for each Month are set forth in Equation B-1 below:

$$\text{Daily RMR Capacity Payment} = \text{Daily Availability Payment} + \text{Daily Surcharge Payment}$$

The Daily RMR Capacity Payment can never be less than zero.

$$\text{Daily Availability Payment (\$/MW-day)} = \frac{\text{AFRR (\$)}}{\text{RMR Contract Capacity (MW)} * \text{days in Contract Year}}$$

RMR Contract Capacity is shown in Section 1 of Schedule A.

The Daily Surcharge payment is calculated in accordance with Equation B-3 below:

$$\text{Daily Surcharge Payment (\$/MW-day)} = \frac{\text{Sum of ((Annual Capital Item Cost (\$)) / (RMR Contract Capacity (MW) * days in Contract Year))}}{1}$$

- Annual Capital Item Cost is the amount recoverable by Owner under this Agreement in a Contract Year for each Capital Item approved pursuant to Section 7.4 or Section 7.6.
- The Surcharge Payment Factor is 1.

The Annual Capital Item Costs for the Contract Year are set forth in Table B-1 below:

| Table B-1 | | | |
|------------------|--------------------------|--------------------------|--------------------------|
| Unit | Capital Item Project No. | Annual Capital Item Cost | Surcharge Payment Factor |
| | | | |

Annual Fixed Revenue Requirement (AFRR)

The Annual Fixed Revenue Requirement for each Unit is set forth in Table B-2 below. For any Contract Year, the Annual Fixed Revenue Requirement shall be determined by the Formula Rate set forth in Schedule F, unless Owner files a superseding rate schedule under Section 205 of the Federal Power Act.

| Table B-2 | |
|------------------|----------------------------------|
| Unit | Annual Fixed Revenue Requirement |
| | |

Limited Section 205 Filing for an Extension of Contract Term

If CAISO has extended the term of this Agreement pursuant to Section 2.1(b), then not later than October 31 of the expiring Contract Year, Owner shall make a filing with FERC under Section 205 of the Federal Power Act containing the values in Tables B-1 through B-2 for the ensuing Contract Year.

Schedule C

Invoicing for Costs under this Agreement but not Recoverable in CAISO Market Revenues (RMR Invoice)

Variable Cost Payment

No more frequently than once a month, Owner may invoice CAISO for variable costs or other costs, Termination Fee, and CAISO's Repair Share (RMR Invoice), that CAISO is obligated to pay and not otherwise recoverable through the CAISO Tariff. For payment of Termination Fee the RMR Invoice shall be called the Termination Fee Invoice.

The payment of the RMR Invoice shall be subject to review and approval of CAISO in accordance with the CAISO Tariff and applicable CAISO Business Practice Manuals.

| Cost Category | Cost unit | Frequency of invoice |
|---------------|-----------|----------------------|
| | | |

RMR Invoice Costs

Voltage Support and Black Start Services

Voltage Support (including synchronous condenser operation)
Black Start

If the Unit is otherwise generating, the Owner shall be required to operate the Unit within the Power Factor range of the Unit specified in Schedule A to provide Ancillary Services or Voltage Support without additional compensation.

Certain Units (hydroelectric and synchronous condensers) can provide Ancillary Services without generating Energy. Under this Condition, Owner will be compensated for Motoring Charges if the Unit is providing Ancillary Services or Voltage Support while synchronized without generating Energy.

Motoring Charge

When Units are operated as synchronous condensers (i.e., motored using electric power) to provide Ancillary Services, or Voltage Support, if applicable, the payment for that service is given by the following formula:

$$\text{Motoring Charge} = \left(\begin{array}{l} \text{Power consumption rate} \\ \text{(MWh/hr)} \end{array} \right) \times \left(\begin{array}{l} \text{hours} \\ \text{operated} \end{array} \right) \times \left(\begin{array}{l} \text{Energy Price} \end{array} \right)$$

Where the Power consumption rate is given by the following table:

| Unit | Power consumption rate (MWh/hour) |
|------|-----------------------------------|
|------|-----------------------------------|

The Energy Price shall be equal to the total power costs charged to the Facility by its supplier of end-use Energy under the Applicable UDC Tariff for the billing cycle in which the Motoring Charge was incurred divided by the total power consumed at the Facility under such tariff during such billing cycle.

Applicable UDC Tariff

Black Start Services

For those Units with Black Start capability, the cost of maintaining such capability is included in this

Agreement and no additional costs shall be charged to the CAISO for maintaining such capability. The CAISO will pay for Black Start service, including for a Black Start Test Dispatch Notice, at the rates and prices in this Agreement for Start-Ups and Delivery of Energy in connection with the Black Start service. Owner shall maintain the Black Start capability of the Unit and the Facility and provide Black Starts in accordance with the CAISO Ancillary Services Requirements Protocol and the CAISO Dispatch Protocol, which shall be deemed incorporated by reference into this Agreement.

When the CAISO first gives written notice to the Owner that it has obtained adequate Black Start service through an auction or a separate agreement with Owner or other Generators and Black Start service under this Agreement is no longer required, the CAISO shall not be entitled to call upon this Unit to provide Black Start service. Once the CAISO has given this notice, the Owner may remove Black Start service from this Agreement by filing unilaterally a change in rate schedule with FERC. Such filing shall not be required to include any reduction in rate or revenue solely because Black Start service is removed. The CAISO shall not oppose the absence of any rate or revenue reduction that results solely from removing such service.

Appendix D

Not Used

**Schedule E
Not Used**

Schedule F Annual Revenue Requirements of Must-Run Units

Determination of Annual Revenue Requirements of Must-Run Generating Units

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- (D) RMR Contract
- (E) Subject Resource
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- (G) Owner
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Exhibit A - Initial Variable O&M Rates

Exhibit B - Depreciation Rate and Mortality Characteristics

Exhibit C - 1998 Cost Information

Article I. Purpose and General Procedures

Part A. Determination of Rates and Charges

This Schedule F establishes the procedures and methodology for determining the Annual Fixed Revenue Requirements (in dollars) and Variable O&M Rates (in \$/MWh) for facilities designated for must-run service for purposes of calculating certain charges for such service under the RMR Contract.

The Annual Fixed Revenue Requirements and the Variable O&M Rate for each designated must-run generating facility shall be determined annually. The Annual Fixed Revenue Requirements and the Variable O&M Rate for each such facility that shall be used for calculating charges to the CAISO during each calendar year shall be determined by application of the Formula set forth in Article II hereof to the Owner's costs incurred during the twelve-month period ended on June 30 of the prior calendar year. Each twelve-month period ending on June 30 of each year is hereinafter referred to as the "Cost Year" relating to the rates and charges that are effective during the succeeding calendar year.

Part B. Informational Filings

In connection with the determination of rates and charges for each calendar year, reflecting costs incurred during the June 30 Cost Year as described in the foregoing Part A of this Article I, the Owner shall provide to the CAISO an Information Package detailing and supporting all calculations involved in such determination. A single Information Package may contain all such informational materials pertaining to all of the Owner's designated must-run facilities. On or before October 1, 2001, the Owner shall provide to the CAISO the Information Package relating to the rates and charges to become effective on January 1, 2002. Thereafter, on November 1 of each year, the Owner shall provide to the CAISO the Information Package relating to the rates and charges to be effective during the calendar year beginning on the following January 1.

Each such Information Package shall be in a clear and readable format and shall contain:

1. detailed workpapers showing the derivation of costs under the Formula for the relevant Cost Year along with supporting schedules showing the data used in applying the formula, presented in a format consistent with the presentation of information in the FERC Form No. 1;
2. a clear identification of the depreciation rates reflected in claimed costs for the Cost Year and the rate of return and every other stated item (i.e., any item which appears as a numerical value in the Formula and which only may be changed by a filing with the FERC);
3. a comparison of the major components of the resulting revenue requirements for the relevant Cost Year with the corresponding components of the revenue requirements that result from the application of the Formula using costs from the Owner's FERC Form No. 1 relating to the preceding calendar year;

4. such additional documentation as to specific items of costs required by the Formula. The Owner shall provide each Information Package to the CAISO in printed form and a suitable electronic format. The CAISO shall post the Information Package on its website. A suitable electronic format shall be any format that the FERC permits for electronic filings.

Coincident with providing each such Information Package to the CAISO, the Owner shall also submit the Information Package to the FERC in an informational filing so as to allow for review of the related rates and charges by the FERC staff and affected parties. As to the informational filing relating to rates and charges to be effective during calendar year 2002, (i) discovery requests by the FERC staff and affected parties shall be made within 45 days of the filing, with responses by the Owner due within 60 days of the filing, and (ii) protests, if any, by affected parties shall be filed with the FERC within 75 days of the filing. As to each subsequent informational filing, (i) discovery requests by the FERC staff and affected parties shall be made within 20 days of the filing, with responses by the Owner due within 35 days of the filing, and (ii) protests, if any, by affected parties shall be filed with the FERC within 45 days of the filing. In the event that the need arises during the discovery process for the nondisclosure or confidentiality of information, the Owner and affected parties, other than FERC Staff and state regulatory agencies, shall utilize the procedures contained in Schedules N-1 and N-2 of the RMR Contract. If the Owner seeks the confidentiality or nondisclosure of information provided to FERC or state regulatory agencies, it shall follow the applicable rules, regulations and statutory provisions of those agencies.

Protests to the Information Package challenging arithmetic calculations or conformity to the Rate Formula, not resolved by summary disposition of the FERC, shall be resolved by the use of the Alternative Dispute Resolution procedures in Schedule K of the RMR Contract. In such a proceeding, the Owner will bear the burden of proof as in a proceeding under Section 205 of the Federal Power Act (FPA). If it is found that an erroneous calculation or non-conforming formula element has been used, refunds shall be ordered. The amount of refunds shall restore the parties to the positions they would have occupied had the erroneous calculations or non-conforming formula elements not been used, with interest calculated pursuant to Section 35.19a of the Commission's regulations, 18 C.F.R. Section 35.19a.

If a matter is set for hearing, additional discovery shall be permitted in accordance with the Commission's Rules of Practice and Procedure. Under hearings established pursuant to this provision, refund rights will be as in a proceeding under Section 205 of the FPA. Any refunds due as the result of a final Commission order will be credited or paid to the CAISO with interest in accordance with 18 C.F.R. 35.19a.

In addition to the discovery provided above, affected parties shall have the ability to audit the Owner's books and records as provided in Section 12.2 of the RMR Contract. To the extent that an audit discloses that the formula was not correctly applied for a particular year, the affected prior billings shall be corrected, and appropriate refunds or credits shall be provided to the CAISO, with interest determined in accordance with 18 C.F.R. 35.19a.

Notwithstanding the above procedures, all parties retain full rights to make filings at any time under Sections 205 and 206 of the FPA, as appropriate.

Article II. Formula for Determination of Annual Revenue Requirements

Part A. Purpose and Overview

The purpose of this Formula For Determination of Annual Revenue Requirements ("Formula") is to specify the method for determining the Annual Revenue Requirements, and certain components thereof, of particular must-run generating units for each Cost Year.

Part B of this Formula contains the specifications for the components of costs that may be included in the Annual Revenue Requirements of individual designated must-run generating units (*i.e.*, for each "Subject Resource").

Part C of this Formula sets forth (i) general instructions for the use and application of the Formula, and (ii)

certain general definitions of terms used herein.

Part B. Determination of Annual Revenue Requirements

Section 1. Annual Fixed Revenue Requirements and Variable O&M Rate

(A) Annual Fixed Revenue Requirements

The "Annual Fixed Revenue Requirements" for the Subject Resource is the amount determined as the following difference:

1. Total Annual Revenue Requirements, as defined below; less
2. Total Annual Variable Costs, as defined below.

(B) Variable O&M Rate

The "Variable O&M Rate" for the Subject Resource is the rate (in \$/MWh) determined as the follows:

$$\text{Variable O\&M Rate} = [\text{Annual Variable O\&M Expenses}]/[\text{Annual Net Generation}]$$

where "Annual Variable O&M Expenses" is defined hereinbelow, and "Annual Net Generation" is the net generation (in MWh) of the Subject Resource during the Cost Year.

Notwithstanding the foregoing, whenever the Annual Net Generation of the Subject Resource is zero or negative, the Variable O&M Rate shall be deemed to be zero.

(C) Total Annual Revenue Requirements

The "Total Annual Revenue Requirements" for the Subject Resource is the amount that is the sum of the following amounts:

1. Operating Expenses, determined pursuant to Section 2 below; and
2. Return and Income Tax Allowance, determined pursuant to Section 3 below.

Section 2. Operating Expenses

"Operating Expenses" for the Subject Resource is the quantity that is the sum of the following amounts:

1. Total O&M Expenses, as defined below;
2. Depreciation Expenses, as defined below;
3. Taxes Other Than Income Taxes, as defined below; and
4. Revenue Credits, as defined below.

(A) Total O&M Expenses

"Total O&M Expenses" is the amount of expenses arising from the operation and maintenance of the Subject Resource, including Production O&M Expenses, Transmission O&M Expenses, Distribution O&M Expenses, and Administrative & General Expenses, all as defined below.

- (1) **Production O&M Expenses:** Expenses incurred directly in operating and maintaining the Subject Resource:
 - (a) **Steam Production O&M:** For steam units only, amounts properly recorded in Accounts 500-515.
 - (b) **Hydro Production O&M:** For hydro units only, amounts properly recorded in Accounts 535-545.
 - (c) **Other Power Generation O&M:** For other types of units, amounts properly recorded in Accounts 546-554.
 - (d) **Other Power Supply Expenses:** Amounts properly recorded in Accounts 555-557, if any, that are reasonably assignable or allocable to the Subject Resource.
- (2) **Transmission O&M Expenses:** Expenses incurred directly in operating and maintaining the transmission facilities associated with the Subject Resource, as properly recorded in Accounts 560-573 and reasonably assignable or allocable to the Subject Resource.
- (3) **Distribution O&M Expenses:** Expenses incurred directly in operating and maintaining the distribution facilities associated with the Subject Resource, as properly recorded in Accounts 580-598 and reasonably assignable or allocable to the Subject Resource.
- (4) **Administrative and General (A&G) Expenses:** Those portions, if any, of administrative and general expenses, as properly recorded in Accounts 920-935, that are reasonably related to the operation of the Subject Resource, determined from appropriate direct assignment or reasonable allocation. Such expenses shall exclude (i) franchise fees related solely to the Owner's retail sales, (ii) retail regulatory expenses, (iii) assessments under 18 CFR Section 382.201 of the FERC Regulations, (iv) association dues, and (v) general advertising expenses.

(B) Depreciation Expenses

"Depreciation Expenses" are provisions for depreciation and amortization for the Subject Resource, as properly recorded in Accounts 403, 404, 405, 406, and 407, including only:

- (1) **Production Plant Depreciation:** Depreciation and amortization, if any, of investment in the Subject Resource;
- (2) **Transmission Plant Depreciation:** Depreciation and amortization, if any, of investment in the transmission facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;
- (3) **Distribution Plant Depreciation:** Depreciation and amortization, if any, of investment in the distribution facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;

- (4) **General and Intangible Plant Depreciation:** Depreciation and amortization, if any, of general and intangible plant investments that are reasonably assignable or allocable to the Subject Resource.

Notwithstanding the foregoing, costs recorded in Accounts 405, 406 and 407 shall be included hereunder only if, and to the extent that, FERC shall have permitted the inclusion of such costs for ratemaking purposes for the Owner under the RMR Contract.

(C) Taxes Other Than Income Taxes

"Taxes Other Than Income Taxes" are taxes other than income and revenue taxes, as properly recorded in Account 408.1, that are reasonably assignable and allocable to the Subject Resource, including for example:

1. Property and Property-Related Taxes;
2. Payroll and Labor-Related Taxes;
3. Other Taxes, if any, identifiable as reasonably assignable or allocable to the Subject Resource.

Taxes Other Than Income Taxes assignable and allocable to the Subject Resource shall not include any taxes related solely to, or arising solely from, the Owner's retail sales.

(D) Revenue Credits

"Revenue Credits" are those revenues, if any, that are (i) properly recorded in Account 451 (Miscellaneous Service Revenues), Account 453 (Sales of Water and Water Power), Account 454 (Rent From Electric Property), Account 455 (Interdepartmental Sales), and Account 456 (Other Electric Revenues), and (ii) directly related to, or reasonably allocable to, the Subject Resource. Such Revenue Credits shall be treated as negative values hereunder.

(E) Treatment of Capital Leases

The foregoing components of Operating Expenses may include expenses associated with capital leases as approved by the Commission, as set forth more fully under Article II, Part B, Section 4(A) of this Formula.

Section 3. Return and Income Tax Allowance

"Return and Income Tax Allowance" is the quantity that is the sum of:

1. the product of:
 - a. Allowable Pre-Tax Rate of Return, and
 - b. Net Investment,as both such quantities are hereinafter defined; and
2. the quantity equal to:

$$[ITC Amortization]/(1-t)$$

where:

- a. "t" is the effective, combined state and federal income tax rate.
- b. "ITC Amortization," is amortization, if any, of investment tax credits, as properly recorded in Account 411.4, that are reasonably assignable or allocable to the Subject Resource and to those portions of general and intangible plant investments that are reasonably assignable or allocable to the Subject Resource. Notwithstanding the foregoing, this term shall include only those amounts of amortization of investment tax credits which the Owner shall have elected to receive under Section 46(f)(1) of the Internal Revenue Code. ITC Amortization amounts that reduce net income shall be treated as negative values hereunder, while ITC Amortization amounts, if any, that increase net income shall be treated as positive values hereunder.

Section 4. Net Investment

"Net Investment" is the quantity that is determined as follows:

$$\text{Net Investment} = \text{Gross Plant Investment} - \text{Depreciation Reserve} + \text{CWIP} + \text{PHFU} - \text{ADIT} + \text{Working Capital}$$

where the quantities appearing in the foregoing equation are defined hereinafter below.

In determining Net Investment hereunder, each component thereof, other than Cash Allowance, shall be determined as the end-of-year balances in the Accounts specified for the relevant Cost Year.

(A) Gross Plant Investment

"Gross Plant Investment" is gross original cost plant investment as properly recorded in Accounts 101, 102, 106, and 114, including only the following amounts:

- (1) **Production Plant Investment:** investment in the generating unit itself and in common facilities associated with the unit, as recorded in Accounts 310-316, 330-336, or 340-346, 106 and 114;
- (2) **Transmission Plant Investment:** investment in transmission facilities associated with the Subject Resource, as properly recorded in Accounts 350-359, 106, and 114, and reasonably assignable or allocable to the Subject Resource;
- (3) **Distribution Plant Investment:** investment in distribution facilities associated with the Subject Resource, as properly recorded in Accounts 360-373, 106, and 114, and reasonably assignable or allocable to the Subject Resource; and
- (4) **General and Intangible Plant Investment:** reasonably assignable and allocable portions, if any, of general and intangible plant investment, recorded in Accounts 389-399 and 301-303, 106 and 114.

Subject to the limitations detailed in this paragraph, when the Owner has a capital lease in lieu of gross plant investment, it may include Account 101.1 hereunder. A lease may be capitalized and the costs included for ratemaking purposes if the Owner demonstrates that the lease qualifies as a capital lease under 18 C.F.R. Part 101, General Instruction No. 19 (1998), and the Owner has obtained, prior to the informational filing, approval to include such costs for ratemaking purposes from the FERC under the FPA. Capital leases shall be accounted for in accordance with 18 C.F.R. Part 101, General Instruction No. 20 (1998).

(B) Depreciation Reserve

"Depreciation Reserve" is accumulated provision for depreciation and amortization, as properly recorded in Accounts 108, 111, and 115, related to the Subject Resource, including the following amounts:

- (1) Production Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in the unit itself and in common facilities associated with the unit;
- (2) Transmission Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in transmission facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;
- (3) Distribution Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in distribution facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;
- (4) General and Intangible Plant Reserve:** amounts of Depreciation Reserve for the portions, if any, of general and intangible plant investments reasonably assignable and allocable to the Subject Resource.

Credit balances in the aforementioned accounts shall be treated as positive values hereunder, and debit balances in such accounts shall be treated as negative values.

(C) CWIP

"CWIP" is the amount of construction work in progress, as properly recorded in Account 107 for construction projects associated with the Subject Resource related solely and directly to pollution control for the Subject Resource.

(D) PHFU

"PHFU" is the cost of plant held for future use, as properly recorded in Account 105 that is reasonably assignable or allocable to the Subject Resource.

(E) ADIT

"ADIT" is accumulated provision for deferred income taxes, as properly recorded in Accounts 190, 281, 282, 283, and 255, that are reasonably assignable or allocable to the investment in, or operation of, the Subject Resource, including the following amounts:

- (1) Production Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, the Subject Resource itself and common facilities associated with the Subject Resource;
- (2) Transmission Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, the transmission facilities, if any, associated with the Subject Resource;
- (3) Distribution Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, distribution facilities, if any, associated with the Subject Resource; and
- (4) General and Intangible Plant ADIT:** amounts of ADIT arising from the portions, if any, of general and intangible plant investments reasonably assignable and allocable to the Subject Resource.

For purposes of this Formula, ADIT means accumulated provision for deferred income taxes, as properly recorded in the aforementioned Accounts, *including* amounts previously recorded in such accounts and reclassified as a result of the adoption of SFAS No. 109, but *excluding* amounts recorded in such accounts as a result of the adoption of SFAS No. 109, such that the required adoption of SFAS No. 109 will have no effect on the costs determined hereunder.

Notwithstanding the foregoing, as to Account 255, ADIT hereunder shall include only those amounts, if any, related to investment tax credits which the Owner shall have elected to receive under Section 46(f)(2) of the Internal Revenue Code.

ADIT balances that are credit balances shall be treated as positive values hereunder, while ADIT balances that are debit balances shall be treated as negative values hereunder.

Owner shall support all amounts of ADIT included and not included hereunder in the manner described in sections 35.13(h)(6) and (7) of the Commission's regulations (Statements AF and AG, respectively), except that the time period for the relevant data for the informational package will be consistent with the requirements of this formula, rather than the "Periods" referenced in those regulations.

(F) Working Capital

"Working Capital" is the sum of the portions, if any, of the following items that are reasonably assignable or allocable to the Subject Resource:

- (1) Fuel Stocks**, which is the amount of fossil fuel stock, if any, maintained for the Subject Resource, as properly recorded in Account 151;
- (2) Plant Materials and Supplies**, consisting of the value of plant materials and supplies reasonably assignable or allocable to the Subject Resource, as properly recorded in Accounts 154 and 163;
- (3) Prepayments**, consisting of the amount, if any, of prepayments reasonably assignable or allocable to the Subject Resource, as properly recorded in Account 165;
- (4) Working Cash Allowance**, which is one-eighth of O&M Expenses (as defined herein), less (a) Total Annual Fuel Costs (as defined herein below), and (b) all amounts or portions, if any, of Account 555 (Purchased Power) that may be included in such O&M Expenses; and

Unamortized Deferred Costs, which shall be that portion, if any, of Account 186 directly related to, or reasonably allocable to, the Subject Resource.

Section 5. Allowable Pre-Tax Rate of Return

The Allowable Pre-Tax Rate of Return shall be:

Section 6. Additional Quantities

(A) Annual Variable O&M Expenses

"Annual Variable O&M Expenses" is the sum of the following quantities:

- (1) **Variable Production O&M Expenses:** those portions of Production O&M Expenses, as defined above, other than fuel expenses, that are reasonably determined to be variable expenses, in the sense that they are incurred as a result of, or otherwise are reasonably associated with, the production of energy by the Subject Resource.
- (2) **Variable A&G Expenses:** that portion of A&G Expenses that is related or allocable to the foregoing Variable Production O&M Expenses.

Notwithstanding the foregoing, starting with the first information filing hereunder and continuing until the Owner elects to use a different method to determine its Annual Variable O&M Expenses, the Owner may compute Annual Variable O&M Expenses as the amount equal to the product of (a) the Initial Variable O&M Rate, in \$/MWh, for the Subject Resource, as set forth in Exhibit A hereto (Exhibit A can be found in Appendix B to the Stipulation and Agreement), times (b) the Net Generation of the Subject Resource (as defined hereinabove). Whenever the Owner does not compute Annual Variable O&M Expenses based on the Initial Variable O&M Rate in the foregoing manner, the Owner shall include in each of Informational Package a detailed explanation of the method or methods used to classify O&M expenses as between fixed (*i.e.*, capacity-related) expenses and variable (*i.e.*, energy-related) expenses and the reason(s) such method results in just and reasonable rates.

(B) Annual Fixed O&M Expenses

"Annual Fixed O&M Expenses" is the quantity that is equal to the following:

- (1) Total O&M Expenses, as defined hereinabove, less
- (2) the sum of:
 - a. Annual Variable O&M Expenses, as defined hereinabove, and
 - b. Annual Variable Fuel Costs, as defined herein below,
 - c. Annual Emissions Costs, as defined herein below, and
 - d. Annual Non-Fuel Start-Up Costs, as defined herein below.

(C) Fuel Expenses

(1) Total Annual Fuel Costs

"Total Annual Fuel Costs" is the total fuel expense for the Subject Resource for the Cost Year properly recorded in Account 501 or Account 547, as appropriate depending on the nature of the Subject Resource.

(2) Annual Fixed Fuel Costs

"Annual Fixed Fuel Costs" is that portion, if any, of Total Annual Fuel Costs related to fuel handling and administration of fuel planning, procurement and transportation which do not vary with the amount of fuel purchased.

(3) Annual Variable Fuel Costs

"Annual Variable Fuel Costs" is the quantity that is the following difference:

1. Total Annual Fuel Costs, less
2. Annual Fixed Fuel Costs.

(D) Annual Emissions Costs

"Annual Emissions Costs" is the total emissions costs that are related to the operation of the Subject Resource during the Cost Year.

(E) Annual Non-Fuel Start-Up Costs

"Annual Non-Fuel Start-Up Costs" is the aggregate sum of costs, other than fuel costs, attributable to start-ups of the Subject Resource during the Cost Year, consisting of start-up power costs, shut-down power costs, and other non-fuel start-up costs, all as determined pursuant to the applicable sections of Schedule D of the RMR Contract, as applied to all start-ups of the Subject Resource during the Cost Year.

(F) Total Annual Variable Costs

"Total Annual Variable Costs" is the sum of:

1. Annual Variable O&M Expenses,
2. Annual Variable Fuel Costs, and
3. Annual Emissions Costs.

Part C. General Instructions and Explanatory Notes

Section 1. General Instructions

In applying this Formula to a Subject Resource, the following instructions and explanations shall be followed:

(A) No Duplicative Charges

The costs determined and referenced by this Formula shall exclude costs that are recoverable, or that are actually recovered, elsewhere under the applicable contract or agreement between the Owner and the CAISO. There shall be no double counting of costs hereunder.

(B) Determination of Depreciation Expenses

Depreciation Expenses, Depreciation Reserve, and Deferred Income Taxes reflected in the revenue requirements determined pursuant to this Formula shall be computed using either fixed depreciation rates or depreciation rates determined annually from fixed mortality characteristics (i.e., service lives, net salvage ratios, etc.). Such depreciation rates and/or mortality characteristics, which may differ for particular assets or groups of assets comprising, or related to, the Subject Resource, are set forth on Exhibit B, which is attached hereto and made a part hereof. Such depreciation rates and/or mortality characteristics may not be changed except pursuant to Section 205 or Section 206 of the FPA. Nothing herein shall be construed as affecting any requirements of the FERC regarding the use by the Owner of depreciation rates for financial reporting purposes.

(C) Costs in Excess of Original Cost

The components of rate base and the costs reflected under the Formula shall not include an acquisition adjustment or costs associated with an acquisition adjustment unless the Owner shall have obtained approval from the FERC to include under the Formula such an adjustment or such costs for ratemaking purposes under the FPA. The effective date for the inclusion of such costs shall be as set forth in the FERC order.

(D) Use of FERC Accounting

The costs determined and referenced by this Formula shall reflect only FERC-basis accounting, and shall not reflect any accounting for costs approved by any state regulatory commission or other body if not approved or accepted by the FERC for use in connection with the RMR Contract. Except as otherwise provided herein, the accounting for costs for purposes of applying this Formula shall be consistent with the requirements of the Uniform System of Accounts.

(E) Accounting Methods

The costs determined and referenced by this Formula shall reflect only such accounting methods prescribed by such authorities as AICPA and FASB that shall have been approved or accepted by the FERC for use in connection with the RMR Contract. The Owner shall be required to seek and gain such approval or acceptance from the FERC prior to reflecting any changed accounting methods in the determination of costs in connection with this Formula.

The Owner shall carry the burden of demonstrating that its accounting methods and entries reflected in the costs determined and referenced by this Formula produce just, reasonable, and nondiscriminatory rates for its customers.

(F) Out-of-Period Adjustments

The costs determined and referenced by this Formula shall not reflect any accounting entries the purpose of which is to adjust or correct for accounting entries in years other than the Cost Year if such adjusting or correcting entries would have an unjust, unreasonable, or discriminatory effect on the CAISO.

(G) Extraordinary Costs

Extraordinary costs included in the costs determined and referenced by this Formula shall be subject to amortization over a reasonable period of time. In determining how costs should be amortized, the parties shall also determine how the costs being amortized should be recovered in the event that the plant closes and does not reopen.

As used herein, "extraordinary costs" mean costs arising from events and transactions that are of an unusual nature and infrequent occurrence, the effects of which are abnormal and significantly different from the ordinary and typical activities of the Owner, and would not reasonably be expected to recur in the foreseeable future. In determining significance, items should be considered individually and not in the aggregate. However, the effects of a series of related transactions arising from a single specific and identifiable event or plan of action should be considered in the aggregate. An item can be extraordinary even if it is less than five (5) percent of income computed before the extraordinary item. In its annual Information Package, the Owner shall identify and provide explanations for all extraordinary costs which it seeks to include in the rates and charges determined pursuant to this Formula, and the Owner shall bear the burden of proof, as in a proceeding under Section 205 of the FPA, that its proposed treatment of extraordinary costs is just and reasonable.

(H) Imprudently Incurred Costs

The costs determined and referenced by this Formula shall not include any costs which have been determined by the FERC in a proceeding under Section 206 of the FPA to have been imprudently incurred by the Owner.

(I) Transmission Cost Assignments and Allocations

Costs of transmission facilities assigned and/or allocated to the Subject Resource hereunder are intended to include only those costs, if any, related to the step-up substation facilities and other transmission facilities directly connected to the Subject Resource and used to deliver the output of the Subject Resource to the transmission grid. In each annual Informational Package, the Owner shall clearly identify and fully describe all transmission facilities which it claims satisfy the foregoing criteria.

(J) Distribution Cost Assignments and Allocations

Costs of distribution facilities assigned and/or allocated to the Subject Resource hereunder are intended to include only those costs, if any, related to the step-up substation facilities and other distribution facilities directly connected to the Subject Resource and used to deliver the output of the Subject Resource to the transmission or distribution system. In each annual Informational Package, the Owner shall clearly identify and fully describe all distribution facilities which it claims satisfy the foregoing criteria.

(K) Inclusion of Certain Costs

The Owner shall include in its annual Informational Package detailed workpapers and explanations supporting the reasonableness of including in the revenue requirements determined pursuant to this formula any amounts recorded in Accounts 501, 547, 555, 561, 927, 105, and 186. The Owner shall bear the burden of proof, as in a proceeding under Section 205 of the FPA, to affirmatively demonstrate that all such included amounts are directly related to the provisions of service under the RMR Contract and are reasonably assignable or allocable to the Subject Resource. As to Account 105, the requirement for a definitive plan required by the description of Account 105 in the Uniform System of Accounts, and the affirmative demonstration required by this paragraph, shall be deemed to be met upon a showing that the CAISO has approved, in accordance with the provisions of Section 7.4 of the RMR Contract, a plan for the future use of the property.

(L) Direct Assignments and Allocations

Where Part B of this Formula provides for the identification and/or assignment of costs incurred directly in connection with a particular facility or facilities (including a Subject Resource), or directly related to such a facility or facilities, the Owner shall bear the burden of demonstrating the reasonableness of each such identification and/or assignment, and each failure to make such an identification and/or assignment. Notwithstanding the foregoing, where this Formula provides for such a direct identification or assignment of costs, the Owner may use an allocation method to apportion such costs among particular facilities; provided, however, that (i) the Owner shall in its Informational Package clearly identify and describe such allocation method and the basis for it, and (ii) the Owner shall bear the burden of demonstrating the reasonableness of the method. It is recognized that such allocation methods may, for example, be appropriate for apportioning certain types of costs between individual generating units at a multi-unit generating station. Such allocations of costs between individual generating units at a plant site shall be consistent with the requirements for such allocations, if any, provided in the RMR Contract.

(M) No Adverse Distinction

In applying this Formula and in maintaining its books and records insofar as they affect the results of applying this Formula, the Owner shall not make an adverse distinction between the Subject Resource and any other facility or facilities owned or operated by the Owner; e.g., the Owner shall assign certain costs directly to the Subject Resource only if, and to the extent that, the Owner directly assigns such costs to other, similar facilities.

Section 2. General Definitions

Except as may be expressly stated otherwise, the following terms have the followings meanings as used herein:

(A) Account

"Account" refers to a particular account for "major" utilities as prescribed by the Uniform System of Accounts.

(B) FERC

"FERC" means the Federal Energy Regulatory Commission or its successor.

(C) Uniform System of Accounts

"Uniform System of Accounts" means the FERC's "Uniform System of Accounts Prescribed For Public Utilities and Licensees Subject to the Provisions of the Federal Power Act," as such uniform system of accounts was in effect as of the first effective date of the RMR Contract.

(D) RMR Contract

"RMR Contract" means the contract to which this Formula is attached and made a part thereof.

(E) Subject Resource

"Subject Resource" means any particular generating unit to which this Formula is applied for purposes of determining the annual costs thereof.

(F) Cost Year

"Cost Year" means the twelve-month period ended June 30 to which this Formula is applied to determine the Annual Fixed Revenue Requirements and Variable O&M Rate for a Subject Resource to be applicable during the next succeeding calendar year.

(G) Owner

"Owner" means the entity, other than the CAISO, that is a party to the RMR Contract.

(H) CAISO

The "CAISO" means the California Independent System Operator Corporation.

Exhibit A - Initial Variable O&M Rates¹

[Footnote 1: Exhibit A for each owner is filed in Appendix to the Stipulation and Agreement.]

| Line | RMR Facility | Unit | Initial Variable O&M Rate (\$/MWh) |
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Exhibit B - Depreciation Rate and Mortality Characteristics^{2 3}

[Footnote 2: Exhibit B for each owner is filed in Appendix B to the Stipulation and Agreement.]

[Footnote 3: Effective as of the effective date of the Settlement.]

| Line | RMR Facility | Unit | Plant Account | Depreciation Rate (%) | Mortality Characteristics | | | |
|------|--------------|------|---------------|-----------------------|---------------------------|----------------------|-----------------------|--------------------------|
| | | | | | Retirement Date | Average Service Life | Salvage Value or Rate | Interim Retirements Rate |
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**Schedule G
Not Used**

**Schedule H
Not Used**

Schedule I

Insurance Requirements

Owner - Obtained Insurance [subject to negotiation]

CAISO - Obtained Insurance [subject to negotiation]

Schedule J

Notices

Notice to Owner:

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

With a copy to: Owner's Representative:

Notice to CAISO:

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

With a copies to:

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

**Schedule K
Dispute Resolution
DISPUTE RESOLUTION**

Applicability

1.1 General Applicability.

Except as limited below or otherwise as limited by law (including the rights of any party to file a complaint with FERC under the relevant provisions of the Federal Power Act (FPA)), these ADR Procedures shall apply to all disputes between parties which arise under this Agreement. The foregoing shall not impair the applicability of the CAISO Tariff ADR procedures to other disputes between the parties that do not arise under this Agreement. All alternative dispute resolution proceedings hereunder shall be administered by the American Arbitration Association (“AAA”). The Owner and CAISO shall enter into such arrangements with the AAA as are necessary to provide for AAA administration of this Schedule K.

1.1.1 This Schedule K shall not apply to disputes as to whether rates and charges under the Agreement are just and reasonable under the Federal Power Act except as provided in Schedule F. Nothing herein shall limit the right of the FERC to initiate or adjudicate complaints or other proceedings in accordance with applicable statutes or regulations or to compel FERC to exceed its statutory authority as defined by any applicable federal statutes, regulations or orders lawfully promulgated thereunder.

1.2 Disputes Involving Government Agencies.

If a party to a dispute is a government agency the procedures herein which provide for the resolution of claims and arbitration of disputes are subject to any limitations imposed on the agency by law, including but not limited to the authority of the agency to effect a remedy. If the governmental agency is a federal entity, the procedures herein shall not apply to disputes involving issues arising under the United States Constitution.

1.3 Injunctive and Declaratory Relief.

Where the court having jurisdiction so determines, use of the ADR Procedures shall not be a condition precedent to a court action for injunctive relief nor shall the provisions of California Code of Civil Procedure sections 1281 *et seq.* apply to such court actions.

1.4 Negotiation and Mediation.

1.4.1 Negotiation.

CAISO and Owner (“Parties”) shall make good-faith efforts to negotiate and resolve any dispute between them arising under this Agreement prior to invoking the ADR Procedures herein. Each Party shall designate an individual with authority to negotiate the matter in dispute to participate in such negotiations.

1.4.2 Statement of Claim.

In the event a dispute is not resolved through such good-faith negotiations, any party may submit a statement of claim, in writing, to each other disputing party, which submission shall commence the ADR Procedures. The statement of claim shall set forth in reasonable detail (i) each claim, (ii) the relief sought, including the proposed award, if applicable, (iii) a summary of the grounds for such relief and the basis for each claim, (iv) the parties to the dispute, and (v) the individuals having knowledge of each claim. The other parties to the dispute shall similarly submit their respective statements of claim within 14 days of the date of the initial statement of claim or such longer period as the

AAA may permit following an application by the responding party. If any responding party wishes to submit a counterclaim in response to the statement of claim, it shall be included in such party's responsive statement of claim. No party shall be considered as having received notice of a claim decided or relief granted by a decision made under these procedures unless the statement of claim includes such claim or relief.

1.4.3 Selection of Mediator.

After submission of the statements of claim, the parties may request mediation, if the disputing parties so agree. If the parties agree to mediate, the AAA shall distribute to the parties by facsimile or other electronic means a list containing the names of at least seven prospective mediators with mediation experience, or with technical or business experience in the electric power industry, or both, as he or she shall deem appropriate to the dispute. The parties shall either agree upon a mediator from the list provided or from any alternative source, or alternate in striking names from the list with the last name on the list becoming the mediator. The first party to strike off a name from the list shall be determined by lot. The parties shall have seven days from the date of receipt of the AAA's list of prospective mediators to complete the mediator selection process and appoint the mediator, unless the time is extended by mutual agreement. The mediator shall comply with the requirements of Section 1.5.2.

1.4.4 Mediation.

The mediator and representatives of the disputing parties, with authority to settle the dispute, shall within 14 days after the mediator's date of appointment schedule a date to mediate the dispute. Matters discussed during the mediation shall be confidential and shall not be referred to in any subsequent proceeding. With the consent of all disputing parties, a resolution may include referring the dispute directly to a technical body (such as a WECC technical advisory panel) for resolution or an advisory opinion, or referring the dispute directly to FERC.

1.4.5 Demand for Arbitration.

If the disputing parties have not succeeded in negotiating a resolution of the dispute within 30 days of the initial statement of claim or, if within that period the parties agreed to mediate, within 30 days of the parties' first meeting with the mediator, such parties shall be deemed to be at impasse and any such disputing party may then commence the arbitration process, unless the parties by mutual agreement agree to extend the time. A party seeking arbitration shall provide notice of its demand for arbitration to the other disputing parties.

1.5 Arbitration.

1.5.1 Selection of Arbitrator.

1.5.1.1 Disputes Under \$1,000,000. Where the total amount of claims and counterclaims in controversy is less than \$1,000,000 (exclusive of costs and interest), the disputing parties shall select an arbitrator from a list containing the names of at least 10 qualified individuals supplied by AAA, within 14 days following submission of the demand for arbitration. If the disputing parties cannot agree upon an arbitrator within the stated time, they shall take turns striking names from the list of proposed arbitrators. The first party to strike off a name shall be determined by lot. This process shall be repeated until one name remains on the list, and that individual shall be the designated arbitrator.

1.5.1.2 Disputes of \$1,000,000 or Over. Where the total amount of claims and counterclaims in controversy is \$1,000,000 or more (exclusive of interest and costs), the

disputing parties may agree on any person to serve as a single arbitrator, or shall endeavor in good faith to agree on a single arbitrator from a list of ten qualified individuals provided by the AAA, 14 days following submission of the demand for arbitration. If the disputing parties are unable to agree on a single arbitrator within the stated time, the party or parties demanding arbitration, and the party or parties responding to the demand for arbitration, shall each designate an arbitrator. Each designation shall be from the AAA list of arbitrators, as applicable, no later than the tenth day thereafter. The two arbitrators so chosen shall then choose a third arbitrator.

1.5.2 Disclosures Required of Arbitrators.

The designated arbitrator(s) shall be required to disclose to the parties any circumstances that might preclude him or her from rendering an objective and impartial determination. Each designated arbitrator shall disclose:

1.5.2.1 Any direct financial or personal interest in the outcome of the arbitration;

1.5.2.2 Any information required to be disclosed by California Code of Civil Procedure Section 1281.9.; and

1.5.2.3 Any existing or past financial, business, professional, or personal interest that are likely to affect impartiality or might reasonably create an appearance of partiality or bias. The designated arbitrator shall disclose any such relationships that he or she personally has with any party or its counsel, or with any individual whom they have been told will be a witness. They should also disclose any such relationship involving members of their families or their current employers, partners, or business associates. All designated arbitrators shall make a reasonable effort to inform themselves of any interests or relationships described above. The obligation to disclose interests, relationships, or circumstances that might preclude an arbitrator from rendering an objective and impartial determination is a continuing duty that requires the arbitrator to disclose, at any stage of the arbitration, any such interests, relationships, or circumstances that arise, or are recalled or discovered.

1.5.2.4 If, as a result of the continuing disclosure duty, an arbitrator makes a disclosure which is likely to affect his or her impartiality, or might reasonably create an appearance of partiality or bias or if a party independently discovers the existence of such circumstances, a party wishing to object to the continuing use of the arbitrator must provide written notice of its objection to the other parties within ten days of receipt of the arbitrator's disclosure or the date of a party's discovery of the circumstances giving rise to that party's objection. Failure to provide such notice shall be deemed a waiver of such objection. If a party timely provides a notice of objection to the continuing use of the arbitrator the parties shall attempt to agree whether the arbitrator should be dismissed and replaced in the manner described in Section 1.5.1. If within ten days of a party's objection notice the parties have not agreed how to proceed the matter shall be referred to the AAA for resolution.

1.5.3 Arbitration Procedures.

The AAA shall compile and make available to the arbitrator and the parties standard procedures for the arbitration of disputes, which procedures (i) shall conform to the requirements specified herein; and (ii) may be modified or adopted for use in a particular proceeding as the arbitrator deems appropriate, in accordance with Section 1.5.4 The procedures shall be based on the latest edition of the American Arbitration Association Commercial Arbitration Rules, to the extent such rules are not inconsistent with this Schedule K. Except as provided herein, all parties shall be bound by such procedures.

1.5.4 Modification of Arbitration Procedures.

In determining whether to modify the standard procedures for use in the pending matter, the arbitrator shall consider (i) the complexity of the dispute, (ii) the extent to which facts are disputed, (iii) the extent to which the credibility of witnesses is relevant to a resolution, (iv) the amount in controversy, and (v) any representations made by the parties. Alternatively, the parties may, by mutual agreement, modify the standard procedures. In the event of a disagreement between the arbitrator and the agreement of the parties regarding arbitration procedures to be utilized, the parties' agreement shall prevail.

1.5.5 Remedies.

1.5.5.1 Arbitrator's Discretion. The arbitrator shall have the discretion to grant the relief sought by a party, or determine such other remedy as is appropriate, unless the parties agree to conduct the arbitration "baseball" style. Unless otherwise expressly limited herein, the arbitrator shall have the authority to award any remedy or relief available from FERC, or any court of competent jurisdiction. Where this Agreement leaves any matter to be agreed between the parties at some future time and provides that in default of agreement the matter shall be referred to the ADR, the arbitrator shall have authority to decide upon the terms of the agreement which, in the arbitrator's opinion, it is reasonable that the parties should reach, having regard to the other terms this Agreement concerned and the arbitrator's opinion as to what is fair and reasonable in all the circumstances.

1.5.5.2 "Baseball" Arbitration. If the parties agree to conduct the arbitration "baseball" style, the parties shall submit to the arbitrator and exchange with each other their last best offers in the form of the award they consider the arbitrator should make, not less than seven days in advance of the date fixed for the hearing, or such later date as the arbitrator may decide. If a party fails to submit its last best offer in accordance with this Section, that party shall be deemed to have accepted the offer proposed by the other party. The arbitrator shall be limited to awarding only one of the proposed offers, and may not determine an alternative or compromise remedy.

1.5.6 Summary Disposition.

The procedures for arbitration of a dispute shall provide a means for summary disposition of a demand for arbitration, or a response to a demand for arbitration, that in the reasoned opinion of the arbitrator does not have a good faith basis in either law or fact. If the arbitrator determines that a demand for arbitration or response to a demand for arbitration does not have a good faith basis in either law or fact, the arbitrator shall have discretion to award the costs of the time, expenses, and other charges of the arbitrator to the prevailing party. A determination made under this Section is subject to appeal pursuant to Section 1.6.

1.5.7 Discovery Procedures.

The procedures for the arbitration of a dispute shall include adequate provision for the discovery of relevant facts, including the taking of testimony under oath, production of documents and other things, the presentation of evidence, the taking of samples, conducting of tests, and inspection of land and tangible items. The nature and extent of such discovery shall be determined as provided herein and shall take into account (i) the complexity of the dispute, (ii) the extent to which facts are disputed, (iii) the extent to which the credibility of witnesses is relevant to a resolution, and (iv) the amount in controversy. The forms and methods for taking such discovery shall be as described in the Federal Rules of Civil Procedure, except as modified pursuant to Section 1.5.4.

1.5.8 Evidentiary Hearing.

The arbitration procedures shall provide for an evidentiary hearing, with provision for the cross-examination of witnesses, unless all parties consent to the resolution of the matter on the basis of a written record. The forms and methods for taking evidence shall be determined by the arbitrator(s) and modified pursuant to Section 1.5.4. The arbitrator may require such written or other submissions from the parties as he or she may deem appropriate, including submission of direct and rebuttal testimony of witnesses in written form. The arbitrator may exclude any evidence that is irrelevant, immaterial, unduly repetitious or prejudicial, or privileged. The arbitrator shall compile a complete evidentiary record of the arbitration that shall be available to the parties on its completion upon request.

1.5.9 Confidentiality.

Subject to the other provisions of this Agreement, any party may claim that information contained in a document otherwise subject to discovery is "Confidential" if such information would be so characterized under the Federal Rules of Evidence or the provisions of the Agreement. The party making such claim shall provide to the arbitrator in writing the basis for its assertion. If the claim of confidentiality is confirmed by the arbitrator, he or she shall establish requirements for the protection of such documents or other information designated as "Confidential" as may be reasonable and necessary to protect the confidentiality and commercial value of such information. Any party disclosing information in violation of these provisions or requirements established by the arbitrator, unless such disclosure is required by federal or state law or by a court order, shall thereby waive any right to introduce or otherwise use such information in any judicial, regulatory, or other legal or dispute resolution proceeding, including the proceeding in which the information was obtained.

1.5.10 Timetable.

Promptly after the appointment of the arbitrator, the arbitrator shall set a date for the issuance of the arbitration decision, which shall be no later than six months (or such earlier date as the parties and the arbitrator may agree) from the date of the appointment of the arbitrator, with other dates, including the dates for an evidentiary hearing or other final submissions of evidence, set in light of this date. The date for the evidentiary hearing or other final submission of evidence shall not be changed, absent extraordinary circumstances. The arbitrator shall have the power to impose sanctions, including dismissal of the proceeding, for dilatory tactics or undue delay in completing the arbitration proceedings.

1.5.11 Decision.

1.5.11.1 Except as provided below with respect to "baseball" style arbitration, the arbitrator shall issue a written decision granting the relief requested by one of the parties, or such other remedy as is appropriate, if any, and shall include findings of fact and law. The arbitration decision shall be based on (i) the evidence in the record, (ii) the terms of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, (iii) applicable United States federal law, including the Federal Power Act and any applicable FERC regulations and decisions, and international treaties or agreements as applicable, and (iv) applicable state law. Additionally, the arbitrator may consider relevant decisions in previous arbitration proceedings involving this Agreement. To the extent it may do so without violating confidentiality requirements, a summary of the disputed matter and the arbitrator's decision may be published in a CAISO newsletter on CAISO Website.

1.5.11.2 In arbitration conducted "baseball" style, the arbitrator shall issue a written decision adopting one of the awards proposed by the parties, and shall include findings of fact and law. The arbitration decision shall be based on (i) the evidence in the record, (ii) the terms of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, (iii) applicable United States federal law, including the Federal Power Act and any applicable FERC regulations and decisions, and international treaties or agreements as applicable, and (iv) applicable state law. If the arbitrator concludes that no proposed award is consistent with the factors enumerated in (i) through (iv) above, or addresses all of the issues in dispute, the arbitrator shall specify how each proposed award is deficient and direct that the parties submit new proposed awards that cure the identified deficiencies. To the extent it may do so without violating confidentiality requirements, a summary of the disputed matter and the arbitrator's decision may be published in a CAISO newsletter on CAISO Website.

1.5.11.3 Where a panel of arbitrators is appointed pursuant to Section 1.5.1.2, a majority of the arbitrators must agree on the decision. An award shall not be deemed to be precedent except in so far as a future dispute between the parties involves the same issue.

1.5.12 Compliance.

Unless the arbitrator's decision is appealed under Section 1.6, the disputing parties shall, upon receipt of the decision, immediately take whatever action is required to comply with the award to the extent the award does not require regulatory action. An award that is not appealed shall be deemed to have the same force and effect as an order entered by FERC or any court of competent jurisdiction.

1.5.13 Enforcement.

Following the expiration of the time for appeal of an award pursuant to Section 1.6.3, any party may apply to FERC or any court of competent jurisdiction for entry and enforcement of judgment based on the award.

1.5.14 Costs.

The costs of the time, expenses, and other charges of the arbitrator shall be borne by the parties to the dispute, with each side on an arbitrated issue bearing its pro-rata share of such costs, and each party to an arbitration proceeding bearing its own costs and fees. If the arbitrator determines that a demand for arbitration or response to a demand for arbitration was made in bad faith, the arbitrator shall have discretion to award the costs of the time, expenses, and other charges of the arbitrator to the prevailing party.

1.6 Appeal of Award.

1.6.1 Basis for Appeal.

A party may apply to the FERC or any court of competent jurisdiction to hear an appeal of an arbitration decision only upon the grounds that the decision is contrary to or beyond the scope of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, United States federal law, including, without limitation, the Federal Power Act, and any applicable FERC regulations and decisions, or state law. Appeals shall, unless otherwise ordered by FERC or the court of competent jurisdiction, conform to the procedural limitations set forth in this Section 1.6.

1.6.2 Appellate Record.

The parties intend that FERC or a court of competent jurisdiction should afford substantial deference to the factual findings of the arbitrator. No party shall seek to expand the record before FERC or a court of competent jurisdiction beyond that assembled by the arbitrator, except (i) by making reference to legal authority which did not exist at the time of the arbitrator's decision, or (ii) if such party contends the decision was based upon or affected by fraud, collusion, corruption, misconduct or misrepresentation.

1.6.3 Procedures for Appeals.

1.6.3.1 If a party to an arbitration desires to appeal a decision, it shall provide a notice of appeal to all parties and the arbitrator(s) within 14 days following the date of the decision. Within ten days of the filing of the notice of appeal, the appealing party must file an appropriate application, petition or motion with FERC for review under the Federal Power Act or with a court of competent jurisdiction. Such filing shall state that the subject matter has been the subject of an arbitration pursuant to this Agreement and, to the extent relevant, the CAISO Tariff and protocols.

1.6.3.2 Within 30 days of filing the notice of appeal (or such period as FERC or the court of competent jurisdiction may specify) the appellant shall file the complete evidentiary record of the arbitration and a copy of the decision with FERC or with the court. The appellant shall serve on all parties to the arbitration copies of a description of all materials included in the submitted evidentiary record.

1.6.4 Award Implementation.

Implementation of the decision shall be deemed stayed pending an appeal unless and until, at the request of a party, FERC or the court of competent jurisdiction with which an appeal has been filed, issues an order dissolving, shortening, or extending such stay.

A summary of each appeal shall be published in a CAISO newsletter on the CAISO Website.

1.6.5 Judicial Review of FERC Orders.

FERC orders resulting from appeals shall be subject to judicial review pursuant to the Federal Power Act.

Schedule L-1

Request for Approval of Capital Items or Repairs

REQUEST FOR APPROVAL OF CAPITAL ITEMS OR REPAIRS

This form should be used to request CAISO approval of Planned Capital Items, Unplanned Repairs or Unplanned Capital Items pursuant to Sections 7.4, 7.5 or 7.6 of the Agreement.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR
 RELIABILITY MUST-RUN UNIT
 CAPITAL ITEM AND REPAIR PROJECT REQUEST

Date: **CAISO Project Number:**
Facility: **Unit:**
Owner: **Location:**

This request covers:

- () Capital Items for the next Contract Year (preliminary)
- () Capital Items for the next Contract Year (final)
- () Remaining Start-ups, Run-hours and MWhs prior to the need to invest in the next Capital Item
- () Unplanned Repairs
- () Unplanned Capital Items

If this request covers Capital Items for the next Contract Year, provide:

Small Project Estimate (reliability)

Small Project Estimate (other)

Identify separately each Capital Item included in a small project estimate projected to cost more than \$50,000.

If this request covers Unplanned Repairs, or Capital Items projected to cost more than \$500,000, provide the information in the remainder of this form for each project.

Project Description: (describe the project and its major scope items – materials, new systems, modifications to existing systems, etc.)

If the project is required because of loss or damage to a Unit, describe the cause and nature of the loss or damage and all repairs performed or required for all Units during the year:

Project Budget:

| Year | Labor | Material | Contract | Int Svc | Other | Material | Over head AEGE | Total Cost | AD VAL TAX | Total Expenditures | Total Financial Costs |
|------|-------|----------|----------|---------|-------|----------|-------------------|---------------|---------------|-----------------------|--------------------------|
| | | | | | | | | | | | |

Describe any work or repairs performed relating to this project in the last five years:

As applicable, state the proposed depreciation life, Annual Capital Item Cost, Surcharge Payment

Factor or Repair Payment Factor (percentage owed by CAISO) of the Capital Item or Repair:

Describe why this project is required (justification):

Is this project required to comply with any laws, regulations or permits? If so, please list them and explain requirement.

Provide a cost/benefit analysis summary for this project:

Include all assumptions including changes to unit performance [efficiency, aux. power loads, etc.], impact on RMR Contract Capacity, grid interconnection/metering impacts, etc.

Describe the impacts on the Unit's ability to perform its obligations under this Agreement if this project is not approved:

Describe alternatives to this project that were evaluated and the projected costs of those alternatives:

Describe alternatives along with their major scope items. Also, compare the projected cost of these alternatives with the selected alternative, and compare the unit performance impacts (efficiency, auxiliary power demands, RMR Contract Capacity effects, etc.) of these alternatives against the chosen alternative.

List any proceeds received or expected to be received by Owner from insurers or other third parties pursuant to applicable insurance, warranties and other contracts in connection with the project.

Provide the schedule for implementing this project:

| Event | Begin | Complete |
|-------|-------|----------|
| | | |

Describe any outages required to implement this project:

Other comments:

Remaining Start-ups, Run hours, MWs prior to Need for Capital Item:

For any Capital Item required to extend operational capability of the RMR Unit, the Owner must provide the CAISO with the remaining Unit start-ups, run hours, MWs and any other factor that may trigger or affect the timing or the need for such Capital Items. The Owner and CAISO will utilize this information to consider whether the Unit can be safely and reliably operated in the current Contract Year, prior to the need for such Capital Item. If so, these limits will be considered as eligible limits for development of appropriate opportunity costs in accordance with Article 6.1 of this Agreement.

| Unit | Capital Item description | Remaining Start-ups | Remaining Run hours | Remaining MWs | Other Factor Relevant as to Timing of Capital Items |
|------|--------------------------|---------------------|---------------------|---------------|---|
| | | | | | |

* Update more columns for description as needed.

Schedule L-2

Capital Item and Repair Progress Report

CAPITAL ITEM AND REPAIR PROGRESS REPORT

CALIFORNIA INDEPENDENT SYSTEM OPERATOR
RELIABILITY MUST-RUN UNIT
CAPITAL ITEM AND REPAIR PROGRESS REPORT

| | |
|----------------------------------|---------------------------------|
| Date: | CAISO Project Number: |
| Facility: | Unit: |
| Owner: | Location: |
| Capital Item or Repair: | |
| Original In-Service Date: | Current In-Service Date: |

If Current In-Service Date has changed, describe the reason why:

Describe any additional costs or savings resulting from the change in the Current In-Service Date:

Describe what portion of any additional costs Owner is requesting CAISO to pay, and why Owner believes that CAISO should be obligated to pay those additional costs:

Schedule M

Not Used

SCHEDULE N-1

Not Used

**NON-DISCLOSURE and CONFIDENTIALITY AGREEMENT
FOR PERSONS OTHER THAN THE RESPONSIBLE UTILITY**

[Name of] (the "Receiving Party") acknowledges (a) that **[Name of Owner]** ("Owner") has agreed to provide Confidential Information to the Receiving Party pursuant to certain provisions of the Must-Run Service Agreement ("MRSA") between Owner and the California Independent System Operator Corporation ("CAISO"), in connection with discussing the possible execution of such an MRSA, and (b) that Owner and CAISO (jointly, the "Providing Parties" and severally, the "Providing Party") may provide Confidential Information on a need-to-know basis to Owner's Scheduling Coordinator, financial institutions, agents and potential purchasers of interests in a Unit; and, as required for settlement and billing, to Scheduling Coordinators responsible for paying for services provided under the MRSA between Owner and CAISO. In order to permit the Receiving Party to receive such Confidential Information from Owner or CAISO, the Receiving Party and the Providing Parties hereby agree as follows:

- (1) For purposes of this Non-Disclosure and Confidentiality Agreement, the term "Confidential Information" shall have the same meaning it has in Section 12.5 of the *pro forma* MRSA, except that the definition in Section 12.5 of the MRSA shall be deemed also cover comparably designated information provided in connection with discussions concerning the possible execution of an MRSA;
- (2) The Providing Parties shall provide such Confidential Information pursuant to the terms of this Non-Disclosure and Confidentiality Agreement;
- (3) The Receiving Party shall keep such Confidential Information confidential, shall use it only for the purposes related to the MRSA under discussion, and shall limit the disclosure of any such Confidential Information to only those personnel within its organization with responsibility for using such information in connection with the MRSA upon their execution of this Non-Disclosure and Confidentiality Agreement. Such personnel may not include any person whose duties include (i) the marketing or sale of electric power or natural gas or gas transportation capacity at wholesale or retail, (ii) the purchase of electric power or natural gas or gas transportation capacity at wholesale or retail, (iii) the direct supervision of any employee with such responsibilities, or (iv) the provision of electricity or natural gas marketing consulting services to any employee with such responsibilities;
- (4) The Receiving Party shall assure that personnel within its organization authorized to receive Confidential Information read and comply with the provisions of this Non-Disclosure and Confidentiality Agreement;
- (5) The Receiving Party shall use all reasonable efforts to maintain the confidentiality of the Confidential Information in any litigation, and shall promptly notify the providing Party of any attempt by a third party to obtain the Confidential Information through legal process or otherwise;
- (6) Retention; Destruction. All Confidential Information (including all copies) shall, at a Providing Party' request and direction, either be promptly returned to the Providing Party or destroyed at the conclusion of the term of the MRSA, except to the extent prohibited by law. Notwithstanding the foregoing, electronic copies of materials or summaries containing or reflecting Confidential Information that are generated through data backup and/or archiving systems and which are not readily accessible by the Receiving Party or its personnel, shall not be deemed to violate this Non-Disclosure and Confidentiality Agreement, provided that such Confidential Information is not disclosed in violation of the other terms of this Non-Disclosure and Confidentiality Agreement.

The Receiving Party agrees to be bound by the terms of Section 12.5 of the *pro forma* MRSA in the same manner and to the same extent as the Providing Parties. The person signing on behalf of the Receiving Party represents that he/she is authorized to bind the Receiving Party to the terms of this Non-Disclosure and Confidentiality Agreement.

Signature:

Name:

Company:

Title:

Receiving Party:

Address:

Telephone:

Signature:

Name:

Owner:

Title:

Address:

Telephone:

Signature:

Name:

California Independent System Operator Corporation

Title:

Address:

Telephone:

Schedule O

Not Used

Schedule P

Not Used

Attachment B-1 – Marked Tariff

Reliability Must-Run and Capacity Procurement Mechanism Enhancements

California Independent System Operator Corporation

4.9.13.2 Load-Following or Non Load-Following Election

The MSS Operator has the option to elect to operate a System Unit or Generating Units in the MSS to follow its Load, provided that: (a) the Scheduling Coordinator for the MSS Operator shall remain responsible for purchases of Energy in accordance with the CAISO Tariff if the MSS Operator does not operate its System Unit or Generating Units and bid or schedule imports into the MSS, to match the metered Demand in the MSS and exports from the MSS; and (b) if the deviation between Generation and imports into the MSS and metered Demand and exports from the MSS exceeds the MSS Deviation Band, then the Scheduling Coordinator for the MSS Operator shall pay the additional amounts specified in Section 11.7. If an MSS Operator elects Load-following and net Settlements, all generating resources within the MSS must be designated as Load-following resources. If an MSS Operator elects Load-following and gross Settlements, generating resources within the MSS can be designated as either Load-following or non-Load-following resources. Consistent with these requirements, the MSS Operator may also modify the designation of generating resources within the MSS within the timing requirements specified for such Master File changes as described in the Business Practice Manuals.

If the MSS Operator has elected gross Settlement and is a Load-following MSS: (i) it must designate in the Master File which of its generating resources are Load-following resources, (ii) it must comply with the additional bidding requirements in Section 30.5.2.5, and (iii) the generation resources designated as Load-following resources cannot set Real-Time prices. However, Load-following resources will be eligible to receive Bid Cost Recovery to ensure that the price paid for Energy dispatched by the CAISO is not less than the MSS Operator's accepted Bid price. Bid Cost Recovery for a Load-following MSS resource is only applicable to generation capacity provided to the CAISO Markets by that MSS resource and is not applicable for the generating capacity that is designated or used by an MSS Operator to follow its own Load.

An MSS Operator may designate RMR ~~ResourcesUnits~~ as Load-following. Load-following RMR ~~ResourcesUnits~~ must be available to the CAISO for Dispatch up to the ~~Maximum Net Dependable Capacity-RMR Contract Capacity~~ specified in the RMR Contract. Energy ~~delivered in response to an RMR-Dispatch~~ shall be accounted for as a delivery from the MSS to the CAISO for the purposes of determining if the MSS Operator followed its metered Demand and exports from the MSS as described in

this Section 4.9.13.2 except that Energy from an RMR ~~Resources~~Unit in a Day-Ahead Schedule can be used for Load-following to satisfy Day-Ahead scheduled Demand like any other non-RMR ~~Resource~~Unit Load-following resource. If no RMR Dispatch ~~Notice~~ is received for a Load-following RMR ~~Resource~~Unit, such Load-following RMR ~~Resource~~Unit may participate in the CAISO Markets as any other non-RMR ~~Unit~~ Load-following resource subject to Section 30.5.2.5.

* * * * *

6.5.3.1.3 Between 5:00 a.m. and 10:00 a.m., the CAISO will provide feedback to Scheduling Coordinators about their validated ETC and TOR quantities, and calculated Default Energy Bids curves ~~provided by Independent Entities~~, and in addition, the RMR Proxy Bids for Energy and the Minimum Load and Start-Up Cost Bid curves for ~~Legacy~~ RMR Units, ~~as provided by Independent Entities~~.

6.5.3.1.4 After the close of the DAM bidding at 10:00 a.m., the CAISO will send a message to the Scheduling Coordinators regarding the outcome of the Bid validation.

6.5.3.1.5 By 1:00 p.m., the CAISO will publish the result of the DAM and the resource will be flagged if it is being dispatched under its ~~Legacy~~ RMR Contract ~~and will~~. ~~Any such Dispatch shall~~ be deemed an RMR Dispatch Notice under the ~~Legacy~~ RMR Contract.

* * * * *

6.5.3.1.7 The results of the Day-Ahead Market will be published by 1:00 p.m. and will include:

- (a) Unit Commitment status for resources committed in the IFM;
- (b) Day-Ahead Schedules and prices;
- (c) Day-Ahead AS Awards and prices;
- (d) RUC Awards and RUC Capacity and resource-specific RUC Prices;
- (e) RUC Start-Up Instructions;
- (f) Start-Up Instructions resulting from the ELC Process;
- (g) Post-market summary of Day-Ahead and Real-Time Energy Schedules, Ancillary Service

Awards, RMR Dispatches, and ~~CCR results of Legacy~~ RMR Units;

- (h) Day-Ahead final resource Bid mitigation results; and
- (i) Day-Ahead finally qualified Load following capacity.

* * * * *

6.5.5.1.2 Every five (5) minutes for Target T+10, the CAISO will send Dispatch Instructions via the secure communication system. The Dispatch Instruction will be flagged if a resource is being dispatched under ~~is a Legacy~~ RMR Contract.

* * * * *

7.7.2 Market Participant Responsibilities in System Emergencies.

- (a) **Response to CAISO Dispatch Instructions.** All Market Participants shall respond immediately to CAISO Dispatch Instructions during System Emergencies.
- (b) **Responsibilities of UDCs and MSS Operators During a System Emergency.**
 - (1) **Compliance with Directions and Procedures.** In the event of a System Emergency, UDCs and MSS Operators shall comply with all directions from the CAISO concerning the avoidance, management, and alleviation of the System Emergency and shall comply with all procedures concerning System Emergencies set forth in this CAISO Tariff, the Business Practice Manuals, and the Operating Procedures. and shall comply with all procedures concerning System Emergencies set forth in the CAISO Tariff, Business Practice Manuals and Operating Procedures.
 - (2) **Communications.** During a System Emergency, the CAISO shall communicate with the UDCs and MSS Operators through their respective control centers and in accordance with procedures established in individual UDC and MSS Operating Agreements.

(3) **Notifications of End-Use Customers.** Each UDC and MSS Operator will notify its End-Use Customers connected to the UDC's or the MSS's Distribution System of any voluntary curtailments notified to the UDC or to the MSS Operator by the CAISO pursuant to the provisions of the Electrical Emergency Plan.

(c) **Responsibilities of Generating Units, System Units and System Resources During System Emergencies.**

(1) **In General.** All Generating Units and System Units that are owned or controlled by a Participating Generator are (without limitation to the CAISO's other rights under this CAISO Tariff) subject to control by the CAISO during a System Emergency and the CAISO shall have the authority to instruct a Participating Generator to bring its Generating Unit on-line or off-line or to increase or curtail the output of the Generating Unit and to alter scheduled deliveries of Energy and Ancillary Services into or out of the CAISO Controlled Grid, if such an instruction is reasonably necessary to prevent an imminent or threatened System Emergency or to retain Operational Control over the CAISO Controlled Grid during an actual System Emergency.

(2) **Prerequisite for Dispatch Instructions.** The CAISO shall, where reasonably practicable, use Ancillary Services which it has the contractual right to instruct and which are capable of contributing to containing or correcting the actual, imminent, or threatened System Emergency prior to issuing instructions to a Participating Generator under this subsection, except that the CAISO need not take such action if it determines such action is unlikely to be effective.

(3) **Legacy RMR Condition 2 Units.**

(A) **Prerequisite for Dispatch Instructions.** The CAISO shall only instruct an Legacy RMR Unit whose owner has selected Condition 2 of its Legacy RMR Contract to start-up and change its output if the CAISO has reasonably used all other available and effective resources to prevent a threatened System Emergency without declaring that a System

Emergency exists.

(B) **Compensation.** If the CAISO dispatches a Condition 2 RMR Unit pursuant to subparagraph (A), it shall compensate that unit in accordance with Section 11.5.6.3 and allocate the costs in accordance with Section 11.5.6.3.2.

(4) **Qualifying Facilities.** A Scheduling Coordinator that represents a QF subject to an Existing QF Contract that is not subject to a PGA or Net Scheduled PGA will make reasonable efforts to require such QFs to comply with the CAISO's instructions during a System Emergency without penalty for failure to do so.

* * * * *

11.2.2.1 Settlement of RUC Availability Payment

Scheduling Coordinators shall receive RUC Availability Payments for all eligible capacity awarded in the RUC process. Resource Adequacy Capacity and ~~RMR eCapacity from RMR Units dispatched under its RMR Contract in the DAM~~ are not eligible for RUC Availability Payments in the DAM. The RUC Availability Payment shall be calculated for each resource based on the product of the RUC Price and the RUC Availability Quantity for the relevant Settlement Period. The RUC Availability Payment amounts are allocated through the RUC Compensation Costs allocation in Section 11.8.6.5.

* * * * *

11.5.6 Settlement Amounts for RTD Instructed Imbalance Energy from Exceptional Dispatch

For each Settlement Interval, the RTD IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.11 is calculated as the sum of the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant FMM or RTD LMP Settlement price for each type of Exceptional Dispatch as further described in this Section 11.5.6. For MSS Operators the Settlement for FMM Instructed Imbalance Energy or RTD

Instructed Imbalance Energy from Exceptional Dispatches is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.11~~9~~ shall be calculated as set forth in Section 11.5.6.7.

11.5.6.1 Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, to Mitigate Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for System Emergency conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the

applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price subject to Section 39.6.1.4; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for Emergency System conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, is the minimum of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. All Energy costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.1.1 Settlement of Excess Cost Payments for Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, and to Avoid an Imminent System Emergency

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Disruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 for the applicable Exceptional Dispatch at the FMM or RTD LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch. The Excess Cost Payment for incremental Exceptional Dispatches used for System Emergency conditions; for a Market Disruption; or to avoid an imminent System Emergency for an RMR Resource is the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 and one of the following two costs: (1) the RMR Resource's Energy Bid price

adjusted to remove Opportunity Costs; or (2) the Default Energy Bid price adjusted to remove Opportunity Costs.

11.5.6.2 Settlement of Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered by an RMR Resource as a result of Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of: (a) the applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch from an RMR Resource is the minimum of: (a) the FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for decremental FMM Instructed

Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

11.5.6.2.1 [NOT USED]

11.5.6.2.2 [NOT USED]

11.5.6.2.3 Settlement of Excess Cost Payments for Exceptional Dispatches used for Transmission-Related Modeling Limitations

The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following three costs: (1) the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch. The Excess Cost Payment for Exceptional Dispatches for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each RMR Resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following two costs: (1) the resource's Energy Bid Cost adjusted to remove Opportunity Costs; or (2) the Default Energy Bid cost adjusted to remove Opportunity Costs, for the relevant Exceptional Dispatch.

11.5.6.2.4 Exceptional Dispatches for Non-Transmission-Related Modeling Limitations

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of the (a) FMM or RTD LMP; (b) Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to

System Resources. For RMR Resources, the Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of: (a) FMM or RTD LMP; (b) Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the (a) FMM or RTD LMP; (b) Energy Bid Price; (c) Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) negotiated price as applicable to System Resources. For RMR Resources; the Exceptional Dispatch Settlement for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the: (a) FMM or RTD LMP; (b) Energy Bid price adjusted to remove Opportunity Costs; or (c) Default Energy Bid price adjusted to remove Opportunity Costs. All costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

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11.5.6.3 Settlement for Instructed Imbalance Energy from Exceptional Dispatches for Condition 2 Legacy RMR Units

11.5.6.3.1 Pricing for Exceptional Dispatch of Legacy RMR Units

If the CAISO dispatches an Legacy RMR Unit that has selected Condition 2 of its Legacy RMR Contract to Start-Up or provide Energy other than a Start-Up or Energy pursuant to the Legacy RMR Contract, the CAISO shall pay as follows:

- (a) if the Owner has elected Option A of Schedule G, two times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and 1.5 times the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instructions;
- (b) if the Owner has elected Option B of Schedule G, three times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instruction.

Equation 1a

$$\text{Energy Price (\$/MWh)} = (AX^3 + BX^2 + CX + D) * P * E$$

$$X + \text{Variable O\&M Rate}$$

Equation 1b

$$\text{Energy Price (\$/MWh)} = \frac{A * (B + CX + De^{FX})}{X + \text{Variable O\&M Rate}} * P * E$$

Where:

- for Equation 1a, A, B, C, D and E are the coefficients given in Table C1-7a of the applicable Legacy RMR Contract;
- for Equation 1b, A, B, C, D, E and F are the coefficients given in Table C1-7b of the applicable Legacy RMR Contract;
- X is the Unit output level during the applicable settlement period, MWh;
- P is the Hourly Fuel Price as calculated by Equation C1-8 in Schedule C using the Commodity Prices in accordance with the applicable Legacy RMR Contract;

Variable O&M Rate (\\$/MWh): as shown on Table C1-18 of the applicable Legacy RMR Contract.

11.5.6.3.2 Allocation of Costs from Exceptional Dispatch Calls to Condition 2 RMR Units

- (a) All costs associated with Energy provided by a Condition 2 Legacy RMR Unit operating other than according to a RMR Dispatch shall be allocated in accordance with Section 11.5.4.2.

- (b) Start-Up Costs for Condition 2 Legacy RMR Units providing service outside the Legacy RMR Contract shall be treated similar to costs under Section 11.5.6.2.5.2.

* * * * *

11.8.2.1 IFM Bid Cost Calculation

For each Settlement Interval, the CAISO shall calculate IFM Bid Cost for each Bid Cost Recovery Eligible Resource as the algebraic sum of the IFM Start-Up Cost, IFM Transition Cost, IFM Minimum Load Cost, IFM Pump Shut-Down Cost, IFM Energy Bid Cost, IFM Pumping Cost, and IFM AS Bid Cost. For Multi-Stage Generating Resources, in addition to the specific IFM Bid Cost rules described in Section 11.8.2.1, the CAISO will apply the rules described in Section 11.8.1.3 to further determine the applicable MSG Configuration-based CAISO Market Start-Up Cost, Transition Cost and Minimum Load Cost in any given Settlement Interval. For Multi-Stage Generating Resources, the incremental IFM Start-Up, Minimum Load, and Transition Costs to provide Energy Scheduled in the Day-Ahead Schedule or awarded RUC or Ancillary Service capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the IFM rules specified in Section 31.3. For RMR Resources, the CAISO shall calculate the IFM Bid Cost as the algebraic sum of the IFM Start-Up Cost adjusted to remove Opportunity Costs and Major Maintenance Costs, IFM Transition Cost adjusted to remove Opportunity Costs and Major Maintenance Adder Costs, IFM Minimum Load Costs adjusted to remove Opportunity Costs and Major Maintenance Adder Costs, IFM Energy Bid Cost adjusted to remove Opportunity Costs, and IFM AS Bid Cost.

11.8.2.1.1 IFM Start-Up Cost

The IFM Start-Up Cost for any IFM Commitment Period shall be equal to the Start-Up Costs submitted by the Scheduling Coordinator to the CAISO for the IFM divided by the number of Settlement Intervals within the applicable IFM Commitment Period. For each Settlement Interval, only the IFM Start-Up Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the IFM Start-Up Costs for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration. The following rules shall apply sequentially to qualify the IFM Start-Up Cost in an IFM

Commitment Period:

- (a) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is an IFM Self-Commitment Period within or overlapping with that IFM Commitment Period.
- (b) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in the Day-Ahead Market anywhere within the applicable IFM Commitment Period.
- (c) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is no actual Start-Up at the start of the applicable IFM Commitment Period because the IFM Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) If an IFM Start-Up is terminated in the Real-Time within the applicable IFM Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource was starting up, the IFM Start-Up Cost for that IFM Commitment Period shall be prorated by the ratio of the Start-Up Time before termination over the total IFM Start-Up Time.
- (e) The IFM Start-Up Cost is qualified if an actual Start-Up occurs within the applicable IFM Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO IFM Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether the resource's metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3.
- (f) The IFM Start-Up Cost will be qualified if an actual Start-Up occurs earlier than the start of the IFM Commitment Period if the advance Start-Up is a result of a Start-Up instruction issued in a RUC or Real-Time Market process subsequent to the IFM, or the advance

Start-Up is uninstructed but is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the targeted IFM Start-Up.

- (g) The Start-Up Costs for a Bid Cost Recovery Eligible Resource that is a Short Start Unit committed by the CAISO in the IFM and that further receives a Start-Up Instruction from the CAISO in the Real-Time Market to start within the same CAISO IFM Commitment Period, will be qualified for the CAISO IFM Commitment Period instead of being qualified for the CAISO RTM Commitment Period; and Start-Up Costs for subsequent Start-Ups will be further qualified as specified in Section 11.8.4.1.1(h).

11.8.2.1.2 IFM Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost submitted to the CAISO in the IFM, and as modified pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour subject to the rules described below.

- (a) For each Settlement Interval, only the IFM Minimum Load Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery.
- (b) The IFM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is in an IFM Self Commitment Period for the Bid Cost Recovery Eligible Resource; or (2) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule for the applicable Settlement Interval.
- (c) If the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the IFM Minimum Load Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits an RMR Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the sum of IFM Minimum Load Costs, adjusted to remove Minimum Load Opportunity Costs and Minimum Load Major Maintenance Costs, are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4.

- (d) If a Multi-Stage Generating Resource is committed by the CAISO and receives a Day-Ahead Schedule and subsequently is committed by the CAISO to a lower MSG Configuration where its Minimum Load capacity as registered in the Master File in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load as registered in the Master File, the resource's IFM Minimum Load Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits an RMR Multi-Stage Generating Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the sum of IFM Minimum Load Costs, adjusted to remove Minimum Load Opportunity Costs and Minimum Load Major Maintenance Costs, are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4.
- (e) If the conditions in Sections 11.8.2.1.2 (c) and (d) do not apply, then the IFM Minimum Load Cost for any Settlement Interval is zero if the Bid Cost Recovery Eligible Resource is determined to be Off during the applicable Settlement Interval. For the purposes of determining IFM Minimum Load Cost, a Bid Cost Recovery Eligible Resource is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its (i) Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and (ii) the Tolerance Band, and the Metered Energy is greater than zero (0) MWh. Otherwise, such resource is determined to be Off.
- (f) For Multi-Stage Generating Resources, the commitment period is determined based on application of section 11.8.1.3. If application of section 11.8.1.3 dictates that the IFM is the commitment period, then the calculation of the IFM Minimum Load Costs will depend on whether the IFM CAISO Committed MSG Configuration is determined to be On. If it is determined to be On, then, the IFM Minimum Load Costs will be based on the Minimum Load Costs of the IFM committed MSG Configuration. For the purposes of determining IFM Minimum Load Cost for a Multi-Stage Generating Resource, a Bid Cost Recovery Eligible Resource is determined to be On if its metered Energy in a Settlement Interval is

equal to or greater than the difference between its IFM MSG Configuration Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Tolerance Band, and the Metered Energy is greater than zero (0) MWh. Otherwise, such resource is determined to be Off.

- (g) The IFM Minimum Load Costs calculation is subject to the Shut-Down State Variable and is disqualified as specified in Section 11.17.2.

11.8.2.1.4 IFM Pumping Bid Cost

For Pumped-Storage Hydro Units and Participating Load only, the IFM Pumping Bid Cost for the applicable Settlement Interval shall be the Pumping Cost submitted to the CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour. The Pumping Cost is negative. The Pumping Cost is included in IFM Bid Cost computation for a Pumped-Storage Hydro Unit and Participating Load committed by the IFM to pump or serve Load if it actually operates in pumping mode or serves Load in that Settlement Interval. The IFM Energy Bid Cost for a Participating Load for any Settlement Interval is set to zero for actual Energy consumed in excess of the Day-Ahead Schedule for Demand. The IFM Pumping Cost for any Settlement Interval is zero if: (1) the Settlement Interval is in an IFM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; or (2) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as an Legacy RMR Dispatch in the Day-Ahead Schedule for the applicable Settlement Interval.

11.8.2.1.5 IFM Energy Bid Cost

For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the Bid Cost Recovery Eligible Resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost

Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity as registered in the Master File in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load as registered in the Master File, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM Energy Bid Cost for RMR Resources shall be the integral of the relevant Energy Bid used in the IFM adjusted to remove Opportunity Costs from the higher of the RMR Resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour.

11.8.2.1.6 IFM AS Bid Cost

For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. For any Settlement Interval, the IFM AS Bid Cost for an RMR Resource shall be zero.

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11.8.3.1 RUC Bid Cost Calculation

For each Settlement Interval, the CAISO shall determine the RUC Bid Cost for a Bid Cost Recovery Eligible Resource as the algebraic sum of the RUC Start-Up Cost, RUC Transition Cost, RUC Minimum Load Cost and RUC Availability Bid Cost. For Multi-Stage Generating Resources, in addition to the specific RUC Bid Cost rules described in Section 11.8.3.1, the rules described in Section 11.8.1.3 will be applied to further determine the applicable MSG Configuration-based CAISO Market Start-Up Cost, Transition Cost, and Minimum Load Cost, as modified pursuant to Section 30.7.10.2, if applicable, in any given Settlement Interval. For Multi-Stage Generating Resources, the incremental RUC Start-Up, Minimum Load Costs, and Transition Costs to provide RUC awarded capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the RUC optimization rules in specified in Section 31.5. For each Settlement Interval, the CAISO shall determine the RUC Bid Cost for an RMR Resource as the algebraic sum of the RUC Start-Up Cost adjusted to remove Opportunity Costs and Major Maintenance Costs, and RUC Transition Cost adjusted to remove Opportunity Costs and Major Maintenance Costs.

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource, as adjusted pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an Legacy RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost for a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load

Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.

11.8.3.1.3 RUC Availability Bid Cost

The RUC Availability Bid Cost is calculated as the product of the RUC Award with the relevant RUC Availability Bid price, divided by the number of Settlement Intervals in a Trading Hour. The RUC Availability Bid Cost for a Bid Cost Recovery Eligible Resource for a Settlement Interval is zero if the Bid Cost Recovery Eligible Resource is operating below its RUC Schedule, and also has a negative Uninstructed Imbalance Energy (UIE) magnitude in that Settlement Interval in excess of: (1) five (5) MWh divided by the number of Settlement Intervals in the Trading Hour; or (2) three percent (3%) of its maximum capacity divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine the RUC Availability Bid Cost based on the Multi-Stage Generating Resource Generating Unit level. The RUC Availability Cost for a Bid Cost for an RMR Resource for a Settlement Interval is zero.

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11.8.4.1 RTM Bid Cost Calculation

For each Settlement Interval, the CAISO shall calculate RTM Bid Cost for each Bid Cost Recovery Eligible Resource, as the algebraic sum of the RTM Start-Up Cost, RTM Minimum Load Cost, RTM Transition Cost, RTM Pump Shut-Down Cost, RTM Energy Bid Cost, RTM Pumping Cost and RTM AS Bid Cost. For each Settlement Interval, the CAISO shall calculate RTM Bid Cost for each RMR Resource as the algebraic sum of the RTM Start-Up Cost adjusted to remove Opportunity Costs and Major Maintenance Costs, RTM Transition Costs adjusted to remove Opportunity Costs and Major Maintenance Costs, RTM Energy Bid Cost adjusted to remove Opportunity Costs and Major Maintenance Costs, and RTM AS Bid Cost. For Multi-Stage Generating Resources, in addition to the specific RTM Bid Cost rules described in Section 11.8.4.1, the rules described in Section 11.8.1.3 will be applied to further determine the applicable MSG Configuration-based CAISO Market Start-Up Cost, Transition Cost, and Minimum

Load Cost, as modified pursuant to Section 30.7.10.2, if applicable, in given Settlement Interval. For Multi-Stage Generating Resources, the incremental RTM Start-Up Cost, Minimum Load Cost, as modified pursuant to Section 30.7.10.2, if applicable, and Transition Cost to provide RTM committed Energy or awarded Ancillary Services capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the RTM optimization rules in specified in Section 34.

11.8.4.1.1 RTM Start-Up Cost

For each Settlement Interval of the applicable Real-Time Market Commitment Period, the Real-Time Market Start-Up Cost shall consist of the Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market divided by the number of Settlement Intervals in the applicable Real-Time Market Commitment Period. For each Settlement Interval, only the Real-Time Market Start-Up Cost in a CAISO Real-Time Market Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RTM Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RTM. The following rules shall be applied in sequence and shall qualify the Real-Time Market Start-Up Cost in a Real-Time Market Commitment Period:

- (a) The Real-Time Market Start-Up Cost is zero if there is a Real-Time Market Self-Commitment Period within the Real-Time Market Commitment Period.
- (b) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource has been manually pre-dispatched under an Legacy RMR Contract or the resource is flagged as an Legacy RMR Dispatch in the Day-Ahead Schedule or Real-Time Market anywhere within that Real-Time Market Commitment Period.
- (c) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.11.2 to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.
- (d) The Real-Time Market Start-Up Cost is zero if there is no Real-Time Market Start-Up at the start of that Real-Time Market Commitment Period because the Real-Time Market Commitment Period is the continuation of an IFM or RUC Commitment Period from the

previous Trading Day.

- (e) If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable Real-Time Market Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up, the Real-Time Market Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.
- (f) The Real-Time Market Start-Up Cost shall be qualified if an actual Start-Up occurs within that Real-Time Market Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Interval(s) indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Interval that falls within the CAISO Real-Time Market Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether its metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3. The CAISO will determine that the Multi-Stage Generating Resource is On based on the MSG Configuration that the CAISO has committed in the Real-Time Market.
- (g) The Real-Time Market Start-Up Cost for a Real-Time Market Commitment Period shall be qualified if an actual Start-Up occurs earlier than the start of the Real-Time Market Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the Real-Time Market Start-Up, otherwise the Start-Up Cost is zero for the Real-Time Market Commitment Period.
- (h) For Short-Start Units, the first Start-Up Costs within a CAISO IFM Commitment Period are qualified IFM Start-Up Costs as described above in Section 11.8.2.1.1(g). For subsequent Start-Ups of Short-Start Units after the CAISO Shuts Down a resource and then the CAISO issues a Start-Up Instruction pursuant to a CAISO RTM Commitment within the CAISO IFM Commitment Period, the Start-Up Costs shall be qualified as Real-Time Start-Up costs, provided that the resource actually Shut-Down and Started-Up based on CAISO Shut-Down and Start-Up Instructions.

11.8.4.1.2 RTM Minimum Load Cost

The RTM Minimum Load Cost is the Minimum Load Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market, as adjusted pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under a Legacy RMR Contract or the resource has been flagged as a Legacy RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) for all resources that are not Multi-Stage Generating Resources, that Settlement Interval is included in an IFM or RUC Commitment Period; or (4) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.11.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. A resource's RTM Minimum Load Costs for Bid Cost Recovery purposes are subject to the application of the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of Section 11.8.1.3. For all Bid Cost Recovery Eligible Resources that the CAISO Shuts Down, either through an Exceptional Dispatch or an Economic Dispatch through the Real-Time Market, from its Day-Ahead Schedule that was also from a CAISO commitment, the RTM Minimum Load Costs will include negative Minimum Load Costs for Energy between the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and zero (0) MWhs.

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11.8.4.1.5 RTM Energy Bid Cost

For any Settlement Interval, the RTM Energy Bid Cost for the Bid Cost Recovery Eligible Resource except Participating Loads shall be computed as the sum of the products of each RTD Instructed Imbalance Energy portion, except Standard Ramping Energy, Residual Imbalance Energy, FMM

Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Energy Bid prices, the Default Energy Bid price, or the Locational Marginal Price, if any, as further described in Section 11.17, for each Dispatch Interval in the Settlement Interval. For Settlement Intervals for which the Bid Cost Recovery Eligible Resource is ramping up to or down from a related Minimum Load that was increased pursuant to Section 9.3.3 for the Real-Time Market, the RTM Energy incurred by the ramping will be classified as FMM Derate Energy or RTD Derate Energy and will not be included in Bid Cost Recovery. For a Bid Cost Recovery Eligible Resource that is ramping up to or down from an Exceptional Dispatch, the relevant Energy Bid Cost related to the Energy caused by ramping will be settled on the same basis as the Energy Bid used in the Settlement of the Exceptional Dispatch that led to the ramping. The RTM Energy Bid Cost for a Bid Cost Recovery Eligible Resource, including Participating Loads and Proxy Demand Response Resources, for a Settlement Interval is subject to the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric as described in Section 11.17. Any Uninstructed Imbalance Energy in excess of FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy is also not eligible for Bid Cost Recovery. For a Multi-Stage Generating Resource the CAISO will determine the RTM Energy Bid Cost based on the Generating Unit level. For RMR Resources, the CAISO will determine the RTM Energy Bid Cost based on the relevant Energy Bid adjusted to remove Opportunity Costs.

11.8.4.1.6 RTM AS Bid Cost

For each Settlement Interval, the Real-Time Market AS Bid Cost shall be the product of the average Real-Time Market AS Award from each accepted AS Bid submitted in the Settlement Interval for the Real-Time Market, reduced by any relevant tier-1 No Pay capacity in that Settlement Interval (but not below zero), with the relevant AS Bid price. The average Real-Time Market AS Award for a given AS in a Settlement Interval is the sum of the 15-minute Real-Time Market AS Awards in that Settlement Interval, each divided by the number of 15-minute Commitment Intervals in a Trading Hour and prorated to the duration of the Settlement Interval (10/15 if the Real-Time Market AS Award spans the entire Settlement Interval, or 5/15 if the Real-Time Market AS Award spans half the Settlement Interval). For a Multi-Stage Generating Resource the CAISO will determine the RTM AS Bid Cost based on the Generating Unit level.

The Real-Time Market AS Bid Cost shall also include Mileage Bid Costs. For each Settlement Interval, the Real-Time Mileage Bid Cost shall be the product of Instructed Mileage associated with a Real-Time Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price divided by the number of Settlement Intervals for the Real-Time Market in a Trading Hour. The CAISO will determine and calculate the Real Time Market Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. For an RMR Resource, the RTM AS Bid Cost shall be zero.

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11.10.1.4 Voltage Support

The total payments for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of commitment costs, FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy Settlement as a result of Exceptional Dispatch pursuant to CAISO Tariff Section 11.5.6 and any the opportunity costs, if any, due to an Exceptional Dispatch that ~~of~~ limiting Energy output to enable reactive energy production ~~in response to a CAISO instruction~~. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the FMM or RTD LMP minus the higher of the Energy Bid price or the Default Energy Bid price. The Opportunity Cost for an RMR Resource shall be calculated based on the product of the Energy amount that would have cleared the market and the price of the FMM or RTD LMP minus the higher of the Energy Bid price adjusted to remove Opportunity Costs or the Default Energy Bid price adjusted to remove Opportunity Costs.

If applicable, Scheduling Coordinators shall also receive any payments under any long-term contracts due for the Settlement Period. FMM Exceptional Dispatches or RTD Exceptional Dispatches for incremental or decremental Energy needed for Voltage Support procured through Exceptional Dispatch pursuant to Section 34.11.2 will be paid and settled in accordance with Section 11.5.6. RMR Resources and Condition 2 Legacy RMR Units providing Voltage Support are not eligible for an Opportunity Cost compensated in accordance with the RMR Contract rather than pursuant to this Section 11.10.1.4.

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11.13 Settlements ~~and Billing~~ of RMR Charges and Payments

This section applies to RMR Resources, which are resources subject to an RMR Contract entered into after September 1, 2018. For Legacy RMR Units, refer to Appendix H.

11.13.1 Daily RMR Settlement Objectives

The Daily RMR Settlement for each RMR Resource will include the Daily RMR Capacity Payment plus the Daily Variable Cost Payment plus the Daily Additional Cost Settlement minus the Daily RMR Excess Revenues minus the Daily RMR Exceptional Dispatch Revenues. The objective of this Section 11.13 is to inform RMR Owners which are responsible for preparation of Invoices, and Responsible Utilities, which are responsible for payment of Reliability Must-Run Charges pursuant to Section 41.7, of the manner in which the RMR Charges referred to in Section 41.6 shall be verified and settled and of the procedures regarding the billing, invoicing and payment of these RMR Charges.

11.13.2 Daily RMR Capacity Payment Accounts

The Daily RMR Capacity Payment consists of the Daily Availability Payment plus the Daily Surcharge Payment from Schedule B of the applicable RMR Contract.

11.13.2.1 Facility Trust Account

The CAISO shall establish a Facility Trust Account for each RMR Contract. Each Facility Trust Account shall consist of two segregated commercial bank accounts: (1) an RMR Owner Facility Trust Account, which will be held in trust for the RMR Owner, and (2) a Responsible Utility Facility Trust Account, which will be held in trust for the Responsible Utility. RMR Charges paid by the Responsible Utility to the CAISO in connection with the RMR Contract will be deposited into the RMR Owner Facility Trust Account and RMR Payments from the CAISO to the RMR Owner will be withdrawn from such account, all in accordance with this Section 11.13, Section 41.6, and the RMR Contract. RMR Refunds received by the CAISO from the RMR Owner in accordance with the RMR Contract will be deposited into the Responsible Utility Facility Trust Account and such RMR Refunds will be withdrawn from such account and paid to the Responsible Utility in accordance with this Section 11.13, Section 41.6, and the RMR Contract. The RMR

~~Owner Facility Trust Account and the Responsible Utility Facility Trust Account shall have no other funds commingled in them at any time.~~

~~11.13.2.2 RMR Owner's Settlement Accounts~~

~~Each RMR Owner shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fedwire, and, at its option, may also establish and maintain a Settlement Account for transfers via ACH, where payments to and from the Facility Trust Accounts shall be made in accordance with this Section 11.13. Each RMR Owner shall notify the CAISO of its Settlement Account details upon entering into its RMR Contract with the CAISO and may notify the CAISO from time to time of any changes by giving at least fifteen (15) days notice before the new account becomes operational.~~

~~11.13.3 Daily Variable Cost Payment~~RMR Payments Calendar

~~For each Trading Day, the CAISO shall calculate IFM Bid Cost Recovery Amount described in Section 11.8.2 and RTM Bid Cost Recovery Amount described in Section 11.8.4 for each RMR Resource while adjusting to remove Major Maintenance Cost and Opportunity Cost adders, calculated pursuant to Section 30.4.1.1.6, including any if the limits used to calculate the Opportunity Cost are established pursuant to Article 6 of the RMR Contract. The RMR Resource shall receive any Unrecovered Bid Cost Uplift Payment(s) as described in Section 11.8.5. The Daily Variable Cost Uplift Settlement is the sum of the IFM Unrecovered Bid Cost Uplift Payment as described in Section 11.8.5.1 and the RUC and RTM Unrecovered Bid Cost Uplift Payment as described in Section 11.8.5.2. The CAISO shall issue an RMR Payments Calendar for the purposes of this Section 11.13 which shall contain those dates set forth in Section 9.1 (b) of the RMR Contract and the following information:~~

- ~~(a) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Estimated RMR Invoice pursuant to their RMR Contract;~~
- ~~(b) the date on which the CAISO is required to initiate proposed adjustments to the Estimated RMR Invoice to the Responsible Utility and to the RMR Owner;~~
- ~~(c) the date by which the RMR Owners are required to issue their Revised Estimated RMR Invoice reflecting appropriate revisions to the original Estimated RMR Invoice agreed upon by the Responsible Utility and the RMR Owner (In the event no revisions are required, the RMR Owner shall submit an e-mail~~

~~to the CAISO and Responsible Utility stating there are no revisions and the Estimated RMR Invoice should be deemed as the Revised Estimated RMR Invoice.);~~

~~(d) — the date on which the CAISO is required to issue to the Responsible Utility or RMR Owner the CAISO Invoice based on the Revised Estimated RMR Invoice;~~

~~(e) — the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Adjusted RMR Invoice pursuant to their RMR Contract;~~

~~(f) — the date on which the CAISO is required to initiate proposed adjustments to the Adjusted RMR Invoice to the Responsible Utility and the RMR Owner;~~

~~(g) — the date by which the RMR Owners are required to issue their Revised Adjusted RMR Invoice reflecting appropriate revisions to the original Adjusted RMR Invoice agreed upon by the Responsible Utility and the RMR Owner. (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Adjusted RMR Invoice should be deemed as the Revised Adjusted RMR Invoice.);~~

~~(h) — the date on which the CAISO is required to issue to the Responsible Utility or the RMR Owner the CAISO Invoice based on the Revised Adjusted RMR Invoice;~~

~~(i) — the dates by which the Responsible Utility and RMR Owner must have notified the CAISO of any dispute in relation to the CAISO Invoice, Estimated RMR Invoice or Adjusted RMR Invoice (including the Revised Estimated RMR Invoice and Revised Adjusted RMR Invoice) or the CAISO's proposed adjustments;~~

~~(j) — the date and time by which Responsible Utilities or RMR Owners are required to have made payments into the RMR Owner Facility Trust Account or Responsible Utility Facility Trust Account in payment of the CAISO Invoices relating to each Revised Estimated RMR Invoice and each Revised Adjusted RMR Invoice; and~~

~~(k) — the date and time by which the CAISO is required to have made payments into the RMR Owners' Facility Trust Accounts or Responsible Utilities' Facility Trust Accounts in payment of the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice pursuant to their RMR Contract.~~

~~If the day on which any CAISO Invoice, any RMR Invoice, or any payment is due is not a Business Day, such statement or invoice shall be issued or payment shall be due on the next succeeding Business Day.~~

~~Information relating to charges for Energy or Ancillary Services which are payable by the CAISO pursuant to Sections 8 and 11 to the Scheduling Coordinators representing the RMR Owners will be contained in the RMR Payments Calendar.~~

~~11.13.4 Daily Additional Cost Settlement Information Provided By RMR Owners To The CAISO~~

~~For each Trading Day, the CAISO will calculate any additional Costs associated with an RMR Resource responding to a CAISO-issued Exceptional Dispatch pursuant to Section 34.11 to calculate the Daily Additional Cost Settlement. Each RMR Invoice and any Prior Period Change Worksheet shall include, or be accompanied by, information about RMR Payments and RMR Refunds in sufficient detail to enable the CAISO to verify all RMR Charges and all RMR Refunds, and such information shall be copied to the Responsible Utility. Each RMR Invoice shall separately show the amounts due for services from each Reliability Must Run Unit.~~

~~This information shall be provided in an electronic form in accordance with the RMR Invoice template developed jointly and agreed to by the CAISO, Responsible Utilities and RMR Owners in accordance with the RMR Contracts and the principles in Schedule O to those RMR Contracts, and maintained on the CAISO Website.~~

~~11.13.5 Daily RMR Excess Revenues Validation of RMR Charges and RMR Refunds~~

~~For each Trading Day, the CAISO will calculate the Daily RMR Excess Revenues as the total CAISO daily sum of IFM excess payment, RC excess payment, and RTM excess payment. The RMR Resource will have its RMR Capacity Payment reduced by the IFM excess payment, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2 over a Trading Day is negative. The RMR Resource will have its RMR Capacity Payment reduced by the RUC excess payment, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3 over a Trading Day is negative. The RMR Resource will have its RMR Capacity Payment reduced by the RTM excess payment, if the net of all RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 over a Trading Day is negative. The CAISO shall validate, based on information provided by each RMR Owner pursuant to paragraph 4, the amount due from the relevant Responsible Utility for RMR Charges and the amount due to the relevant Responsible Utility for RMR Refunds applicable to the Reliability Must Run Generation and Ancillary Services of that~~

~~RMR Owner, but shall not represent or warrant the accuracy or completeness of the information provided by the RMR Owner. The CAISO shall provide copies of its exception report and information to the relevant Responsible Utility and RMR Owner.~~

~~The CAISO shall not be obligated to pay the Responsible Utility any RMR Refunds unless and until the CAISO has received corresponding RMR Refunds into the Responsible Utility Facility Trust Account from the RMR Owner.~~

11.13.6 Daily RMR Exceptional Dispatch Excess Revenues ~~Description of the Billing Process~~

~~Daily Exceptional Dispatch excess payment is the total CAISO daily sum of Settlement Interval Exceptional Dispatch surplus payments. For each Settlement Interval, the Exceptional Dispatch surplus payment is the net of Settlement Bid Cost Amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch and FMM IIE Settlement Amounts and RTD Instructed Imbalance Energy from Exceptional Dispatch pursuant to Section 11.5.6, where Exceptional Dispatch Settlement amounts for exceeds Exceptional Dispatch Bid Cost Settlement amounts. Bid Cost Settlement amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch is calculated as the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant Bid Cost Settlement price. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs.~~

11.13.6.1 ~~Issuance of RMR Invoices by the RMR Owner~~

~~Each RMR Owner shall provide any RMR Invoice to the CAISO in the electronic form, mutually agreed by the parties, which may be updated by agreement with the CAISO, Responsible Utilities and RMR Owners from time to time in accordance with the requirements of Schedule O of the RMR Contract, on each of the days specified in the RMR Payments Calendar, and shall send to the relevant Responsible Utility a copy~~

of that invoice on the day of issue.

~~11.13.6.2 — Review of the RMR Invoice by the CAISO~~

~~The CAISO shall review each RMR Invoice within the period specified in the RMR Payments Calendar and is required to initiate proposed adjustments to that invoice to the RMR Owner and the relevant Responsible Utility. Once the CAISO initiates proposed adjustments, the RMR Owner shall issue a Revised Estimated RMR Invoice or Revised Adjusted RMR Invoice.~~

~~11.13.6.3 — Issuance of CAISO Invoices by the CAISO~~

~~The CAISO shall provide to the Responsible Utility and the RMR Owner on the dates specified in the RMR Payments Calendar CAISO Invoices showing:~~

- ~~(a) — the amounts which, on the basis of the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice, as the case may be, and pursuant to Section 11.13, are to be paid by or to the relevant Responsible Utility and RMR Owner;~~
- ~~(b) — the Payment Date, being the date on which such amounts are to be paid and the time for such payment;~~
- ~~(c) — details (including the account number, bank name and Fedwire transfer instructions or, if applicable, ACH transfer instructions) of the RMR Owner Facility Trust Account to which any amounts owed by the Responsible Utility are to be paid, or of the RMR Responsible Utility Facility Trust Account to which any amounts owed by the RMR Owner are to be paid.~~

~~11.13.6.4 — Resolving Disputes Relating to Invoices~~

~~11.13.6.4.1 — Review of the Invoices by the Responsible Utility~~

~~Each Responsible Utility shall have the review period specified in the RMR Payments Calendar to review RMR Invoices and CAISO Invoices, validate and propose adjustments to such invoices, and notify the CAISO of any dispute. Notwithstanding the above, each Responsible Utility shall have the review time specified in Section 41.6 to dispute such invoice.~~

~~11.13.6.4.2 — Dispute Notice~~

~~If a Responsible Utility disputes any item or calculation relating to any revised RMR Invoice, or any CAISO Invoice, it shall provide the CAISO, with a copy to the RMR Owner, via email or such other communication mode as the parties may mutually agree upon, a notice of dispute at any time from the~~

~~receipt of the copy of such invoice from the RMR Owner or the CAISO to the expiration of the period for review set out in Section 11.13. The CAISO shall initiate a corresponding dispute with the RMR Owner under the RMR Contract.~~

~~11.13.6.4.3 — Contents of Dispute Notice~~

~~The notice of dispute shall state clearly the Revised Estimated RMR Invoice, Revised Adjusted RMR Invoice, or CAISO Invoice in dispute, the item disputed (identifying specific Reliability Must Run Units and time periods), the reasons for the dispute, and the proposed amendment (if appropriate) and shall be accompanied by all available evidence reasonably required to support the claim.~~

~~11.13.6.4.4 — Prior Period Change Agreed to by the RMR Owner~~

~~Subject to Sections 11.13.6.4.5 or 11.13.6.4.6, if the RMR Owner agrees with the proposed change, the change shall be shown in a Prior Period Change Worksheet and included in the next appropriate May or December Estimated RMR Invoice as specified in Article 9.1 of the RMR Contract.~~

~~11.13.6.4.5 — Dispute Involving the RMR Owner~~

~~If the dispute relates to an item originating in any RMR Invoice, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.~~

~~11.13.6.4.6 — Dispute Involving an Alleged Error or Breach or Default of the CAISO's Obligations Under Section 41.6~~

~~If the dispute relates to an alleged error or breach or default of the CAISO's obligations under Section 41.6, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.~~

~~11.13.6.4.7 — Payment Pending Dispute~~

~~Subject to Section 41.6, if there is any dispute relating to an item originating in an RMR Invoice that is not resolved prior to the Payment Date, the Responsible Utility shall be obligated to pay any amounts shown in the relevant CAISO Invoice on the Payment Date irrespective of whether any such dispute has been resolved or is still pending. The Responsible Utility may notify the CAISO that the payment is made under protest, in which case the CAISO shall notify the RMR Owner that payment is made under protest. In accordance with Section 9.6 of the RMR Contract, if such dispute is subsequently resolved in favor of the Responsible Utility that made the payment under protest, then any amount agreed or determined to be owed by the RMR Owner to the CAISO shall be repaid by the RMR Owner to the CAISO, with interest~~

~~at the interest rate specified in the RMR Contract from the date of payment by the CAISO to the RMR Owner of the disputed amount to the date of repayment by the RMR Owner, as specified in Section 11.13.6.4.4. If an RMR Owner does not agree to make the change pursuant to Section 11.13.6.4.4, then such repayment shall be made by CAISO's deduction of such amount from the next CAISO Invoices until extinguished, or if the RMR Contract has terminated, by paying a RMR Refund in such amount to the Responsible Utility Facility Trust Account, subject to the limitation of Section 41.6.2.~~

11.13.7 Daily RMR Cost Allocation Payment Procedures

The CAISO shall allocate amounts paid to RMR Resources through the Daily RMR Settlement to Scheduling Coordinators representing Load-Serving Entities that serve load in the TAC Area(s) in which the need for the RMR Contract arose. These amounts paid will be allocated to each such Scheduling Coordinator based on the pro-rated share of each Load-Serving Entity's TAC Area Metered Demand total TAC Area metered Demand recorded in the CAISO settlement system for actual days of any settlement month period for which the RMR Contract was in effect.

11.13.7.1 Payment Date

~~The Payment Date for RMR Payments to and RMR Refunds from RMR Owners shall be the due date specified in the RMR Contract and in the RMR Payments Calendar and the same shall be the Payment Date for the CAISO and Responsible Utilities in relation to RMR Charges, provided that the RMR Owner has furnished the Responsible Utility and the CAISO with the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice no less than nine (9) calendar days before the due date. The Payment Date shall be stated on the CAISO Invoice.~~

11.13.7.2 Payment Method

~~All payments and refunds by the CAISO to RMR Owners and Responsible Utilities shall be made via Fedwire or, if chosen by the RMR Owner or Responsible Utility, via ACH. However, if the RMR Owner is also the Responsible Utility, at the discretion of the RMR Owner, payments and refunds may be made by memorandum account instead of by Fedwire transfer or ACH.~~

11.13.7.3 Payment by RMR Owners and Responsible Utilities.

~~Each RMR Owner shall ensure that the amount shown on the relevant CAISO Invoice as payable by the RMR Owner shall be received into the Responsible Utility Facility Trust Account not later than 10:00 am~~

on the Payment Date.

Subject to Section 41.6, each Responsible Utility shall ensure that the amount shown on the relevant CAISO Invoice as payable by the Responsible Utility shall be received into the RMR Owner Facility Trust Account not later than 10:00 am on the Payment Date.

~~11.13.7.4 — Payment by the CAISO~~

~~The CAISO shall verify the amounts available for distribution to Responsible Utilities and/or RMR Owners on the Payment Date and shall give instructions to the CAISO Bank to remit from the relevant Facility Trust Account to the relevant settlement account maintained by each Responsible Utility or RMR Owner the amounts determined by the CAISO to be available for payment to each Responsible Utility or RMR Owner.~~

~~11.13.7.5 — Payment Default by RMR Owner or Responsible Utility~~

~~If by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes the RMR Default Amount has not been received, the CAISO shall immediately notify the RMR Owner and the Responsible Utility. Where the RMR Default Amount was due from the Responsible Utility, the CAISO and RMR Owner shall proceed as set forth in Section 41.6 and the applicable provision of the RMR Contract. Where the RMR Default Amount was due from the RMR Owner, the CAISO and the Responsible Utility shall proceed as set forth in the applicable provision of the RMR Contract.~~

~~11.13.7.5.1 — Default Relating to Market Payments~~

~~For the avoidance of doubt, non payment to RMR Owners, or their respective Scheduling Coordinators, of charges for Energy or Ancillary Services which are payable by the CAISO to Scheduling Coordinators representing such RMR Owners shall be dealt with pursuant to Sections 11.3 to 11.30 (inclusive).~~

~~11.13.7.6 — Set off~~

~~11.13.7.6.1 — Set off in the Case of a Defaulting Responsible Utility~~

~~The CAISO is authorized to apply any amount to which any defaulting Responsible Utility is or will be entitled from the Responsible Utility Facility Trust Account in or towards the satisfaction of any amount owed by that Responsible Utility to the RMR Owner Facility Trust Account arising under the settlement and billing process set out in this Section 11.13.~~

~~For the avoidance of doubt, neither the CAISO nor any Responsible Utility will be authorized to set off any~~

~~amounts owed by that Responsible Utility in respect of one Facility Trust Account against amounts owed to that Responsible Utility in respect of another Facility Trust Account or any amounts owed by that Responsible Utility under this Section 11.13 against amounts owed to that Responsible Utility except as provided by Section 41.6.~~

~~**11.13.7.6.2 — Set-off in the Case of a Defaulting RMR Owner**~~

~~The CAISO is authorized to apply any amount to which any defaulting RMR Owner is or will be entitled from the RMR Owner Facility Trust Account in or towards the satisfaction of any amount owed by that RMR Owner to the Responsible Utility Facility Trust Account in accordance with Article 9 of the RMR Contract and Sections 41.6 and 11.10.2.~~

~~For the avoidance of doubt, neither the CAISO nor any RMR Owner will be authorized to set off any amounts owed by that RMR Owner in respect of one Facility Trust Account against amounts owed to that RMR Owner in respect of another Facility Trust Account or any amounts owed by that RMR Owner under this Section 11.13 against amounts owed to that RMR Owner under the RMR Contract.~~

~~**11.13.7.7 — Default Interest**~~

~~Responsible Utilities shall pay interest on RMR Default Amounts to the CAISO at the interest rate specified in the RMR Contract for the period from the relevant Payment Date to the date on which the payment is received by the CAISO.~~

~~RMR Owners shall pay interest to the CAISO on RMR Default Amounts at the interest rate specified in the RMR Contract for the period from the date on which payment was due to the date on which the payment is received by the CAISO.~~

~~The CAISO shall pay interest to RMR Owners at the interest rate specified in the RMR Contract for the period from the date on which payment is due under the RMR Contract to the date on which the payment is received by the RMR Owner.~~

~~The CAISO shall pay interest to Responsible Utilities at the interest rate specified in the relevant RMR Contract for the period from the date following the date it received an RMR Refund from the relevant RMR Owner to the date in which the payment is received by the relevant Responsible Utility.~~

~~Where payment of an RMR Default Amount is made by exercise of a right of set-off or deduction, payments shall be deemed received when payment of the sum which takes that set-off or deduction into~~

account is made.

11.13.8 [Not Used] Overpayments

~~The provisions of Sections 11.29.19.3 and 11.29.19.4 shall apply to RMR Owners and Responsible Utilities which have been overpaid by the CAISO and references to CAISO Creditors in these sections and in the relevant Sections of the CAISO Tariff shall be read, for the purposes of this Section 11.13, to mean RMR Owners and Responsible Utilities as applicable. Disputed amounts shall not be considered to be overpayments until and unless the dispute is resolved.~~

11.13.9 [Not Used] Communications

~~11.13.9.1 — Method of Communication~~

~~CAISO Invoices will be issued by the CAISO via the CAISO's secure communication system. RMR Invoices and Prior Period Change Worksheets will be issued by the RMR Owner in an electronic form mutually agreed by the parties and maintained on the CAISO Website. The CAISO shall also post Prior Period Change examples and Prior Period Change guidelines as specified in Article 9.1 of the RMR Contract.~~

~~11.13.9.2 — Emergency Procedures~~

~~11.13.9.2.1 — Emergency Affecting the CAISO~~

~~In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may deem any Estimated RMR Invoice or any Adjusted RMR Invoice to be correct without thorough verification and may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13.~~

~~11.13.9.2.2 — Emergency Affecting the RMR Owner~~

~~In the event of an emergency or a failure of any of the RMR Owner's systems, the RMR Owner may use Estimated RMR Invoices as provided in the applicable section of the RMR Contract or may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13 and its RMR Contract. Details of the variation will be published on the CAISO Website. Communications of an emergency nature on a due date or a Payment Date relating to payments shall be made by the fastest practical means including by telephone.~~

11.13.10 [Not Used] Confidentiality

~~The provisions of Sections 11.29.10.5 and 20.5 shall apply to this Section 11.13 between and among the RMR Owners, the CAISO and Responsible Utilities. Except as may otherwise be required by applicable law, all confidential information and data provided by RMR Owner or the CAISO to the Responsible Utility pursuant to the RMR Contract, Section 41.6 or this Section 11.13 shall be treated as confidential and proprietary to the providing party to the extent required by Section 12.5 and Schedule N of the RMR Contract and will be used by the receiving party only as permitted by such Section 12.5 and Schedule N.~~

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11.18.6 Submission of ~~Emissions Cost Invoices~~ by RMR Owner

~~Scheduling Coordinators on behalf of RMR Resources for Generators eligible for Bid Cost Recovery that incur Emissions C costs during a CAISO Commitment Period that are not recoverable pursuant to the CAISO Daily RMR Settlement but are recoverable under the applicable RMR Contract may submit to the CAISO an invoice pursuant to Schedule C of the RMR Contract in the form specified on the CAISO Website with appropriate documentation. The CAISO will review and any amounts accepted will be paid by the CAISO on the next practicable Invoice and allocated pursuant to Section 11.13.5. (the Emissions Cost Invoice) for the recovery of such Emissions Costs. Emissions Cost Invoices shall not include any Emissions Costs specified in an RMR Contract for a unit. All Emissions Cost Invoices must include a copy of all final invoice statements from air quality districts demonstrating the Emissions Costs incurred by the applicable Generating Unit, and such other information as the CAISO may reasonably require to verify the Emissions Costs incurred during a CAISO Commitment Period.~~

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11.29.24.1 Preparation

In September of each year, the CAISO will prepare a draft CAISO Payments Calendar for the following calendar year showing for each Trading Day:

- (a) The date by which Scheduling Coordinators are required to provide Actual Settlement

Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for all their Scheduling Coordinator Metered Entities for each Settlement Period in the Trading Day;

- (b) The date on which the CAISO will issue Initial Settlement Statements T+3B and Invoices and Payment Advices to Scheduling Coordinators or CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (c) The date on which the CAISO will issue the Recalculation Settlement Statements T+12B; T+55B, T+9M, T+18M, T+33M, and T+36M, and Invoices and Payment Advices to Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs for that Trading Day;
- (d) The dates by which Scheduling Coordinators, CRR Holders, Black Start Generators and Participating TOs are required to notify the CAISO of any disputes in relation to their Recalculation Settlement Statements T+12B, T+55B, T+9M, T+18M and T+33M.
- (e) The date and time by which CAISO Debtors are required to have made payments into the CAISO Clearing Account in payment of Invoices for that Trading Day;
- (f) The dates and times on which the CAISO Clearing Account will remit payments to the CAISO Creditors of amounts owing to them for that Trading Day; and
- (g) In relation to ~~Reliability Must Run~~RMR Charges and RMR ~~Payments~~compensation, the details are set out in Sections ~~11.13-3~~ and 41 and Appendix H for Legacy RMR Units of the CAISO Tariff.

* * * * *

12.7 ~~[Not Used] Credit Obligation of New Responsible Utilities for RMR Costs~~

~~If a Responsible Utility first executed the TCA after April 1, 1998 (a New Responsible Utility) and if:~~

- ~~(i) the senior unsecured debt of the New Responsible Utility is rated or becomes rated at less than A- from Standard & Poor's ("S&P") or A3 from Moody's Investment Services ("Moody's"), and~~

~~(ii) — Such ratings do not improve to A or better from S&P or A3 or better from Moody's within 60 days,~~

~~the New Responsible Utility shall issue and confirm to the CAISO an irrevocable and unconditional letter of credit in an amount equal to three times the highest monthly payment invoiced by the CAISO to the New Responsible Utility (or the prior Responsible Utility) in connection with services under Reliability Must-Run Contracts in the last 3 months for which invoices have been issued. The letter of credit must be issued by a bank or other financial institution whose senior unsecured debt rating is not less than A from S&P and A2 from Moody's. The letter of credit shall be in such form as the CAISO may reasonably require from time to time by notice to the New Responsible Utility and shall authorize the CAISO or the RMR Owner to draw on the letter of credit for deposit solely into the RMR Owner Facility Trust Account in an amount equal to any amount due and not paid by the Responsible Utility under the CAISO Invoice. The security provided by the New Responsible Utility pursuant to this Section is intended to cover the New Responsible Utility's outstanding liability for payments it is liable to make to the CAISO under this Section, including monthly payments, any reimbursement for capital improvement, termination fees and any other payments to which the CAISO is liable under Reliability Must-Run Contracts.~~

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30.5.2.5 Supply Bids for Metered Subsystems

Consistent with the bidding rules specified in this Section 30.5, Scheduling Coordinators that represent MSS Operators may submit Bids for Energy and Ancillary Services, including Self-Schedules and Submissions to Self-Provide an Ancillary Service, to the DAM. All Bids to supply Energy by MSS Operators must identify each Generating Unit on an individual unit basis. The CAISO will not accept aggregated Generation Bids without complying with the requirements of Section 4.9.12 of the CAISO Tariff. All Scheduling Coordinators that represent MSS Operators must submit Demand Bids at the relevant MSS LAP. Scheduling Coordinators that represent MSS Operators must comply with Section 4.9 of the CAISO Tariff. Scheduling Coordinators that represent MSS Operators that have opted out of RUC participation pursuant to Section 31.5 must Self-Schedule one hundred percent (100%) of the Demand

Forecast for the MSS. For an MSS that elects Load following, the MSS Operator shall also self-schedule or bid Supply to match the Demand Forecast. All Bids for MSSs must identify each Generating Unit on an individual unit basis or a System Unit. For an MSS that elects Load following consistent with Section 4.9.13.2, the Scheduling Coordinator for the MSS Operator must include the following additional information with its Bids: the Generating Unit(s) that are Load following; the range of the Generating Unit(s) being reserved for Load following; whether the quantity of Load following capacity is either up or down; and, if there are multiple Generating Units in the MSS, the priority list or distribution factors among the Generating Units. The CAISO will not dispatch the resource within the range declared as Load following capacity, leaving that capacity entirely available for the MSS to dispatch. The CAISO uses this information in the IFM runs and the RUC to simulate MSS Load following. The Scheduling Coordinator for the MSS Operator may change these characteristics through the Bid submission process in the RTM. If the Load following resource is also an RMR Unit, the MSS Operator must not specify the ~~Maximum Net Dependable RMR Contract~~ Capacity specified in the RMR Contract as Load following up or down capacity to allow the CAISO to access such capacity for RMR Dispatch.

* * * * *

31.2 Day-Ahead MPM Process

After the Market Close of the DAM, and after the CAISO has validated the Bids pursuant to Section 30.7, the CAISO will perform the MPM process, which is a single market run that occurs prior to the IFM Market Clearing run. The Day-Ahead MPM process determines which Bids need to be mitigated to the applicable Default Energy Bids in the IFM pursuant to Section 31.2.3. For Maximum Net Dependable Capacity of Legacy RMR Units, Bids will be mitigated to the and when RMR Proxy Bids pursuant to Section 31.2.3 should be considered in the IFM for RMR Units. The Day-Ahead MPM process optimizes resources to meet Demand reflected in Demand Bids, including Export Bids and Virtual Demand Bids, and to procure one hundred (100) percent of Ancillary Services requirements based on Supply Bids submitted to the DAM. Virtual Bids and Bids from Demand Response Resources, Participating Load, and Non-Generator Resources are considered in the MPM process, but are not subject to Bid mitigation. Bids

from Participating Load resources that are not subject to Bid mitigation will also be considered in the MPM process. Bids from resources comprised of multiple technologies that include Non-Generator Resources will remain to be subject to all applicable market power mitigation under the CAISO Tariff, including Local Market Power Mitigation. The mitigated or unmitigated Bids and RMR Proxy Bids identified in the MPM process for all resources that cleared in the MPM are then passed to the IFM. The CAISO performs the MPM process for the DAM for the twenty-four (24) hours of the targeted Trading Day.

* * * * *

31.2.2 [Not Used] Bid Mitigation for RMR Units

~~For purposes of the MPM process, Condition 1 RMR Units will be treated like non-RMR Units with respect to any capacity in excess of the Maximum Net Dependable Capacity specified in the RMR Contract. For up to the Maximum Net Dependable Capacity specified in the RMR Contract for Condition 1 RMR Units, the portion of the market Bid at and below the Competitive LMP at the RMR Unit's Location will be retained in the IFM. To the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero (0), and that MPM process dispatches a Condition 1 RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the RMR Unit's Location, those Bid prices above the Competitive LMP will be set to the higher of the RMR Proxy Bid or the Competitive LMP. If any Bid prices are set to the level of the RMR Proxy Bid through this process, any incremental dispatch of the resource based on the RMR Proxy Bid will be flagged as an RMR Dispatch in the Day-Ahead Schedule and the resource shall be considered to have received a Dispatch Notice pursuant to the RMR Contract. Condition 1 RMR Units that have not submitted Bids and Condition 2 RMR Units will not be considered in the MPM unless the CAISO issues a manual RMR Dispatch, in which case the dispatch level specified in the manual RMR Dispatch will be protected in the MPM. If a Condition 2 RMR Unit is issued a Manual RMR Dispatch by the CAISO, then RMR Proxy Bids for all of the unit's Maximum Net Dependable Capacity under the RMR Contract will be considered in the MPM. Any incremental dispatch based on RMR Proxy Bids will be flagged as an RMR Dispatch in the Day-~~

~~Ahead Schedule and the resource shall be considered to have received a Dispatch Notice pursuant to the RMR Contract. For a Condition 1 RMR Unit that has submitted Bids and has not been issued a Manual RMR Dispatch, to the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero (0), and that MPM process dispatches a Condition 1 RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the RMR Unit's Location, the resource will be flagged as an RMR dispatch in the Day-Ahead Market if the resource has a Day-Ahead Schedule at a level higher than the dispatch level determined by the Competitive LMP.~~

* * * * *

31.2.3 Bid Mitigation ~~for Non-RMR Units~~

If the non-competitive Congestion component of an LMP calculated in an MPM process is greater than zero (0), then any resource at that Location that is dispatched in that MPM process is subject to Local Market Power Mitigation. Bids on behalf of any such resource, to the extent that they exceed the Competitive LMP at the resource's Location, will be mitigated to the higher of the resource's Default Energy Bid (or RMR Proxy Bid for Legacy RMR Units), as specified in Section 39, or the Competitive LMP at the resource's Location. To the extent a Multi-Stage Generating Resource is dispatched in the MPM process and the non-competitive Congestion component of the LMP calculated at the Multi-Stage Generating Resource's Location is greater than zero, for purposes of mitigation, all the MSG Configurations will be mitigated similarly and the CAISO will evaluate all submitted Energy Bids for all MSG Configurations based on the relevant Default Energy Bids for the applicable MSG Configuration. The CAISO will calculate the Default Energy Bids for Multi-Stage Generating Resources by submitted MSG Configuration. Any market Bids equal to or less than the Competitive LMP will be retained in the IFM.

* * * * *

31.3.1.4 Eligibility to Set the Day-Ahead LMP

All Generating Units, Participating Loads, non-Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, System Resources, System Units, or Constrained Output Generators subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates, MSG Transitions, Forbidden Operating Regions, or other temporal constraints are eligible to set the LMP, provided that (a) the Schedule for the Generating Unit or Resource-Specific System Resource is between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) the Schedule for the Participating Load, non-Participating Load, Proxy Demand Resources, Reliability Demand Response Resources, non-Resource-Specific System Resource, or System Unit is between zero (0) MW and the highest MW value in its Economic Bid or Generated Bid. If (a) a resource's Schedule is constrained by its Minimum Operating Limit or the highest MW value in its Economic Bid or Generated Bid, (b) the CAISO enforces a resource-specific constraint on the resource due to an [Legacy RMR Dispatch of a Legacy RMR Unit](#) or Exceptional Dispatch, (c) the resource is constrained by a boundary of a Forbidden Operating Region or is Ramping through a Forbidden Operating Region, or (d) the resource's full Ramping capability is constraining its inter-hour change in Schedule, the resource cannot be marginal and thus is not eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A Constrained Output Generator will be eligible to set the hourly LMP if any portion of its Energy is necessary to serve Demand.

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31.5.1 RUC Participation

31.5.1.1 Capacity Eligible for RUC Participation

RUC participation is voluntary for capacity that has not been designated as Resource Adequacy Capacity. Scheduling Coordinators may make such capacity available for participation in RUC by submitting a RUC Availability Bid, provided the Scheduling Coordinator has also submitted an Energy Bid (other than a [Virtual Bid](#)) for such capacity into the IFM. Virtual Bids are not eligible to participate in RUC. Capacity from Non-Dynamic System Resources that has not been designated Resource Adequacy

Capacity is not eligible to participate in RUC. Capacity from resources including System Resources that has been designated as qualified Resource Adequacy Capacity must participate in RUC. RUC participation is required for Resource Adequacy Capacity to the extent that Resource Adequacy Capacity is not committed following the IFM. System Resources eligible to participate in RUC will be considered on an hourly basis; that is, RUC will not observe any multi-hour block constraints. In RUC the CAISO may commit a Multi-Stage Generating Resource with a Resource Adequacy must-offer obligation at any MSG Configuration with capacity equal to or greater than the MSG Configuration committed in the Integrated Forward Market. RUC will observe the Energy Limits that may have been submitted in conjunction with Energy Bids to the IFM. Legacy RMR Unit capacity will be considered in RUC in accordance with Section 31.5.1.3. MSS resources may participate in RUC in accordance with Section 31.5.2.3. COG resources are accounted for in RUC, but may not submit or be paid RUC Availability Payments. The ELS Resources committed through the ELC Process conducted two days before the day the RUC process is conducted for the next Trading Day as described in Section 31.7 are binding.

31.5.1.2 RUC Availability Bids

Scheduling Coordinators may only submit RUC Availability Bids for capacity (above the Minimum Load as registered in the Master File) for which they are also submitting an Energy Bid (other than a Virtual Bid) to participate in the IFM. Any available Resource Adequacy Capacity, RMR Capacity, and CPM Capacity will be optimized at \$0/MW in RUC. For Multi-Stage Generating Resources that fail to submit a \$0/MW per hour for the Resource Adequacy Capacity, the CAISO will insert the \$0/MW per hour for the resource's Resource Adequacy Capacity at the MSG Configuration level up to the minimum of the Resource Adequacy Capacity or the PMax of the MSG Configuration. Scheduling Coordinators may submit non-zero RUC Availability Bids for the portion of a resource's capacity that is not Resource Adequacy Capacity or CPM Capacity.

31.5.1.3 Legacy RMR Treatment Generation Resources

If a Legacy RMR Unit resource is determined to have an RMR-G generation requirement for any Trading Hour of the next day, either by the MPM process or by the CAISO through a mManual RMR Dispatch Notice, and if any portion of the RMR-G generation requirement has not been cleared in the IFM, the entire portion of the RMR-G generation requirement will be represented as a Legacy RMR Generation

Self-Schedule in the RUC.

31.5.1.4 Eligibility to Set the RUC Price

All resources that are eligible for RUC participation as described in Section 31.5.1.1 with RUC Bids that are unconstrained due to Ramp Rates or other temporal constraints, including MSG Transitions, are eligible to set the RUC Price, provided that (a) the RUC Schedule for the Generating Unit or Resource-Specific System Resource is between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) the Schedule for the eligible resource other than a Generating Unit or Resource-Specific System Resource is between zero (0) MW and the highest MW value in its Economic Bid or Generated Bid. If (a) a resource's Schedule is constrained by its Minimum Operating Limit or the highest MW value in its Economic Bid or Generated Bid, (b) the CAISO enforces a resource-specific constraint on the resource due to an RMR [Dispatch Notice](#) or Exceptional Dispatch or (c) the resource's full Ramping capability is constraining its inter-hour change in Schedule, the resource cannot be marginal and thus is not eligible to set the RUC Price. Resources identified as MSS Load following resources are not eligible to set the RUC Price.

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31.5.6 Eligibility for RUC Compensation

All RUC Capacity is eligible for the RUC Availability Payment except for: (i) ~~RUC Capacity from RMR Capacity from RMR Resources~~ ~~Units that has been designated as RMR Dispatch and included in RUC as a Self-Schedule~~; (ii) Resource Adequacy Capacity; and (iii) RUC Capacity that corresponds to the resource's Minimum Load, which is compensated through the Bid Cost Recovery as described in Section 11.8. Resources not committed in the IFM that are committed in RUC, including [Condition 1 Legacy](#) RMR Units that were not designated for [Legacy](#) RMR Dispatches and Resource Adequacy Resources, are also eligible for RUC Cost Compensation, which includes Start-Up, Transition Costs, and Minimum Load Cost compensation, and Bid Cost Recovery, subject to the resource actually following its Dispatch Instructions as verified by the CAISO pursuant to procedures set forth in the Business Practice Manuals.

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34.1.5.2 Fifteen Minute Market MPM

The MPM process for the first fifteen-minute (15) interval for a Trading Hour starts with the unmitigated Bid set as validated pursuant to Section 30.7 and Section 34.1.4. The MPM process produces results for each fifteen (15) minute interval of the Trading Hour and thus may produce up to four mitigated Bids for any given resource for the Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Sections ~~31.2.2 and~~ 31.2.3 above. If a Bid is mitigated in the MPM process for the first fifteen (15) minute interval for a Trading Hour, the mitigated Bid will be utilized for all market applications for that first fifteen (15) minute interval. If a Bid is not mitigated in the first fifteen (15) minute interval, the CAISO will still mitigate that Bid in subsequent fifteen (15) minute intervals of the Trading Hour if the MPM runs for the subsequent intervals determine that mitigation is needed. For each Trading Hour, any Bid mitigated in a prior fifteen (15) minute interval of that Trading Hour will continue to be mitigated in subsequent intervals of that Trading Hour and may be further mitigated as determined in the MPM runs for any subsequent fifteen (15) minute interval.

34.1.5.3 Hour-Ahead Scheduling Process MPM

For HASP mitigation, a single mitigated Bid for the entire Trading Hour is calculated using the minimum Bid price of the four mitigated Bid curves at each Bid quantity level. For Legacy RMR Units, RMR Proxy Bids resulting from the MPM process will be utilized in all RTM optimization processes for each Trading Hour.

34.1.5.4 Real-Time Dispatch MPM

The RTD MPM process produces results for each five (5) minute interval of a Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each five (5) minute interval, using the methodology set forth in Sections ~~31.2.2 and~~ 31.2.3 above. The input Bids to the MPM for the first of the three (3) RTD runs corresponding to a particular RTUC interval are the final Bids as mitigated pursuant to Section 34.1.5.2 for the RTD intervals corresponding to the applicable financially binding Fifteen Minute Market run. If a Bid is

mitigated in the MPM process for the first five (5) minute interval for an applicable fifteen-minute (15) RTUC interval, the mitigated Bid will be utilized for all the corresponding RTD intervals in that fifteen-minute (15) RTUC interval. If a Bid is not mitigated in the first five (5) minute interval, the CAISO will still mitigate that Bid in subsequent five (5) minute intervals of the applicable RTUC interval if the MPM runs for the subsequent intervals determine that mitigation is needed. For each fifteen-minute (15) RTUC interval, a bid that is mitigated is maintained through the rest of the RTD intervals corresponding to the same RTUC interval as the original mitigated RTD interval. The input Bids to the RTD MPM process for the second of the three (3) RTD intervals corresponding to the RTUC interval will be the final mitigated bids used in the first RTD intervals. The input bids to the RTD MPM mitigation process for the third of the three RTD interval corresponding to the particular RTUC interval will be the final mitigated Bids used in the second RTD interval.

34.1.5.5 Reliability Must Run Resources

For a Condition 1 Legacy RMR Unit, the use of RMR Proxy Bids is determined based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Section 31.2.32 above. If a Condition 2 Legacy RMR Unit is issued a Manual RMR Dispatch by the CAISO, then RMR Proxy Bids for all of the unit's Maximum Net Dependable Capacity will be considered in the MPM process. For both Condition 1 and Condition 2 Legacy RMR Units, when mitigation is triggered, a RMR Proxy Bid is calculated using the same methodology described above for non-RMR Units. For a Condition 1 Legacy RMR Unit that has submitted Bids and has not been issued a Manual RMR Dispatch, to the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero, and that MPM process dispatches a Condition 1 Legacy RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the Legacy RMR Unit's Location, the resource will be flagged as an RMR eDispatch if it is dispatched pursuant to a Legacy RMR Contract at a level higher than the dispatch level determined by the Competitive LMP. Both Condition 1 and Condition 2 Legacy RMR Units may be issued manual RMR eDispatches at any time to address local reliability needs or to resolve non-competitive constraints.

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34.10 Dispatch of Energy from Ancillary Services

The CAISO may issue Dispatch Instructions to Participating Generators, Participating Loads, Proxy Demand Resources, (via communication with the Scheduling Coordinators of Demand Response Providers) System Units and System Resources contracted to provide Ancillary Services (either procured through the CAISO Markets, Self-Provided by Scheduling Coordinators, or through Exceptional Dispatch or dispatched in accordance with ~~the~~ a Legacy RMR Contract) for the Supply of Energy. During normal operating conditions, the CAISO may Dispatch those Participating Generators, Participating Loads, Proxy Demand Resources, System Units and System Resources that have contracted to provide Spinning and Non-Spinning Reserve, except for those reserves designated as Contingency Only, in conjunction with the normal Dispatch of Energy. Contingency Only reserves are Operating Reserve capacity that have been designated, either by the Scheduling Coordinator or the CAISO, as available to supply Energy in the Real-Time only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency. During normal operating conditions, the CAISO may also elect to designate any reserve not previously identified as Contingency Only by Scheduling Coordinator as Contingency Only reserves. In the event of an unplanned Outage, a Contingency or a threatened or actual System Emergency, the CAISO may dispatch Contingency Only reserves. If Contingency Only reserves are dispatched through the RTCD, which as described in Section 34.5.2 only Dispatches in the event of a Contingency, such Dispatch and pricing will be based on the original Energy Bids. If Contingency Only reserves are dispatched in response to a System Emergency that has occurred because the CAISO has run out of Economic Bids when no Contingency event has occurred, the RTED will Dispatch such Contingency Only reserves using maximum Bid prices as provided in Section 39.6.1 as the Energy Bids for such reserves and will set prices accordingly. If a Participating Generator, Participating Load, System Unit or System Resource that is supplying Operating Reserve is dispatched to provide Energy, the CAISO shall replace the Operating Reserve as necessary to maintain NERC and WECC reliability standards, including any requirements of the NRC. If the CAISO uses Operating Reserve to meet Real-Time Energy requirements, and if the CAISO needs Operating Reserves to satisfy NERC and WECC

reliability standards, including any requirements of the NRC, the CAISO shall restore the Operating Reserves to the extent necessary to meet NERC and WECC reliability standards, including any requirements of the NRC through either the procurement of additional Operating Reserve in the RTM or the Dispatch of other Energy Bids in SCED to allow the resources that were providing Energy from the Operating Reserve to return to their Dispatch Operating Target. The Energy Bid Curve is not used by the AGC system when Dispatching Energy from Regulation. For Regulation Up capacity, the upper portion of the resource capacity from its Regulation Limit is allocated to Regulation regardless of its Energy Bid Curve. For a resource providing Regulation Up or Operating Reserves the remaining Energy Bid Curve shall be allocated to any RTM AS Awards in the following order from higher to lower capacity where applicable: (a) Spinning Reserve; and (b) Non-Spinning Reserve. For resources providing Regulation Up, the applicable upper Regulation Limit shall be used as the basis of allocation if it is lower than the upper portion of the Energy Bid Curve. The remaining portion of the Energy Bid Curve, if there is any, shall constitute a Bid for RTM Energy. For Regulation Down capacity, the lower portion of the resource capacity from its applicable Regulation Limit is allocated to Regulation regardless of its Energy Bid Curve.

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34.11.1 System Reliability Exceptional Dispatches

The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, [RMR Resources](#), and Condition 2 [Legacy](#) RMR Units pursuant to Section 41.9 [in Appendix H](#), in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has

received a HASP Block Intertie Schedule.

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34.12.2 Decreasing Supply

The scheduling priorities as defined in the RTM optimization to meet the need for decreasing Supply as reflected from higher to lower priority are as follows:

- (a) Non-Participating Load increase;
- (b) Reliability Must Run (RMR) Schedule (Day-Ahead manual pre-dispatch or Manual RMR Dispatches or Dispatches that are flagged as RMR Dispatches following the MPM, for Legacy RMR Units and Exceptional Dispatch for RMR Resources-RRD process);
- (c) Transmission Ownership Right (TOR) Self-Schedule;
- (d) Existing Rights (ETC) Self-Schedule;
- (e) Regulatory Must-Run and Regulatory Must-Take (RMT) Self-Schedule;
- (f) Participating Load increase;
- (g) Day-Ahead Supply Schedule; and
- (h) Self-Schedule Hourly Block

These dispatch priorities as defined in the RTM optimization may be superseded by operator actions and procedures as necessary to ensure reliable operations.

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39.7.1.6 Default Energy Bids for RMR UnitsResources

~~The available capacity in excess of the Maximum Net Dependable Capacity (MNDC) specified in the RMR Contract up to the maximum generation capacity (PMax) is subject to Local Market Power Mitigation.~~ The Scheduling Coordinator for the RMR Unit-Resource must rank order its preferences between the Variable Cost Option, ~~the LMP Option,~~ and the Negotiated Rate Option, which shall be the default rank order if no rank order is specified by the Scheduling Coordinator. These preferences will be

used to determine the Default Energy Bids for the capacity ~~for each RMR Resource between the MNDC and PMax. RMR Proxy Bids for RMR Units based on contractually specified costs are used in lieu of Default Energy Bids for the contractual RMR Unit capacity between the minimum generating capacity (PMin) and the MNDC. The CAISO or Independent Entity will concatenate these two calculation methodologies (for calculating RMR Proxy Bids and Default Energy Bids for RMR Units) and will adjust them for monotonicity without lowering any price on either curve to create a single Energy Bid Curve to be used in the MPM processes as described in Sections 31 and 33 for the DAM and RTM, respectively.~~ RMR ~~Resources~~Units are not eligible to receive ~~the ten percent adder under the Variable Cost Option pursuant to Section 39.7.1.1 or a the~~ Bid Adder pursuant to Section 39.8 ~~for contractual RMR Unit capacity between PMin and MNDC.~~

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39.8.1 Bid Adder Eligibility Criteria

To receive a Bid Adder, a Generating Unit must: (i) have a Mitigation Frequency that is greater than eighty (80) percent in the previous twelve (12) months; and (ii) must not have a contract to be a Resource Adequacy Resource for its entire Net Qualifying Capacity, or be designated under the CPM for its entire Eligible Capacity, or be subject to an obligation to make capacity available under this CAISO Tariff. If a Generating Unit is designated under the CPM for a portion of its Eligible Capacity, the provisions of this section apply only to the portion of the capacity not designated. Scheduling Coordinators for Generating Units seeking to receive Bid Adders must further agree to be subject to the Frequently Mitigated Unit option for a Default Energy Bid. Run hours are those hours during which a Generating Unit has positive metered output. ~~Generating Units that received RMR Dispatches and/or incremental Bids dispatched out of economic merit order to manage local Congestion in an hour prior to the effective date of this Section will have that hour counted as a mitigated hour in their Mitigation Frequency.~~ After the first twelve (12) months from the effective date of this Section, the Mitigation Frequency will be based entirely on a Generating Unit being mitigated under the MPM procedures in Sections 31 and 33.

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40.9.2 Exemptions

- (a) **Capacity Exempt from RAAIM - All Provisions.** The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 –
- (1) Resources with a PMax less than 1.0 MW;
 - (2) Non-specified resources that provide Resource Adequacy Capacity under contracts for Energy delivered within the CAISO Balancing Authority Area;
 - (3) Participating Load that is also Pumping Load; and
 - (4) Legacy RMR Units.
- (b) **Capacity Exempt from RAAIM - Local/System.**
- (1) The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity –
 - (A) Variable Energy Resources; and
 - (B) Combined Heat and Power Resources.
 - (2) The capacity of a resource with a Load-following MSS as its Scheduling Coordinator that is designated on a Load-following MSS's monthly Resource Adequacy Plan is exempt from the RAAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity, to the extent that the resource's capacity is also designated as Resource Adequacy Capacity on the monthly Supply Plan of that Load-following MSS or another Load-following MSS.
 - (3) Resources with Existing QF Contracts or Amended QF Contracts that are Resource Adequacy Resources are exempt from the RAAIM provisions in Section 40.9 applicable to local and system capacity –
 - (A) if the QF resource previously provided Resource Adequacy Capacity pursuant to an Existing QF Contract that was executed prior to August 22, 2010 and remained in effect pursuant to California Public Utilities

Commission Decision 07-09-040 that extended the term of expiring contracts until such time as the new contracts resulting from that decision are available; or

(B) until the QF Resource's Existing QF Contract or Amended QF Contract terminates or if requested by the Scheduling Coordinator for the resource, whichever is earlier.

(c) **Capacity Exempt from RAAIM - Flexible Capacity.**

(1) The capacity of Use-Limited Resources in a combination under Section 40.10.3.2(b), 40.10.3.3(b) or 40.10.3.4(b) is exempt from the RAAIM provisions in Section 40.9 applicable to Flexible RA Capacity to the extent that the resources are committed to provide Flexible RA Capacity as a combination on their respective monthly Supply Plans.

(2) The Capacity of a resource with a Load-following MSS as its Scheduling Coordinator that is designated on a Load-following MSS's monthly Flexible RA Plan is exempt from the RAAIM provisions in Section 40.10 applicable to Flexible RA Capacity, to the extent that the resource's capacity is also designated as Flexible RA Capacity on the monthly Supply Plan of that Load-following MSS or another Load-following MSS.

* * * * *

40.9.3.6.3 General Provisions on Substitute Capacity

(a) **Substitution**

(1) The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on Outage. Certain types of Outages, as defined elsewhere in Section 9 or Section 40, will not subject the Scheduling Coordinator for a Resource Adequacy Resource to RAAIM if it declines to provide RA

Substitute Capacity.

- (2) If the Resource Adequacy Resource on Outage and the substituting resource do not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) **Availability**

- (1) RA Substitute Capacity must be operationally available to the CAISO:
- (2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.
- (3) RMR Capacity, including Legacy RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.
- (4) RA Substitute Capacity shall not qualify to be RMR Capacity, including Legacy RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.
- (5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.6, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.
- (6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) **Timing of Substitution Request**

- (1) **Day-Ahead Market.** Requests for substitution for Forced Outages in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution for

Forced Outages in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.

- (2) **Real-Time Market.** Requests for substitution for Forced Outages in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

* * * * *

40.9.6 Non-Availability Charges and Availability Incentive Payments

- (a) **Non-Availability Charges.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment in accordance with Section 40.9.3 and whose monthly availability calculation under Section 40.9.4 is below the lower bound of the monthly Availability Standard of 94.5 percent will be subject to a Non-Availability Charge for the month.
- (b) **Availability Incentive Payments.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment under Section 40.9.3 and whose availability calculation under Section 40.9.4 is above the upper bound of the monthly Availability Standard of 98.5 percent will be eligible for an Availability Incentive Payment for the month.
- (c) **No Payment or Charge.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment under Section 40.9.3 and whose monthly availability calculation under Section 40.9.4 is equal to or between the lower bound of 94.5 percent and the upper bound of 98.5 percent of the Availability Standard will not be assessed a Non-Availability Charge nor paid an Availability Incentive Payment.
- (d) **Advisory Period.** During an advisory period of April 1, 2018 through May 31, 2018, the CAISO will show the Non-Availability Charges and Availability Incentive Payments on

Settlement Statements but will not include those Non-Availability Charges and Availability Incentive Payments on Invoices for financial settlement.

- (e) **Separate Calculation of Payments and Charges for Flexible RA Capacity.** The CAISO will calculate separate Non-Availability Charges and Availability Incentive Payments for Resource Adequacy Resources providing Flexible RA Capacity. For RMR Resources, the Non-Availability Charge will be based on the RMR Contract capacity costs. RMR Capacity is otherwise treated the same way as Resource Adequacy Capacity.

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41. Procurement of RMR ~~Generation Resources~~

This section applies to RMR Resources, which are resources subject to an RMR Contract entered into after September 1, 2018. For Legacy RMR Units, refer to Appendix H.

41.1 Procurement of Reliability Must-Run ~~Generation Resources~~ by the CAISO

A Reliability Must-Run Contract is a contract entered into by the CAISO with a resource owner Generator which-that operates a Generating Unit or other resource giving the CAISO the right to call on the Generating Unit or Resource to generate Energy, provide Ancillary Services, Black Start, Voltage Support or similar services to maintain and, only as provided in this Section 41.1, or as needed for Black Start or Voltage Support required to meet local reliability needs, or to procure Ancillary Services from Potrero power plant to meet operating criteria associated with the San Francisco local reliability area, to provide Ancillary Services from the Generating Units as and when this is required to ensure that the reliability of the CAISO Controlled Grid-is maintained.

41.2 Designation of ~~Generating Unit Resources~~ as Reliability Must-Run ~~Unit Resources~~

The CAISO will, subject to any existing power purchase contracts of a Generating Unit, have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a Generating Unit or other resource as a Reliability Must-Run ~~Unit Resource~~. The CAISO will also have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a resource for

Reliability Must-Run service that is needed to provide Ancillary Services or other reliability services. A
Generating Unit resource so designated shall then be obligated to provide the CAISO with its proposed
rates for Reliability Must-Run ~~service~~Generation for negotiation with the CAISO. A pro forma Reliability
Must-Run Contract applicable to resources that receive RMR designations is attached as Appendix G.
Such rates shall be authorized by FERC ~~or the Local Regulatory Authority, whichever authority is~~
applicable.

41.2.2 Processing Retirement/Mothball Notices

The CAISO will process retirement/mothball notices as follows:

- (a) If the Generating Unit is not a Resource Adequacy Resource in the current Resource Adequacy Compliance Year and is planning to retire or mothball its Generating Unit, the owner may submit its written notice at any time during the year, and the CAISO will inform the owner of the study results after it completes the study specified in Section 41.3. If the owner of a non-Resource Adequacy Resource desires an earlier determination of need, it can submit its written notice to the CAISO before the 90-day deadline specified in the Participating Generator Agreement for terminating the agreement or removing a resource from the agreement. Under Section 41.3 the CAISO will study whether the Generating Unit is needed for reliability in the current Resource Adequacy Compliance Year or by the end of the upcoming Resource Adequacy Compliance Year. If the CAISO finds that a retiring Generating Unit is needed for reliability in either of these timeframes, the CAISO will designate the Generating Unit as RMR for the remainder of the current Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being procured as Resource Adequacy Capacity. If the CAISO finds a mothballing Generating Unit is needed for reliability in the current Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR designation for the remainder of the current Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being procured as Resource Adequacy Capacity.

(b) If the Generating Unit is subject to any conditions to provide Resource Adequacy Resource for the upcoming Resource Adequacy Compliance Year and the unit owner is planning to retire or mothball its Generating Unit, the unit owner may submit a notice by the deadline established in the applicable Business Practice Manual which will be in the first quarter of the current Resource Adequacy Compliance Year. The CAISO will study the Generating Unit and post the results of the reliability study to its website by the deadline established in the applicable Business Practice Manual, which will be by the end of the second quarter of the current Resource Adequacy Compliance Year. The CAISO will allow an opportunity of no less than seven (7) days for stakeholders to review and submit comments on the report and will allow Load-Serving Entities the opportunity to procure capacity from the needed Generating Unit. Under Section 41.3, the CAISO will study whether the Generating Unit is needed for reliability in the upcoming Resource Adequacy Compliance Year and may study whether the Generating Unit is needed for reliability by the end of the following Resource Adequacy Compliance Year. If the CAISO finds that a retiring Generating Unit is needed for reliability in either the upcoming Resource Adequacy Compliance Year or by the end of the following Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR designation for the upcoming Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being shown on annual Resource Adequacy showings for the upcoming Resource Adequacy Compliance Year. If the CAISO finds a mothballing Generating Unit is needed for reliability in the upcoming Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR designation for the upcoming Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being shown on annual Resource Adequacy showings for the upcoming Resource Adequacy Compliance Year. For notices submitted pursuant to this Section 41.2.2, the CAISO will not commence the RMR Contract negotiation process for any Generating Unit the CAISO finds to be needed for reliability until September 1.

If the unit owner of a Resource Adequacy Resource provides notice after the deadline specified in the applicable Business Practice Manual, the CAISO will inform the resource of the study results 60 days prior to expiration of the Resource Adequacy contract or 90 days from the date of the notice, whichever is later.

- (c) If multiple Generating Units file the requisite notice with the CAISO and can meet the reliability need identified by the CAISO, but the CAISO does not need all of the Generating Units to meet the reliability need, the CAISO will ask each unit owner to submit a proposed annual fixed requirement for its Generating Unit plus a total cost for Planned Capital Items pursuant to the rate schedules included in the pro forma RMR Contract. If the Generating Unit that would receive an RMR Contract based on cost-effectiveness criteria faces use limitations such that the unit, in the CAISO's reasonable discretion, poses the risk of being unavailable to fully meet the reliability need identified by the CAISO, then the CAISO may at its reasonable discretion, and giving due regard for meeting cost-effectiveness considerations, instead grant the designation to another unit that fully meets the reliability need. In exercising this discretion, the CAISO will not unduly discriminate against units with use-limitations. If more than one Generating Unit remain that can meet such criteria, then the CAISO will determine which Generating Unit(s) receives an RMR designation by selecting the Generating Unit(s) with the lowest combined proposed costs for RMR service including Planned Capital Items for the next RMR Contract Year provided that if the total costs of two or more Generating Units are within ten percent of each other, then the CAISO will grant the designation in its discretion based on the following criteria: (1) relative effectiveness of the Generating Units in meeting local and/or zonal constraints or other CAISO system needs; and (2) relative operating characteristics of the Generating Units including dispatch ability, ramp rate, and load following capability. A designated Generating Unit will not be able to propose to FERC – and will not be compensated by the CAISO for any costs higher than – its proposed annual fixed cost revenue requirement, plus any Planned Capital Items provided to the CAISO, respectively. The RMR Owner will still be allowed to recover any

costs for items not covered in its proposal, as permitted by the RMR Contract.

41.3 Reliability Studies and Determination of RMR Unit Status

In addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria. Although the CAISO may base an RMR designation on the Local Capacity Technical Study, the CAISO does not use its RMR authority to address Resource Adequacy deficiencies. The CAISO will then determine which ~~Generating Units resources~~ it requires to continue to be Reliability Must-Run ~~UnitsResources~~, which ~~Generating Units resources~~ it no longer requires to be Reliability Must-Run ~~Units-Resources~~ and which Generating Units it requires to become the subject of a Reliability Must-Run Contract which had not previously been so contracted to the CAISO. When making this determination, the CAISO will be evaluating whether there are any more cost-effective options that are available or may be made available to avoid the need for a Reliability Must-Run Contract. ~~None of the Generating Units owned by Local Publicly Owned Electric Utilities are planned to be designated as Reliability Must-Run Units by the CAISO as of the CAISO Operations Date but are expected to be operated in such a way as to maintain the safe and reliable operation of the interconnected transmission system comprising the CAISO Balancing Authority Area. However, in the future, Local Publicly Owned Electric Utilities may contract with the CAISO to provide Reliability Must-Run Generation.~~

41.4 [Not Used] Reliability Must-Run Contracts

~~A pro forma of the Reliability Must-Run Contract is attached as Appendix G. From the CAISO Operations Date all Reliability Must-Run Units will be placed under the "As Called" conditions, but the parties may, pursuant only to the terms of the Reliability Must-Run Contract, transfer any such unit to one of the alternative forms of conditions under specific circumstances. The CAISO will review the terms of the applicable forms of agreement applying to each Reliability Must-Run Unit to ensure that the CAISO will procure Reliability Must-Run Generation from the cheapest available sources and to maintain System Reliability. The CAISO shall give notice to terminate Reliability Must-Run Contracts that are no longer necessary or can be replaced by less expensive and/or more competitive sources for maintaining the reliability of the CAISO Controlled Grid.~~

41.5 RMR Dispatch

41.5.1 Day-Ahead and RTM RMR Dispatch

~~RMR Resources will be subject to all of the availability, dispatch, testing, reporting, verification, and any other applicable requirements imposed under Section 40.6 or Section 40.10.6, as applicable to specific types of Resource Adequacy Resources identified in Resource Adequacy Plans and Flexible RA Capacity resources identified in Resource Flexible RA Capacity Plans. RMR Resources will meet the Day-Ahead availability requirements specified in Section 40.6, the Real-Time availability requirements specified in Section 40.6.2, and the Day-Ahead and Real-Time availability requirements specified under Section 40.10.6.1 for the highest Flexible Capacity Category for which the unit qualifies under Section 40.10.3. Also in accordance with those requirements, RMR Resources that meet the definition of Short Start Units, will be obligated to meet the availability requirements of Section 40.6.2, RMR Resources that meet the definition of Long Start Units will have the rights and obligations specified in Section 40.6.2. If the CAISO has not received an Economic Bid or Self-Schedule for capacity from an RMR Resource, the CAISO will utilize a Generated Bid in accordance with the procedures specified in Section 40.6.8. In addition to Energy Bids, RMR Resources will submit Ancillary Services Bids for the capacity to the extent the resource is certified to provide Ancillary Service. RMR Dispatches will be determined in accordance with the RMR Contract, the MPM process addressed in Sections 31 and 33 and through manual RMR Dispatch Notices to meet Applicable Reliability Criteria.~~

~~The CAISO will notify Scheduling Coordinators for RMR Units of the amount and time of Energy requirements from specific RMR Units in the Trading Day prior to or at the same time as the Day-Ahead Schedules and AS and RUC Awards are published, to the extent that the CAISO is aware of such requirements, through an RMR Dispatch Notice or flagged RMR Dispatch in the IFM Day-Ahead Schedule. The CAISO may also issue RMR Dispatch Notices after Market Close of the DAM and through Dispatch Instructions flagged as RMR Dispatches in the Real-Time Market.~~

~~The Energy to be delivered for each Trading Hour pursuant to the RMR Dispatch Notice an RMR Dispatch in the IFM or Real-Time shall be referred to as the RMR Energy. Scheduling Coordinators may submit Bids in the DAM or the RTM for RMR Units operating under Condition 1 of the RMR Contract in accordance with the bidding rules applicable to non-RMR Units. A Bid submitted in the DAM or the RTM for a Condition 1 RMR Unit shall be deemed to be a notice of intent to substitute a market transaction for~~

~~the amount of MWh specified in each Bid for each Trading Hour pursuant to Section 5.2 of the RMR Contract. In the event the CAISO issues an RMR Dispatch Notice or an RMR Dispatch in the IFM or Real-Time Market for any Trading Hour, any MWh quantities cleared through the MPM shall be considered as a market transaction in accordance with the RMR Contract. RMR Units operating as Condition 2 RMR Units may not submit Bids until and unless the CAISO issues an RMR Dispatch Notice or issues an RMR Dispatch in the IFM, in which case a Condition 2 RMR Unit shall submit Bids in accordance with the RMR Contract in the next available market for the Trading Hours specified in the RMR Dispatch Notice or Day-Ahead Schedule.~~

41.5.2 RMR Payments

~~RMR Units Resources operating as Condition 1 RMR Units or Condition 2 RMR Units that receive an RMR Dispatch Notice will be paid in accordance with the RMR Contract and Sections 11.13 and 11.18.6.~~

41.5.3 ~~RMR Units and Provisions of Ancillary Services Requirements and other Reliability~~ Services

~~The CAISO may call upon RMR Units Resources for Ancillary Services or any other reliability service that the RMR Resource is contracted to provide in any amounts and at any time that the CAISO has determined is necessary, at any time after the issuance of Day Ahead Schedules for the Trading Day if: (i) the CAISO determines that it requires more of an Ancillary Service than it has been able to procure, except that the CAISO shall not be required to accept Ancillary Services Bids that exceed the price caps specified in Section 39 or any other FERC imposed price caps; and (ii) the CAISO has notified Scheduling Coordinators of the circumstances existing in this Section 41.5.3, and after such notice, the CAISO determines that a bid insufficiency condition in accordance with the RMR Contract exists in the RTM and the CAISO requires more of an Ancillary Service. The CAISO must provide the notice specified in sub paragraph (ii) of this Section 41.5.3 as soon as possible after the CAISO determines that additional Ancillary Services are needed for which Bids are not available. The CAISO may only determine that a Bid insufficiency exists after the Market Close of the RTM, unless an earlier determination is required in order to accommodate the RMR Unit's operating constraints. For the purposes of this Section 41.5.3, a Bid insufficiency exists in RTM if, and only if: (i) Bids in the RTM for the particular Ancillary Service that can be used to satisfy that particular Ancillary Services requirement that remain after first procuring the~~

~~megawatts of the Ancillary Service that the CAISO had notified Scheduling Coordinators it would procure in the HASP ("remaining Ancillary Services requirement") represent, in the aggregate, less than two times such remaining Ancillary Services requirement; or (ii) there are less than two unaffiliated bidders to provide such remaining Ancillary Services requirement. If the CAISO determines that a Bid insufficiency condition exists as described in this Section 41.5.3, the CAISO may nonetheless accept available Bids if it determines in its sole discretion that the prices specified in the Bids and the Energy Bid Curves created by the Bids indicate that the Scheduling Coordinators were not attempting to exercise market power.~~

41.6 [Not Used] Reliability Must-Run Charge

~~The CAISO shall prepare and send to each Responsible Utility in accordance with Section 11.13, a CAISO Invoice as provided in the RMR Contract in respect of those costs incurred under each Reliability Must-Run Contract that are payable to the CAISO by such Responsible Utility or payable by the CAISO to such Responsible Utility pursuant to Section 41.7. The CAISO Invoices as provided in the RMR Contract shall reflect all reductions or credits required or allowed under or arising from the Reliability Must-Run Contract or under this Section 41.6. The CAISO Invoice as provided in the RMR Contract shall separately show the amounts due for services from each RMR Owner. Each Responsible Utility shall pay the amount due under each CAISO Invoice as provided in the RMR Contract by the due date specified in the CAISO Invoice as provided in the RMR Contract, in default of which interest shall become payable at the interest rate provided in the Reliability Must-Run Contract from the due date until the date on which the amount is paid in full. For each Reliability Must-Run Contract, the CAISO shall establish two segregated commercial bank accounts under the Facility Trust Account referred to in Section 11.13.2.1 and Article 9 of the Reliability Must-Run Contract. One commercial bank account, the RMR Owner Facility Trust Account, shall be held in trust by the CAISO for the RMR Owner. The other commercial bank account, the Responsible Utility Facility Trust Account, shall be held in trust by the CAISO for the Responsible Utility. Payments received by the CAISO from the Responsible Utility in connection with the Reliability Must-Run Contract, including payments following termination of the Reliability Must-Run Contract, will be deposited into the RMR Owner Facility Trust Account and payments from the CAISO to the RMR Owner will be withdrawn from such account, in accordance with this Section 41.6, Article 9 of the Reliability Must-Run Contract and Section 11.13. Any payments received by the CAISO from the~~

~~RMR Owner in connection with the Reliability Must Run Contract will be deposited into the Responsible Utility Facility Trust Account. Any payments due to the Responsible Utility of funds received from the RMR Owner in connection with the Reliability Must Run Contract will be withdrawn from the Responsible Utility Facility Trust Account, in accordance with this Section 41.6, Section 11.13, and Article 9 of the Reliability Must Run Contract. Neither the RMR Owner Facility Trust Account nor the Responsible Utility Facility Trust Account shall have other funds commingled in it at any time. The CAISO shall not modify this Section or Section 11.13 as it applies to procedures for the billing, invoicing and payment of charges under Reliability Must Run Contracts without the Responsible Utility's consent, provided, however, that no such consent shall be required with respect to any change in the method by which costs incurred by the CAISO under RMR Contracts are allocated to or among Responsible Utilities.~~

41.6.1 ~~[Not Used] No Offsets to Responsible Utility's CAISO Invoice Payments~~

~~Except where the Responsible Utility is also the RMR Owner, the Responsible Utility's payment of the CAISO Invoice as provided in the RMR Contract shall be made without offset, recoupment or deduction of any kind whatsoever. Notwithstanding the foregoing, if the CAISO fails to deduct an amount required to be deducted under Section 41.6.2, the Responsible Utility may deduct such amount from payment otherwise due under such CAISO Invoice as provided in the RMR Contract.~~

41.6.2 ~~[Not Used] Refunds of Disputed Amounts on RMR Invoices~~

~~If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, Revised Estimated RMR Invoice, or Revised Adjusted RMR Invoice, or Final Invoice, it shall pay the CAISO Invoice as provided in the RMR Contract but may pay under protest and reserve its right to seek a refund, with interest, from the CAISO. If resolution of the dispute results in an amount paid by the Responsible Utility under protest being due from the CAISO to the Responsible Utility and from the RMR Owner to the CAISO, and such amount was paid to the RMR Owner by the CAISO, then such amount, with interest at the interest rate specified in the applicable Reliability Must Run Contract from the date of payment until the date on which the amount is repaid in full, shall be refunded by the RMR Owner to the CAISO and from the CAISO to the Responsible Utility, pursuant to Article 9 of the Reliability Must Run Contract and Section 11.13, by the RMR Owner's inclusion of such refund amount in the appropriate invoice. If the RMR Owner does not include such refund amount (including interest) in the appropriate invoice, then~~

~~such refund amount shall be deducted by the CAISO from the next succeeding amounts otherwise due from the Responsible Utility to the CAISO and from the next succeeding amounts otherwise due from the CAISO to the RMR Owner with respect to the applicable Reliability Must-Run Contract or, if such RMR Contract has terminated, such amount shall be refunded by the CAISO to the Responsible Utility; provided, however, that if and to the extent that such resolution is based on an error or breach or default of the RMR Owner's obligations to the CAISO under the Reliability Must-Run Contract, then such refund obligation shall extend only to amounts actually collected by the CAISO from the RMR Owner as a result of such resolution. If resolution of the dispute requires the CAISO, but not the RMR Owner, to pay the Responsible Utility, then such award shall be recovered from any applicable insurance proceeds, provided that to the extent sufficient funds are not recoverable through insurance, the amount of the award (whether determined through settlement, or the CAISO ADR Procedures or otherwise) shall be collected by the CAISO pursuant to Section 13.5, and in any event, the award shall be paid by the CAISO to the Responsible Utility pursuant to Section 13.5.~~

41.6.3 ~~[Not Used] Time-Frame for Responsible Utility to Dispute RMR Invoices~~

~~If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, or part thereof, based in whole or in part on an alleged error by the RMR Owner or breach or default of the RMR Owner's obligations to the CAISO under the Reliability Must-Run Contract, the Responsible Utility shall notify the CAISO of such dispute within twelve (12) months of its receipt of the applicable Revised Adjusted RMR Invoice or Final Invoice from the CAISO, except that the Responsible Utility may also dispute a Revised Estimated RMR Invoice, Revised Adjusted RMR Invoice, or Final Invoice for the reasons set forth above in this Section 41.6.3, within sixty (60) days from the issuance of a final report with respect to an audit of the RMR Owner's books and accounts allowed by a Reliability Must-Run Contract.~~

41.6.4 ~~[Not Used] Disputes After Operational Compliance Review~~

~~If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, based in whole or in part on an alleged error by the CAISO or breach or default of the CAISO's obligations to the Responsible Utility, the Responsible Utility shall notify the CAISO of such dispute prior to the later to occur of: (i) the date~~

~~twelve (12) months following the date on which the CAISO submitted such invoice to the Responsible Utility for payment or (ii) the date sixty (60) days following the date on which a final report is issued in connection with an operational compliance review, pursuant to Section 22.1.2.2, of the CAISO's performance of its obligations to Responsible Utilities under this Section 41.6.4 conducted by an independent third party selected by the CAISO Governing Board and covering the period to which such alleged dispute relates. The CAISO or any Responsible Utility shall have the right to request, but not to require, that the CAISO Governing Board arrange for such an operational compliance review at any time.~~

41.6.5 [Not Used] Invoice Disputes Subject to RMR Contract Resolution Process

~~Notwithstanding Section 13, any Responsible Utility dispute relating to a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, a Final Invoice, or a RMR Charge, RMR Payment or RMR Refund shall be resolved through the dispute resolution process specified in the relevant RMR Contract. If the Responsible Utility fails to notify the CAISO of any dispute as provided above, it shall be deemed to have validated the invoice and waived its right to dispute such invoice.~~

41.6.6 [Not Used] RMR Owner's Rights as a Third Party Beneficiary

~~The RMR Owner shall, to the extent set forth herein, be a third party beneficiary of, and have all rights that the CAISO has under the CAISO Tariff, at law, in equity or otherwise, to enforce the Responsible Utility's obligation to pay all sums invoiced to it in the CAISO Invoices as provided in the RMR Contract but not paid by the Responsible Utility, to the extent that, as a result of the Responsible Utility's failure to pay, the CAISO does not pay the RMR Owner on a timely basis amounts due under the Reliability Must-Run Contract. The RMR Owner's rights as a third party beneficiary shall be no greater than the CAISO's rights and shall be subject to the dispute resolution process specified in the relevant RMR Contract. Either the CAISO or the RMR Owner (but not both) will be entitled to enforce any claim arising from an unpaid CAISO Invoice as provided in the RMR Contract, and only one party will be a "disputing party" under the dispute resolution process specified in the relevant RMR Contract with respect to such claim so that the Responsible Utility will not be subject to duplicative claims or recoveries. The RMR Owner shall have the right to control the disposition of claims against the Responsible Utility for non-payments that result in payment defaults by the CAISO under a Reliability Must Run Contract. To that end, in the event~~

~~of non-payment by the Responsible Utility of amounts due under the CAISO Invoice as provided in the RMR Contract, the CAISO will not take any action to enforce its rights against the Responsible Utility unless the CAISO is requested to do so by the RMR Owner. The CAISO shall cooperate with the RMR Owner in a timely manner as necessary or appropriate to most fully effectuate the RMR Owner's rights related to such enforcement, including using its best efforts to enforce the Responsible Utility's payment obligations if, as, to the extent, and within the time frame, requested by the RMR Owner. The CAISO shall intervene and participate where procedurally necessary to the assertion of a claim by the RMR Owner.~~

**41.7 Non-Availability Charges and Availability Incentive Payments ~~Responsibility for Reliability~~
~~Must-Run Charge~~**

~~The provisions of Section 40.9 applicable to resources providing Resource Adequacy Capacity and Flexible RA Capacity also apply to RMR Resources. RMR Resources will face a resource-specific Resource Adequacy Availability Incentive Mechanism price under Section 40.9.6. The resource-specific price will be the price that the resources is being paid by the CAISO (\$kW/month) under the RMR Contract. Resource Adequacy Availability Incentive Mechanism payments to RMR Resources will be capped at the general Resource Adequacy Availability Incentive Mechanism rate. RMR Resources can provide RA Substitute Capacity based on the same rules applicable to Resource Adequacy Resources under Section 40.9. Except as otherwise provided in Section 41.8, the costs incurred by the CAISO under each Reliability Must-Run Contract shall be payable to the CAISO by the Responsible Utility in whose PTO Service Territory the Reliability Must-Run Units covered by such Reliability Must-Run Contract are located or, where a Reliability Must-Run Unit is located outside the PTO Service Territory of any Responsible Utility, by the Responsible Utility or Responsible Utilities whose PTO Service Territories are contiguous to the Service Area in which the Generating Unit is located, in proportion to the benefits that each such Responsible Utility receives, as determined by the CAISO. Where costs incurred by the CAISO under a Reliability Must-Run Contract are allocated among two or more Responsible Utilities pursuant to this section, the CAISO will file the allocation under Section 205 of the Federal Power Act.~~

**41.8 Allocating Resource Adequacy Credits for RMR Designations ~~Responsibility for RMR~~
~~Charges Associated with SONGS~~**

~~The CAISO will provide Resource Adequacy credits to the Scheduling Coordinators of Load-Serving Entities that serve load in the applicable TAC Area(s) in which the need for the RMR Contract arose equal to the Load-Serving Entity's pro rata share of the eligible net qualifying capacity of the RMR Resource, which shall be based upon each Load-Serving Entity's proportionate share of the Load-Serving Entity's applicable TAC Area Load at the time of the CAISO's annual coincident Peak Demand set forth in the annual Peak Demand Forecast for the next Resource Adequacy Compliance Year. The credited amount will be broken down into monthly values. If the CAISO procures Reliability Must-Run Generation from the San Onofre Nuclear Generation Station Units 2 or 3, it shall determine prior to the operation of such facilities as Reliability Must-Run Generation the appropriate allocation of associated charges, if any, among Responsible Utilities. The allocation of such charges shall be based on the reliability benefits that the CAISO reasonably identifies through studies and analysis as accruing to the respective Service Areas of the Responsible Utilities.~~

41.9 Allocation of Reliability Must-Run Contract Costs ~~Exceptional Dispatch of Condition 2 RMR Units~~

~~As specified in Section 11.13.5, the CAISO will allocate Reliability Must-Run costs not recovered through market revenues to the Scheduling Coordinators for Load-Serving Entities that serve load in the TAC Area(s) in which the need for the RMR Contract arose. These amounts paid will be allocated to each Scheduling Coordinator based on the pro-rata share of each Load-Serving Entity's TAC Area Metered Demand to total metered Demand recorded in the CAISO settlement system for the actual days of any settlement month period for which the RMR Contract was in effect. may Dispatch an RMR Unit that has currently selected Condition 2 of its RMR Contract to provide Energy through an Exceptional Dispatch under this CAISO Tariff for reasons other than as prescribed in the RMR Contract under the following conditions:~~

- ~~(1) The CAISO projects that it will require Energy from the Condition 2 RMR Unit to (a) meet forecast Demand and operating reserve requirements or (b) manage Congestion and no other Generating Unit that is available is capable of meeting the identified requirement;~~

41.9.1 [Not Used] Notification Required Before Condition 2 RMR Unit Dispatch

~~Before dispatching a Condition 2 RMR Unit in accordance with this Section, the CAISO must notify~~

~~Market Participants of (a) the situation for which the CAISO is contemplating dispatching a Condition 2 RMR Unit in accordance with this Section, and (b) the date and time the CAISO requires the Condition 2 RMR Unit so dispatched to be operating. The CAISO shall provide such notice as far in advance as practical and prior to directing the Condition 2 RMR Unit to Start Up~~
~~Notwithstanding anything to the contrary in the applicable RMR Contract, all MWh, Start-Ups and service hours provided by a Generating Unit that has currently selected Condition 2 of its RMR Contract pursuant to this Section 41.9.1 through an Exceptional Dispatch outside of the RMR Contract shall not be used to determine future "Annual Service Limits" as defined in the RMR Contract. Payment for Dispatches pursuant to this Section 41.9.1 is governed by Section 11.~~

* * * * *

43A.2 Capacity Procurement Mechanism Designation

The CAISO shall have the authority to designate Eligible Capacity to provide CPM Capacity services under the CPM to address the following circumstances, as discussed in greater detail in Section 43A:

1. Insufficient Local Capacity Area Resources in an annual or monthly Resource Adequacy Plan;
2. Collective deficiency in Local Capacity Area Resources;
3. Insufficient Resource Adequacy Resources in an LSE's annual or monthly Resource Adequacy Plan;
4. A CPM Significant Event;
5. A reliability or operational need for an Exceptional Dispatch CPM; and
- ~~6. Capacity at risk of retirement within the current RA Compliance Year that will be needed for reliability by the end of the calendar year following the current RA Compliance Year; and~~
67. A cumulative deficiency in the total Flexible RA Capacity included in the annual or monthly Flexible RA Capacity Plans, or in a Flexible Capacity Category in the monthly Flexible RA Capacity Plans.

* * * * *

43A.2.6 **[Not Used] Capacity at Risk of Retirement Needed for Reliability**

~~The CAISO shall have the authority to designate CPM Capacity to keep a resource in operation that is at risk of retirement during the current RA Compliance Year and that will be needed for reliability by the end of the calendar year following the current RA Compliance Year. The CAISO may issue this risk of retirement CPM designation in the event that all of the following requirements apply:~~

- ~~(1) — the resource was not contracted as RA Capacity nor listed as RA Capacity in any LSE's annual Resource Adequacy Plan during the current RA Compliance Year;~~
- ~~(2) — the CAISO did not identify any deficiency, individual or collective, in an LSE's annual Resource Adequacy Plan for the current RA Compliance Year that resulted in a CPM designation for the resource in the current RA Compliance Year;~~
- ~~(3) — CAISO technical assessments project that the resource will be needed for reliability purposes, either for its locational or operational characteristics, by the end of the calendar year following the current RA Compliance Year;~~
- ~~(4) — no new generation is projected by the CAISO to be in operation by the start of the subsequent RA Compliance Year that will meet the identified reliability need;~~
- ~~(5) — the resource owner submits to the CAISO and DMM, at least 180 days prior to terminating the resource's PGA or removing the resource from PGA Schedule 1, a request for a CPM designation under this Section 43A.2.6 including an offer price consistent with Section 43A.4.1.1 and the affidavit of an executive officer of the company who has the legal authority to bind such entity, with the supporting financial information and documentation discussed in the BPM for Reliability Requirements, that attests that it will be uneconomic for the resource to remain in service in the current RA Compliance Year and that the decision to retire is definite unless CPM procurement occurs; and~~
- ~~(6) — the Scheduling Coordinator for the resource has offered all Eligible Capacity from the resource into all CSPs for the current RA year.~~

~~If the CAISO determines that all of the requirements have been met, prior to issuing the CPM designation, the CAISO shall prepare a report that explains the basis and need for the CPM designation. The CAISO~~

~~shall post the report on the CAISO's Website and allow an opportunity of no less than seven (7) days for stakeholders to review and submit comments on the report and no less than thirty (30) days for an LSE to procure Capacity from the resource. If an LSE does not, within that period, procure sufficient RA Capacity to keep the resource in operation during the current RA Compliance Year, the CAISO may issue the risk of retirement CPM designation; provided that the CAISO determines that the designation is necessary and that all other available procurement measures have failed to procure the resources needed for reliable operation. The CAISO will not issue CPM designations in order to circumvent existing procurement mechanisms that could adequately resolve reliability needs.~~

* * * * *

43A.3.7 [Not Used] Term – Capacity at Risk of Retirement Needed for Reliability

~~A CPM designation for Capacity at risk of retirement under Section 43A.2.6 shall have a minimum commitment term of one (1) month and a maximum commitment term of one (1) year, based on the number of months for which the capacity is to be procured within the current RA Compliance Year. The term of the designation may not extend into a subsequent Resource Adequacy Compliance Year. The CAISO shall rescind the CPM designation for any month during which the resource is under contract with an LSE to provide RA Capacity.~~

* * * * *

43A.4 Selection Of Eligible Capacity Under The CPM through Competitive Solicitation Processes (CSP) and General Eligibility Rules

In accordance with Good Utility Practice, the CAISO shall designate and compensate Eligible Capacity as CPM Capacity based on the results of either the Annual CSP, the Monthly CSP, or the Intra-monthly CSP.

The CAISO shall designate CPM Capacity through the Annual CSP to meet designations triggered under

sections 43A.2.1.1, 43A.2.2, or 43A.2.3 (if the failure is to demonstrate sufficient Resource Adequacy capacity in an annual Resource Adequacy Plan), and 43A.2.7(a) (if the failure is to demonstrate sufficient Flexible Resource Adequacy capacity in an annual Flexible Resource Adequacy Plan).

The CAISO shall designate CPM Capacity through the Monthly CSP to meet designations triggered under sections 43A.2.1.2, 43A.2.3 (if the failure is to demonstrate sufficient Resource Adequacy capacity in a monthly Resource Adequacy Plan), or 43A.2.7(b) (if the failure is to demonstrate sufficient Flexible Resource Adequacy capacity in a monthly Flexible Resource Adequacy Plan).

The CAISO shall designate CPM Capacity through the Intra-monthly CSP to meet designations triggered under sections 43A.2.4 or 43A.2.5.

~~The selection criteria in this Section 43A.4 shall not, however, apply to making a risk-of-retirement CPM designation under Section 43A.2.6.~~

* * * * *

43A.8.7 [Not Used] Allocation of CPM Costs for Resources at Risk of Retirement

~~If the CAISO makes any CPM designations under Section 43A.2.6 for resources at risk of retirement needed for reliability, the CAISO shall allocate the costs of such designations to all Scheduling Coordinators for LSEs that serve Load in the TAC Area(s) in which the need for the CPM designation arose based on the percentage of actual Load of each LSE represented by the Scheduling Coordinator in the TAC Area(s) to total Load in the TAC Area(s) as recorded in the CAISO Settlement system for the actual days during any Settlement month period over which the designation has occurred.~~

* * * * *

43A.9 Crediting of CPM Capacity

The CAISO shall credit CPM designations to the resource adequacy obligations of Scheduling Coordinators for Load Serving Entities as follows:

- (a) To the extent the cost of CPM designation under Section 43A.2.1.1 is allocated to a

Scheduling Coordinator on behalf of a LSE under Section 43A.8.1, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards (1) the LSE's Local Capacity Area Resource obligation under Section 40.3.2 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1 and (2) the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1.

- (b) To the extent the cost of CAISO designation under Section 43A.2.2 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.3, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.2.
- (c) To the extent the cost of CPM designation under Section 43A.2.3 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.4, and the designation is for greater than one month under Section 43A.3.4, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.3.

~~(d) To the extent the cost of CPM designation under Section 43A.2.6 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.7, and the designation is for greater than one month under Section 43A.3.7, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.6.~~

- (de) The credit provided in this Section shall be used for determining the need for the

additional designation of CPM Capacity under Section 43A.2 and for allocation of CPM costs under Section 43A.8.

(ef) For each Scheduling Coordinator that is provided credit pursuant to this Section, the CAISO shall provide information, including the quantity of capacity procured in MW, necessary to allow the CPUC, other Local Regulatory Authority, or federal agency with jurisdiction over the LSE on whose behalf the credit was provided to determine whether the LSE should receive credit toward its resource adequacy requirements adopted by such agencies or authorities.

(fg) To the extent the cost of Flexible Capacity CPM designation under Section 43A.2.7 is allocated to a Scheduling Coordinator for an LSE under Section 43A.8.8, and the designation is for greater than one month under Section 43A.3.8, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Flexible Capacity requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the Flexible Capacity CPM designated under Section 43A.2.7.

* * * * *

Appendix A

Master Definition Supplement

* * * * *

~~- [Not Used] Adjusted RMR Invoice~~

~~The monthly invoice issued by the RMR Owner to the CAISO for adjustments made to the Revised Estimated RMR Invoice pursuant to the RMR Contract reflecting actual data for the billing month.~~

* * * * *

~~- [Not Used] CAISO Invoice~~

~~The invoices issued by the CAISO to the Responsible Utilities or RMR Owners based on the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice.~~

* * * * *

- Competitive LMP

An LMP calculated in the MPM process minus the Congestion component relating to non-competitive Transmission Constraints, as calculated in accordance with Section 31.2.32.

* * * * *

- Condition 1 Legacy RMR Unit

A resource operating pursuant to Condition 1 of its Legacy RMR Contract.

* * * * *

- Condition 2 Legacy RMR Unit

A resource operating pursuant to Condition 2 of its Legacy RMR Contract.

* * * * *

- Daily Additional Cost Settlement

Exceptional Dispatch revenues determination for RMR Resources as described in Section 11.13.4.

* * * * *

- Daily Availability Payment

A component of the Daily RMR Capacity Payment as described in Section 11.13.2 and Schedule B of the applicable RMR Contract.

* * * * *

- Daily RMR Capacity Payment

Description of daily capacity payment for RMR Resources described in Section 11.13.2.

* * * * *

- Daily RMR Excess Revenues

The determination of the amount of Exceptional Dispatch revenues, if any, will be used to reduce the RMR Capacity Payment as described in Section 11.13.5.

* * * * *

- Daily RMR Settlement

Description of daily settlement for RMR Resources as described in Section 11.13.1.

* * * * *

- Daily Surcharge Payment

A component of the Daily RMR Capacity Payment as described in Section 11.13.2 and Schedule B of the applicable RMR Contract.

* * * * *

- Daily Variable Cost Payment

Description of the amount of variable costs recoverable by RMR Resources as described in Section 11.13.3.

* * * * *

- [Not Used] Estimated RMR Invoice

~~The monthly invoice issued by the RMR Owner to the CAISO for estimated RMR Payments or RMR Refunds pursuant to the RMR Contract.~~

* * * * *

- Excess Cost Payments

The payments made by the CAISO for costs associated with Exceptional Dispatches for 1) emergency conditions, to avoid Market Disruption and avoid an imminent System Emergency as provided in Section 11.5.6.1.1; 2) transmission-related modeling limitations as provided in Section 11.5.6.2.3; 3) Condition 2 Legacy RMR Units as provided in Section 11.5.6.3.2; and 4) emergency Energy as provided in Section 11.5.8.1.1.

* * * * *

- [Not Used] Facility Trust Account

~~For each RMR Contract, the account established and operated by the CAISO to and from which all payments under Section 11.13 shall be made. Each Facility Trust Account will have two segregated commercial bank accounts, an RMR Owner Facility Trust Account and a Responsible Utility Facility Trust Account.~~

* * * * *

- [Not Used] Final Invoice

~~The invoice due from a RMR Owner to the CAISO at termination of the RMR Contract.~~

* * * * *

- Legacy Reliability Must-Run Contract (RMR Contract)

A Must-Run Service Agreement between the owner of a Legacy Reliability Must-Run Unit and the CAISO.

* * * * *

- Legacy Reliability Must-Run Unit (Legacy RMR Unit)

A Generating Unit of a Participating Generator which is the subject of a Legacy Reliability Must-Run Contract.

* * * * *

- Legacy RMR Capacity

The MNDC reflected in Schedule A of an Legacy RMR Contract and maintained in the CAISO Master File.

* * * * *

- Legacy RMR Contract

A Reliability Must-Run Contract that a Generating Unit or other resource entered into before September 1, 2018.

* * * * *

- Legacy RMR Unit

Legacy Reliability Must-Run Unit

* * * * *

- ~~[Not Used] Market Power Mitigation—RRD~~

~~The two optimization run process conducted in both the Day Ahead Market and the RTM that determines the need for the CAISO to employ market power mitigation measures or Dispatch RMR Units.~~

* * * * *

- Maximum Net Dependable Capacity (MNDC)

A term defined in and used in association with an Legacy RMR Contract.

* * * * *

- ~~[Not Used] New Responsible Utility~~

~~A Responsible Utility that executes a TCA after April 1, 1998.~~

* * * * *

- ~~[Not Used] Prior Period Change~~

~~Any correction, surcharge, credit, refund or other adjustment pertaining to a billing month pursuant to an RMR Contract which is discovered after the Revised Adjusted RMR Invoice for such billing month has been issued.~~

* * * * *

- ~~[Not Used] Prior Period Change Worksheet~~

~~A worksheet prepared by the RMR Owner and submitted to the CAISO following discovery of a necessary change to an RMR Invoice after the Revised Adjusted RMR Invoice for the billing month has been issued.~~

* * * * *

- ~~[Not Used] Reliability Must-Run Charge (RMR Charge)~~

~~The sum payable by a Responsible Utility to the CAISO pursuant to Section 41 for the costs, net of all applicable credits, incurred under the Reliability Must-Run Contract.~~

* * * * *

- Reliability Must-Run Contract (RMR Contract)

A Must-Run Service Agreement between the owner of a Reliability Must-Run ResourceUnit and the CAISO.

* * * * *

- Reliability Must-Run Resource (RMR Resource)

A Generating Unit or other resource under an RMR Contract entered into after September 1,2018.

* * * * *

-[Not Used] Responsible Utility

~~The utility which is a party to the Transmission Control Agreement in whose PTO Service Territory the Reliability Must-Run Unit is located or whose PTO Service Territory is contiguous to the PTO Service Territory in which a Reliability Must-Run Unit owned by an entity outside of the CAISO Controlled Grid is located.~~

* * * * *

- [Not Used] Revised Adjusted RMR Invoice

~~The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting any appropriate revisions to the Adjusted Reliability Must-Run Invoice based on the CAISO's validation and actual data for the billing month.~~

* * * * *

- [Not Used] Revised Estimated RMR Invoice

~~The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting appropriate revisions to the Estimated Reliability Must-Run Invoice based on the CAISO's validation of the Estimated Reliability Must-Run Invoice.~~

* * * * *

- RMR Capacity

The PMax value reflected in Schedule A of an RMR Contract and maintained in the CAISO Master File.

* * * * *

- [Not Used] RMR Charge

~~Reliability Must-Run Charge~~

* * * * *

- [Not Used] RMR Default Amount

~~Any amount due to be received into the relevant Facility Trust Account from the RMR Owner or the Responsible Utility in accordance with an RMR Contract.~~

* * * * *

- RMR Dispatch

The quantity of Energy or Ancillary Services that is mandated by the CAISO to be delivered in a given market for a resource by an Legacy RMR Unit under a Legacy RMR Contract or by an RMR Resource under an RMR Contract.

* * * * *

- RMR Dispatch Notice

Dispatch of an RMR Resource or a Legacy RMR Unit under the applicable RMR Contract or Legacy RMR Contract. Notice received by an RMR Unit from the CAISO containing an RMR Dispatch.

* * * * *

- [Not Used] RMR Energy

~~Total Expected Energy under RMR Dispatch. RMR Energy is calculated independent of other Expected Energy types and it may overlap with any other Expected Energy type. It is used for RMR Contract based settlement as provided in Section 11.13.~~

* * * * *

- [Not Used] RMR Invoice

~~Any Estimated RMR Invoice, Revised Estimated RMR Invoice, Adjusted RMR Invoice, or Revised Adjusted RMR Invoice under an RMR Contract.~~

* * * * *

- [Not Used] RMR Owner

~~The provider of services under a Reliability Must-Run Contract.~~

* * * * *

- [Not Used] RMR Owner Facility Trust Account

~~The commercial bank account held in trust by the CAISO for the benefit of the owner of an RMR Unit subject to an RMR Contract as required and specified in Section 9.2 of the pro forma RMR Contract.~~

* * * * *

- [Not Used] RMR Payment

~~Any amounts which the CAISO is obligated to pay to RMR Owners under the RMR Contracts, net of any~~

~~applicable credits under the RMR Contracts.~~

* * * * *

~~- **[Not Used] RMR Payments Calendar**~~

~~The payment calendar issued by the CAISO pursuant to Section 11.13.~~

* * * * *

- RMR Proxy Bid

For Condition 1 Legacy RMR Units, for Energy, an amount calculated based on the hourly variable costs as defined in Schedule C of the applicable Legacy RMR Contract in the form of a monotonically increasing function consistent with the bidding rules in Section 30. For Condition 2 Legacy RMR Units, for Energy, the Energy Bid defined in Schedule M of the Legacy RMR Contract. For Condition 1 and 2 Legacy RMR Units, for Start-Up costs, the amount set forth in Schedule D of the applicable Legacy RMR Contract; and for Minimum Load costs, an amount calculated based on unit specific performance parameters as set for the applicable RMR Contract and the gas price calculated in accordance with Schedule C of the applicable Legacy RMR Contract.

* * * * *

~~- **[Not Used] RMR Refund**~~

~~Any amounts which RMR Owners are obligated to pay to the CAISO and the CAISO is obligated to pay to the Responsible Utilities under the RMR Contracts, or resulting from any order by the FERC, for deposit into the Responsible Utility Facility Trust Account.~~

* * * * *

- RMR Resource

A Generating Unit or other resource under an RMR Contract entered into after September 1, 2018.

* * * * *

~~- **[Not Used] RMR Security**~~

~~The form of security provided by a Responsible Utility to cover its liability under Section 11.13.~~

* * * * *

Appendix H

LEGACY RELIABILITY MUST-RUN CONTRACT CAISO TARIFF PROVISIONS CONGESTION REVENUE RIGHTS TRANSITION PERIOD

Notwithstanding any other provisions of the CAISO Tariff, the following provisions apply to Legacy Reliability Must-Run Contracts entered into by Reliability Must-Run Units prior to September 1, 2018, the CAISO's treatment of CRRs that settle based on congestion that occurs in the Day Ahead Market in 2018. In all other respects, provisions of the CAISO Tariff not covered by this Appendix H will apply to the CAISO's treatment of CRRs that settle based on congestion that occurs in the Day Ahead Market in 2018.

11.13 Settlements and Billing of RMR Charges and Payments

11.13.1 Objectives

The objective of this Section 11.13 is to inform RMR Owners which are responsible for preparation of Invoices, and Responsible Utilities, which are responsible for payment of Reliability Must-Run Charges pursuant to Section 41.7, of the manner in which the RMR Charges referred to in Section 41.6 shall be verified and settled and of the procedures regarding the billing, invoicing and payment of these RMR Charges.

11.13.2 Accounts

11.13.2.1 Facility Trust Account

The CAISO shall establish a Facility Trust Account for each RMR Contract. Each Facility Trust Account shall consist of two segregated commercial bank accounts: (1) an RMR Owner Facility Trust Account, which will be held in trust for the RMR Owner, and (2) a Responsible Utility Facility Trust Account, which will be held in trust for the Responsible Utility. RMR Charges paid by the Responsible Utility to the CAISO in connection with the RMR Contract will be deposited into the RMR Owner Facility Trust Account and RMR Payments from the CAISO to the RMR Owner will be withdrawn from such account, all in accordance with this Section 11.13, Section 41.6, and the RMR Contract. RMR Refunds received by the CAISO from the RMR Owner in accordance with the RMR Contract will be deposited into the Responsible

Utility Facility Trust Account and such RMR Refunds will be withdrawn from such account and paid to the Responsible Utility in accordance with this Section 11.13, Section 41.6, and the RMR Contract. The RMR Owner Facility Trust Account and the Responsible Utility Facility Trust Account shall have no other funds commingled in them at any time.

11.13.2.2 RMR Owner's Settlement Accounts

Each RMR Owner shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fedwire, and, at its option, may also establish and maintain a Settlement Account for transfers via ACH, where payments to and from the Facility Trust Accounts shall be made in accordance with this Section 11.13. Each RMR Owner shall notify the CAISO of its Settlement Account details upon entering into its RMR Contract with the CAISO and may notify the CAISO from time to time of any changes by giving at least fifteen (15) days notice before the new account becomes operational.

11.13.3 RMR Payments Calendar

The CAISO shall issue an RMR Payments Calendar for the purposes of this Section 11.13 which shall contain those dates set forth in Section 9.1 (b) of the RMR Contract and the following information:

- (a) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Estimated RMR Invoice pursuant to their RMR Contract;
- (b) the date on which the CAISO is required to initiate proposed adjustments to the Estimated RMR Invoice to the Responsible Utility and to the RMR Owner;
- (c) the date by which the RMR Owners are required to issue their Revised Estimated RMR Invoice reflecting appropriate revisions to the original Estimated RMR Invoice agreed upon by the Responsible Utility and the RMR Owner (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Estimated RMR Invoice should be deemed as the Revised Estimated RMR Invoice.);
- (d) the date on which the CAISO is required to issue to the Responsible Utility or RMR Owner the CAISO Invoice based on the Revised Estimated RMR Invoice;

- (e) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Adjusted RMR Invoice pursuant to their RMR Contract;
- (f) the date on which the CAISO is required to initiate proposed adjustments to the Adjusted RMR Invoice to the Responsible Utility and the RMR Owner;
- (g) the date by which the RMR Owners are required to issue their Revised Adjusted RMR Invoice reflecting appropriate revisions to the original Adjusted RMR Invoice agreed upon by the Responsible Utility and the RMR Owner. (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Adjusted RMR Invoice should be deemed as the Revised Adjusted RMR Invoice.);
- (h) the date on which the CAISO is required to issue to the Responsible Utility or the RMR Owner the CAISO Invoice based on the Revised Adjusted RMR Invoice;
- (i) the dates by which the Responsible Utility and RMR Owner must have notified the CAISO of any dispute in relation to the CAISO Invoice, Estimated RMR Invoice or Adjusted RMR Invoice (including the Revised Estimated RMR Invoice and Revised Adjusted RMR Invoice) or the CAISO's proposed adjustments;
- (j) the date and time by which Responsible Utilities or RMR Owners are required to have made payments into the RMR Owner Facility Trust Account or Responsible Utility Facility Trust Account in payment of the CAISO Invoices relating to each Revised Estimated RMR Invoice and each Revised Adjusted RMR Invoice; and
- (k) the date and time by which the CAISO is required to have made payments into the RMR Owners' Facility Trust Accounts or Responsible Utilities' Facility Trust Accounts in payment of the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice pursuant to their RMR Contract.

If the day on which any CAISO Invoice, any RMR Invoice, or any payment is due is not a Business Day, such statement or invoice shall be issued or payment shall be due on the next succeeding Business Day.

Information relating to charges for Energy or Ancillary Services which are payable by the CAISO pursuant to Sections 8 and 11 to the Scheduling Coordinators representing the RMR Owners will be contained in

the RMR Payments Calendar.

11.13.4 Information Provided by RMR Owners to the CAISO

Each RMR Invoice and any Prior Period Change Worksheet shall include, or be accompanied by, information about RMR Payments and RMR Refunds in sufficient detail to enable the CAISO to verify all RMR Charges and all RMR Refunds, and such information shall be copied to the Responsible Utility. Each RMR Invoice shall separately show the amounts due for services from each Reliability Must-Run Unit.

This information shall be provided in an electronic form in accordance with the RMR Invoice template developed jointly and agreed to by the CAISO, Responsible Utilities and RMR Owners in accordance with the RMR Contracts and the principles in Schedule O to those RMR Contracts, and maintained on the CAISO Website.

11.13.5 Validation of RMR Charges and RMR Refunds

The CAISO shall validate, based on information provided by each RMR Owner pursuant to paragraph 4, the amount due from the relevant Responsible Utility for RMR Charges and the amount due to the relevant Responsible Utility for RMR Refunds applicable to the Reliability Must-Run Generation and Ancillary Services of that RMR Owner, but shall not represent or warrant the accuracy or completeness of the information provided by the RMR Owner. The CAISO shall provide copies of its exception report and information to the relevant Responsible Utility and RMR Owner.

The CAISO shall not be obligated to pay the Responsible Utility any RMR Refunds unless and until the CAISO has received corresponding RMR Refunds into the Responsible Utility Facility Trust Account from the RMR Owner.

11.13.6 Description of the Billing Process

11.13.6.1 Issuance of RMR Invoices by the RMR Owner

Each RMR Owner shall provide any RMR Invoice to the CAISO in the electronic form, mutually agreed by the parties, which may be updated by agreement with the CAISO, Responsible Utilities and RMR Owners from time to time in accordance with the requirements of Schedule O of the RMR Contract, on each of the days specified in the RMR Payments Calendar, and shall send to the relevant Responsible Utility a copy of that invoice on the day of issue.

11.13.6.2 Review of the RMR Invoice by the CAISO

The CAISO shall review each RMR Invoice within the period specified in the RMR Payments Calendar and is required to initiate proposed adjustments to that invoice to the RMR Owner and the relevant Responsible Utility. Once the CAISO initiates proposed adjustments, the RMR Owner shall issue a Revised Estimated RMR Invoice or Revised Adjusted RMR Invoice.

11.13.6.3 Issuance of CAISO Invoices by the CAISO

The CAISO shall provide to the Responsible Utility and the RMR Owner on the dates specified in the RMR Payments Calendar CAISO Invoices showing:

- (a) the amounts which, on the basis of the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice, as the case may be, and pursuant to Section 11.13, are to be paid by or to the relevant Responsible Utility and RMR Owner;
- (b) the Payment Date, being the date on which such amounts are to be paid and the time for such payment;
- (c) details (including the account number, bank name and Fedwire transfer instructions or, if applicable, ACH transfer instructions) of the RMR Owner Facility Trust Account to which any amounts owed by the Responsible Utility are to be paid, or of the RMR Responsible Utility Facility Trust Account to which any amounts owed by the RMR Owner are to be paid.

11.13.6.4 Resolving Disputes Relating to Invoices

11.13.6.4.1 Review of the Invoices by the Responsible Utility

Each Responsible Utility shall have the review period specified in the RMR Payments Calendar to review RMR Invoices and CAISO Invoices, validate and propose adjustments to such invoices, and notify the CAISO of any dispute. Notwithstanding the above, each Responsible Utility shall have the review time specified in Section 41.6 to dispute such invoice.

11.13.6.4.2 Dispute Notice

If a Responsible Utility disputes any item or calculation relating to any revised RMR Invoice, or any CAISO Invoice, it shall provide the CAISO, with a copy to the RMR Owner, via email or such other communication mode as the parties may mutually agree upon, a notice of dispute at any time from the

receipt of the copy of such invoice from the RMR Owner or the CAISO to the expiration of the period for review set out in Section 11.13. The CAISO shall initiate a corresponding dispute with the RMR Owner under the RMR Contract.

11.13.6.4.3 Contents of Dispute Notice

The notice of dispute shall state clearly the Revised Estimated RMR Invoice, Revised Adjusted RMR Invoice, or CAISO Invoice in dispute, the item disputed (identifying specific Reliability Must-Run Units and time periods), the reasons for the dispute, and the proposed amendment (if appropriate) and shall be accompanied by all available evidence reasonably required to support the claim.

11.13.6.4.4 Prior Period Change Agreed to by the RMR Owner

Subject to Sections 11.13.6.4.5 or 11.13.6.4.6, if the RMR Owner agrees with the proposed change, the change shall be shown in a Prior Period Change Worksheet and included in the next appropriate May or December Estimated RMR Invoice as specified in Article 9.1 of the RMR Contract.

11.13.6.4.5 Dispute Involving the RMR Owner

If the dispute relates to an item originating in any RMR Invoice, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.

11.13.6.4.6 Dispute Involving an Alleged Error or Breach or Default of the CAISO's Obligations Under Section 41.6

If the dispute relates to an alleged error or breach or default of the CAISO's obligations under Section 41.6, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.

11.13.6.4.7 Payment Pending Dispute

Subject to Section 41.6, if there is any dispute relating to an item originating in an RMR Invoice that is not resolved prior to the Payment Date, the Responsible Utility shall be obligated to pay any amounts shown in the relevant CAISO Invoice on the Payment Date irrespective of whether any such dispute has been resolved or is still pending. The Responsible Utility may notify the CAISO that the payment is made under protest, in which case the CAISO shall notify the RMR Owner that payment is made under protest. In accordance with Section 9.6 of the RMR Contract, if such dispute is subsequently resolved in favor of the Responsible Utility that made the payment under protest, then any amount agreed or determined to be owed by the RMR Owner to the CAISO shall be repaid by the RMR Owner to the CAISO, with interest

at the interest rate specified in the RMR Contract from the date of payment by the CAISO to the RMR Owner of the disputed amount to the date of repayment by the RMR Owner, as specified in Section 11.13.6.4.4. If an RMR Owner does not agree to make the change pursuant to Section 11.13.6.4.4, then such repayment shall be made by CAISO's deduction of such amount from the next CAISO Invoices until extinguished, or if the RMR Contract has terminated, by paying a RMR Refund in such amount to the Responsible Utility Facility Trust Account, subject to the limitation of Section 41.6.2.

11.13.7 Payment Procedures

11.13.7.1 Payment Date

The Payment Date for RMR Payments to and RMR Refunds from RMR Owners shall be the due date specified in the RMR Contract and in the RMR Payments Calendar and the same shall be the Payment Date for the CAISO and Responsible Utilities in relation to RMR Charges, provided that the RMR Owner has furnished the Responsible Utility and the CAISO with the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice no less than nine (9) calendar days before the due date. The Payment Date shall be stated on the CAISO Invoice.

11.13.7.2 Payment Method

All payments and refunds by the CAISO to RMR Owners and Responsible Utilities shall be made via Fedwire or, if chosen by the RMR Owner or Responsible Utility, via ACH. However, if the RMR Owner is also the Responsible Utility, at the discretion of the RMR Owner, payments and refunds may be made by memorandum account instead of by Fedwire transfer or ACH.

11.13.7.3 Payment by RMR Owners and Responsible Utilities.

Each RMR Owner shall ensure that the amount shown on the relevant CAISO Invoice as payable by the RMR Owner shall be received into the Responsible Utility Facility Trust Account not later than 10:00 am on the Payment Date.

Subject to Section 41.6, each Responsible Utility shall ensure that the amount shown on the relevant CAISO Invoice as payable by the Responsible Utility shall be received into the RMR Owner Facility Trust Account not later than 10:00 am on the Payment Date.

11.13.7.4 Payment by the CAISO

The CAISO shall verify the amounts available for distribution to Responsible Utilities and/or RMR Owners

on the Payment Date and shall give instructions to the CAISO Bank to remit from the relevant Facility Trust Account to the relevant settlement account maintained by each Responsible Utility or RMR Owner the amounts determined by the CAISO to be available for payment to each Responsible Utility or RMR Owner.

11.13.7.5 Payment Default by RMR Owner or Responsible Utility

If by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes the RMR Default Amount has not been received, the CAISO shall immediately notify the RMR Owner and the Responsible Utility. Where the RMR Default Amount was due from the Responsible Utility, the CAISO and RMR Owner shall proceed as set forth in Section 41.6 and the applicable provision of the RMR Contract. Where the RMR Default Amount was due from the RMR Owner, the CAISO and the Responsible Utility shall proceed as set forth in the applicable provision of the RMR Contract.

11.13.7.5.1 Default Relating to Market Payments

For the avoidance of doubt, non payment to RMR Owners, or their respective Scheduling Coordinators, of charges for Energy or Ancillary Services which are payable by the CAISO to Scheduling Coordinators representing such RMR Owners shall be dealt with pursuant to Sections 11.3 to 11.30 (inclusive).

11.13.7.6 Set-off

11.13.7.6.1 Set-off in the Case of a Defaulting Responsible Utility

The CAISO is authorized to apply any amount to which any defaulting Responsible Utility is or will be entitled from the Responsible Utility Facility Trust Account in or towards the satisfaction of any amount owed by that Responsible Utility to the RMR Owner Facility Trust Account arising under the settlement and billing process set out in this Section 11.13.

For the avoidance of doubt, neither the CAISO nor any Responsible Utility will be authorized to set off any amounts owed by that Responsible Utility in respect of one Facility Trust Account against amounts owed to that Responsible Utility in respect of another Facility Trust Account or any amounts owed by that Responsible Utility under this Section 11.13 against amounts owed to that Responsible Utility except as provided by Section 41.6.

11.13.7.6.2 Set-off in the Case of a Defaulting RMR Owner

The CAISO is authorized to apply any amount to which any defaulting RMR Owner is or will be entitled from the RMR Owner Facility Trust Account in or towards the satisfaction of any amount owed by that RMR Owner to the Responsible Utility Facility Trust Account in accordance with Article 9 of the RMR Contract and Sections 41.6 and 11.10.2.

For the avoidance of doubt, neither the CAISO nor any RMR Owner will be authorized to set off any amounts owed by that RMR Owner in respect of one Facility Trust Account against amounts owed to that RMR Owner in respect of another Facility Trust Account or any amounts owed by that RMR Owner under this Section 11.13 against amounts owed to that RMR Owner under the RMR Contract.

11.13.7.7 Default Interest

Responsible Utilities shall pay interest on RMR Default Amounts to the CAISO at the interest rate specified in the RMR Contract for the period from the relevant Payment Date to the date on which the payment is received by the CAISO.

RMR Owners shall pay interest to the CAISO on RMR Default Amounts at the interest rate specified in the RMR Contract for the period from the date on which payment was due to the date on which the payment is received by the CAISO.

The CAISO shall pay interest to RMR Owners at the interest rate specified in the RMR Contract for the period from the date on which payment is due under the RMR Contract to the date on which the payment is received by the RMR Owner.

The CAISO shall pay interest to Responsible Utilities at the interest rate specified in the relevant RMR Contract for the period from the date following the date it received an RMR Refund from the relevant RMR Owner to the date in which the payment is received by the relevant Responsible Utility.

Where payment of an RMR Default Amount is made by exercise of a right of set-off or deduction, payments shall be deemed received when payment of the sum which takes that set-off or deduction into account is made.

11.13.8 Overpayments

The provisions of Sections 11.29.19.3 and 11.29.19.4 shall apply to RMR Owners and Responsible Utilities which have been overpaid by the CAISO and references to CAISO Creditors in these sections and in the relevant Sections of the CAISO Tariff shall be read, for the purposes of this Section 11.13, to

mean RMR Owners and Responsible Utilities as applicable. Disputed amounts shall not be considered to be overpayments until and unless the dispute is resolved.

11.13.9 Communications

11.13.9.1 Method of Communication

CAISO Invoices will be issued by the CAISO via the CAISO's secure communication system. RMR Invoices and Prior Period Change Worksheets will be issued by the RMR Owner in an electronic form mutually agreed by the parties and maintained on the CAISO Website. The CAISO shall also post Prior Period Change examples and Prior Period Change guidelines as specified in Article 9.1 of the RMR Contract.

11.13.9.2 Emergency Procedures

11.13.9.2.1 Emergency Affecting the CAISO

In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may deem any Estimated RMR Invoice or any Adjusted RMR Invoice to be correct without thorough verification and may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13.

11.13.9.2.2 Emergency Affecting the RMR Owner

In the event of an emergency or a failure of any of the RMR Owner's systems, the RMR Owner may use Estimated RMR Invoices as provided in the applicable section of the RMR Contract or may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13 and its RMR Contract. Details of the variation will be published on the CAISO Website. Communications of an emergency nature on a due date or a Payment Date relating to payments shall be made by the fastest practical means including by telephone.

11.13.10 Confidentiality

The provisions of Sections 11.29.10.5 and 20.5 shall apply to this Section 11.13 between and among the RMR Owners, the CAISO and Responsible Utilities. Except as may otherwise be required by applicable law, all confidential information and data provided by RMR Owner or the CAISO to the Responsible Utility pursuant to the RMR Contract, Section 41.6 or this Section 11.13 shall be treated as confidential and proprietary to the providing party to the extent required by Section 12.5 and Schedule N of the RMR

Contract and will be used by the receiving party only as permitted by such Section 12.5 and Schedule N.

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41. Procurement of RMR Generation

41.1 Procurement of Reliability Must-Run Generation by the CAISO

A Reliability Must-Run Contract is a contract entered into by the CAISO with a Generator which operates a Generating Unit giving the CAISO the right to call on the Generator to generate Energy and, only as provided in this Section 41.1, or as needed for Black Start or Voltage Support required to meet local reliability needs, or to procure Ancillary Services from Potrero power plant to meet operating criteria associated with the San Francisco local reliability area, to provide Ancillary Services from the Generating Units as and when this is required to ensure that the reliability of the CAISO Controlled Grid is maintained.

41.2 Designation of Generating Unit as Reliability Must-Run Unit

The CAISO will, subject to any existing power purchase contracts of a Generating Unit, have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a Generating Unit as a Reliability Must-Run Unit. A Generating Unit so designated shall then be obligated to provide the CAISO with its proposed rates for Reliability Must-Run Generation for negotiation with the CAISO. Such rates shall be authorized by FERC or the Local Regulatory Authority, whichever authority is applicable.

41.3 Reliability Studies and Determination of RMR Units Status

In addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria. The CAISO will then determine which Generating Units it requires to continue to be Reliability Must-Run Units, which Generating Units it no longer requires to be Reliability Must-Run Units and which Generating Units it requires to become the subject of a Reliability Must-Run Contract which had not previously been so contracted to the CAISO. None of the Generating Units owned by Local Publicly Owned Electric Utilities are planned to be designated as Reliability Must-Run Units by the CAISO as of the CAISO Operations

Date but are expected to be operated in such a way as to maintain the safe and reliable operation of the interconnected transmission system comprising the CAISO Balancing Authority Area. However, in the future, Local Publicly Owned Electric Utilities may contract with the CAISO to provide Reliability Must-Run Generation.

41.4 Reliability Must-Run Contracts

A pro forma of the Reliability Must-Run Contract is attached as Appendix G. From the CAISO Operations Date all Reliability Must-Run Units will be placed under the "As Called" conditions, but the parties may, pursuant only to the terms of the Reliability Must-Run Contract, transfer any such unit to one of the alternative forms of conditions under specific circumstances. The CAISO will review the terms of the applicable forms of agreement applying to each Reliability Must-Run Unit to ensure that the CAISO will procure Reliability Must-Run Generation from the cheapest available sources and to maintain System Reliability. The CAISO shall give notice to terminate Reliability Must-Run Contracts that are no longer necessary or can be replaced by less expensive and/or more competitive sources for maintaining the reliability of the CAISO Controlled Grid.

41.5 RMR Dispatch

41.5.1 Day-Ahead and RTM RMR Dispatch

RMR Dispatches will be determined in accordance with the RMR Contract, the MPM process addressed in Sections 31 and 33 and through manual RMR Dispatch Notices to meet Applicable Reliability Criteria. The CAISO will notify Scheduling Coordinators for RMR Units of the amount and time of Energy requirements from specific RMR Units in the Trading Day prior to or at the same time as the Day-Ahead Schedules and AS and RUC Awards are published, to the extent that the CAISO is aware of such requirements, through an RMR Dispatch Notice or flagged RMR Dispatch in the IFM Day-Ahead Schedule. The CAISO may also issue RMR Dispatch Notices after Market Close of the DAM and through Dispatch Instructions flagged as RMR Dispatches in the Real-Time Market.

The Energy to be delivered for each Trading Hour pursuant to the RMR Dispatch Notice an RMR Dispatch in the IFM or Real-Time shall be referred to as the RMR Energy. Scheduling Coordinators may submit Bids in the DAM or the RTM for RMR Units operating under Condition 1 of the RMR Contract in accordance with the bidding rules applicable to non-RMR Units. A Bid submitted in the DAM or the RTM

for a Condition 1 RMR Unit shall be deemed to be a notice of intent to substitute a market transaction for the amount of MWh specified in each Bid for each Trading Hour pursuant to Section 5.2 of the RMR Contract. In the event the CAISO issues an RMR Dispatch Notice or an RMR Dispatch in the IFM or Real-Time Market for any Trading Hour, any MWh quantities cleared through the MPM shall be considered as a market transaction in accordance with the RMR Contract. RMR Units operating as Condition 2 RMR Units may not submit Bids until and unless the CAISO issues an RMR Dispatch Notice or issues an RMR Dispatch in the IFM, in which case a Condition 2 RMR Unit shall submit Bids in accordance with the RMR Contract in the next available market for the Trading Hours specified in the RMR Dispatch Notice or Day-Ahead Schedule.

41.5.2 RMR Payments

RMR Units operating as Condition 1 RMR Units or Condition 2 RMR Units that receive an RMR Dispatch Notice will be paid in accordance with the RMR Contract.

41.5.3 RMR Units and Ancillary Services Requirements

The CAISO may call upon RMR Units in any amounts that the CAISO has determined is necessary at any time after the issuance of Day-Ahead Schedules for the Trading Day if: (i) the CAISO determines that it requires more of an Ancillary Service than it has been able to procure, except that the CAISO shall not be required to accept Ancillary Services Bids that exceed the price caps specified in Section 39 or any other FERC-imposed price caps; and (ii) the CAISO has notified Scheduling Coordinators of the circumstances existing in this Section 41.5.3, and after such notice, the CAISO determines that a bid insufficiency condition in accordance with the RMR Contract exists in the RTM and the CAISO requires more of an Ancillary Service. The CAISO must provide the notice specified in sub paragraph (ii) of this Section 41.5.3 as soon as possible after the CAISO determines that additional Ancillary Services are needed for which Bids are not available. The CAISO may only determine that a Bid insufficiency exists after the Market Close of the RTM, unless an earlier determination is required in order to accommodate the RMR Unit's operating constraints. For the purposes of this Section 41.5.3, a Bid insufficiency exists in RTM if, and only if: (i) Bids in the RTM for the particular Ancillary Service that can be used to satisfy that particular Ancillary Services requirement that remain after first procuring the megawatts of the Ancillary Service that the CAISO had notified Scheduling Coordinators it would procure in the HASP ("remaining Ancillary

Services requirement") represent, in the aggregate, less than two times such remaining Ancillary Services requirement; or (ii) there are less than two unaffiliated bidders to provide such remaining Ancillary Services requirement. If the CAISO determines that a Bid insufficiency condition exists as described in this Section 41.5.3, the CAISO may nonetheless accept available Bids if it determines in its sole discretion that the prices specified in the Bids and the Energy Bid Curves created by the Bids indicate that the Scheduling Coordinators were not attempting to exercise market power.

41.6 Reliability Must-Run Charge

The CAISO shall prepare and send to each Responsible Utility in accordance with Section 11.13, a CAISO Invoice as provided in the RMR Contract in respect of those costs incurred under each Reliability Must-Run Contract that are payable to the CAISO by such Responsible Utility or payable by the CAISO to such Responsible Utility pursuant to Section 41.7. The CAISO Invoices as provided in the RMR Contract shall reflect all reductions or credits required or allowed under or arising from the Reliability Must-Run Contract or under this Section 41.6. The CAISO Invoice as provided in the RMR Contract shall separately show the amounts due for services from each RMR Owner. Each Responsible Utility shall pay the amount due under each CAISO Invoice as provided in the RMR Contract by the due date specified in the CAISO Invoice as provided in the RMR Contract, in default of which interest shall become payable at the interest rate provided in the Reliability Must-Run Contract from the due date until the date on which the amount is paid in full. For each Reliability Must-Run Contract, the CAISO shall establish two segregated commercial bank accounts under the Facility Trust Account referred to in Section 11.13.2.1 and Article 9 of the Reliability Must-Run Contract. One commercial bank account, the RMR Owner Facility Trust Account, shall be held in trust by the CAISO for the RMR Owner. The other commercial bank account, the Responsible Utility Facility Trust Account, shall be held in trust by the CAISO for the Responsible Utility. Payments received by the CAISO from the Responsible Utility in connection with the Reliability Must-Run Contract, including payments following termination of the Reliability Must-Run Contract, will be deposited into the RMR Owner Facility Trust Account and payments from the CAISO to the RMR Owner will be withdrawn from such account, in accordance with this Section 41.6, Article 9 of the Reliability Must-Run Contract and Section 11.13. Any payments received by the CAISO from the RMR Owner in connection with the Reliability Must-Run Contract will be deposited into the Responsible Utility Facility Trust Account.

Any payments due to the Responsible Utility of funds received from the RMR Owner in connection with the Reliability Must-Run Contract will be withdrawn from the Responsible Utility Facility Trust Account, in accordance with this Section 41.6, Section 11.13, and Article 9 of the Reliability Must-Run Contract. Neither the RMR Owner Facility Trust Account nor the Responsible Utility Facility Trust Account shall have other funds commingled in it at any time. The CAISO shall not modify this Section or Section 11.13 as it applies to procedures for the billing, invoicing and payment of charges under Reliability Must-Run Contracts without the Responsible Utility's consent, provided, however, that no such consent shall be required with respect to any change in the method by which costs incurred by the CAISO under RMR Contracts are allocated to or among Responsible Utilities.

41.6.1 No Offsets to Responsible Utility's CAISO Invoice Payments

Except where the Responsible Utility is also the RMR Owner, the Responsible Utility's payment of the CAISO Invoice as provided in the RMR Contract shall be made without offset, recoupment or deduction of any kind whatsoever. Notwithstanding the foregoing, if the CAISO fails to deduct an amount required to be deducted under Section 41.6.2, the Responsible Utility may deduct such amount from payment otherwise due under such CAISO Invoice as provided in the RMR Contract.

41.6.2 Refunds of Disputed Amounts on RMR Invoices

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, Revised Estimated RMR Invoice, or Revised Adjusted RMR Invoice, or Final Invoice, it shall pay the CAISO Invoice as provided in the RMR Contract but may pay under protest and reserve its right to seek a refund, with interest, from the CAISO. If resolution of the dispute results in an amount paid by the Responsible Utility under protest being due from the CAISO to the Responsible Utility and from the RMR Owner to the CAISO, and such amount was paid to the RMR Owner by the CAISO, then such amount, with interest at the interest rate specified in the applicable Reliability Must-Run Contract from the date of payment until the date on which the amount is repaid in full, shall be refunded by the RMR Owner to the CAISO and from the CAISO to the Responsible Utility, pursuant to Article 9 of the Reliability Must-Run Contract and Section 11.13, by the RMR Owner's inclusion of such refund amount in the appropriate invoice. If the RMR Owner does not include such refund amount (including interest) in the appropriate invoice, then such refund amount shall be deducted by the CAISO from the next succeeding amounts otherwise due

from the Responsible Utility to the CAISO and from the next succeeding amounts otherwise due from the CAISO to the RMR Owner with respect to the applicable Reliability Must-Run Contract or, if such RMR Contract has terminated, such amount shall be refunded by the CAISO to the Responsible Utility; provided, however, that if and to the extent that such resolution is based on an error or breach or default of the RMR Owner's obligations to the CAISO under the Reliability Must-Run Contract, then such refund obligation shall extend only to amounts actually collected by the CAISO from the RMR Owner as a result of such resolution. If resolution of the dispute requires the CAISO, but not the RMR Owner, to pay the Responsible Utility, then such award shall be recovered from any applicable insurance proceeds, provided that to the extent sufficient funds are not recoverable through insurance, the amount of the award (whether determined through settlement, or the CAISO ADR Procedures or otherwise) shall be collected by the CAISO pursuant to Section 13.5, and in any event, the award shall be paid by the CAISO to the Responsible Utility pursuant to Section 13.5.

41.6.3 Time-Frame for Responsible Utility to Dispute RMR Invoices

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, or part thereof, based in whole or in part on an alleged error by the RMR Owner or breach or default of the RMR Owner's obligations to the CAISO under the Reliability Must-Run Contract, the Responsible Utility shall notify the CAISO of such dispute within twelve (12) months of its receipt of the applicable Revised Adjusted RMR Invoice or Final Invoice from the CAISO, except that the Responsible Utility may also dispute a Revised Estimated RMR Invoice, Revised Adjusted RMR Invoice, or Final Invoice for the reasons set forth above in this Section 41.6.3, within sixty (60) days from the issuance of a final report with respect to an audit of the RMR Owner's books and accounts allowed by a Reliability Must-Run Contract.

41.6.4 Disputes After Operational Compliance Review

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, based in whole or in part on an alleged error by the CAISO or breach or default of the CAISO's obligations to the Responsible Utility, the Responsible Utility shall notify the CAISO of such dispute prior to the later to occur of: (i) the date twelve (12) months following the date on which the CAISO submitted such invoice to the Responsible

Utility for payment or (ii) the date sixty (60) days following the date on which a final report is issued in connection with an operational compliance review, pursuant to Section 22.1.2.2, of the CAISO's performance of its obligations to Responsible Utilities under this Section 41.6.4 conducted by an independent third party selected by the CAISO Governing Board and covering the period to which such alleged dispute relates. The CAISO or any Responsible Utility shall have the right to request, but not to require, that the CAISO Governing Board arrange for such an operational compliance review at any time.

41.6.5 Invoice Disputes Subject to RMR Contract Resolution Process

Notwithstanding Section 13, any Responsible Utility dispute relating to a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, a Final Invoice, or a RMR Charge, RMR Payment or RMR Refund shall be resolved through the dispute resolution process specified in the relevant RMR Contract. If the Responsible Utility fails to notify the CAISO of any dispute as provided above, it shall be deemed to have validated the invoice and waived its right to dispute such invoice.

41.6.6 RMR Owner's Rights as a Third Party Beneficiary

The RMR Owner shall, to the extent set forth herein, be a third party beneficiary of, and have all rights that the CAISO has under the CAISO Tariff, at law, in equity or otherwise, to enforce the Responsible Utility's obligation to pay all sums invoiced to it in the CAISO Invoices as provided in the RMR Contract but not paid by the Responsible Utility, to the extent that, as a result of the Responsible Utility's failure to pay, the CAISO does not pay the RMR Owner on a timely basis amounts due under the Reliability Must-Run Contract. The RMR Owner's rights as a third party beneficiary shall be no greater than the CAISO's rights and shall be subject to the dispute resolution process specified in the relevant RMR Contract. Either the CAISO or the RMR Owner (but not both) will be entitled to enforce any claim arising from an unpaid CAISO Invoice as provided in the RMR Contract, and only one party will be a "disputing party" under the dispute resolution process specified in the relevant RMR Contract with respect to such claim so that the Responsible Utility will not be subject to duplicative claims or recoveries. The RMR Owner shall have the right to control the disposition of claims against the Responsible Utility for non-payments that result in payment defaults by the CAISO under a Reliability Must-Run Contract. To that end, in the event of non-payment by the Responsible Utility of amounts due under the CAISO Invoice as provided in the

RMR Contract, the CAISO will not take any action to enforce its rights against the Responsible Utility unless the CAISO is requested to do so by the RMR Owner. The CAISO shall cooperate with the RMR Owner in a timely manner as necessary or appropriate to most fully effectuate the RMR Owner's rights related to such enforcement, including using its best efforts to enforce the Responsible Utility's payment obligations if, as, to the extent, and within the time frame, requested by the RMR Owner. The CAISO shall intervene and participate where procedurally necessary to the assertion of a claim by the RMR Owner.

41.7 Responsibility for Reliability Must-Run Charge

Except as otherwise provided in Section 41.8 , the costs incurred by the CAISO under each Reliability Must-Run Contract shall be payable to the CAISO by the Responsible Utility in whose PTO Service Territory the Reliability Must-Run Units covered by such Reliability Must-Run Contract are located or, where a Reliability Must-Run Unit is located outside the PTO Service Territory of any Responsible Utility, by the Responsible Utility or Responsible Utilities whose PTO Service Territories are contiguous to the Service Area in which the Generating Unit is located, in proportion to the benefits that each such Responsible Utility receives, as determined by the CAISO. Where costs incurred by the CAISO under a Reliability Must-Run Contract are allocated among two or more Responsible Utilities pursuant to this section, the CAISO will file the allocation under Section 205 of the Federal Power Act.

41.8 Responsibility for RMR Charges Associated with SONGS

If the CAISO procures Reliability Must-Run Generation from the San Onofre Nuclear Generation Station Units 2 or 3, it shall determine prior to the operation of such facilities as Reliability Must-Run Generation the appropriate allocation of associated charges, if any, among Responsible Utilities. The allocation of such charges shall be based on the reliability benefits that the CAISO reasonably identifies through studies and analysis as accruing to the respective Service Areas of the Responsible Utilities.

41.9 Exceptional Dispatch of Condition 2 RMR Units

The CAISO may Dispatch an RMR Unit that has currently selected Condition 2 of its RMR Contract to provide Energy through an Exceptional Dispatch under this CAISO Tariff for reasons other than as prescribed in the RMR Contract under the following conditions:

- (1) The CAISO projects that it will require Energy from the Condition 2 RMR Unit to (a) meet forecast Demand and operating reserve requirements or (b) manage Congestion and no

other Generating Unit that is available is capable of meeting the identified requirement;

41.9.1 Notification Required Before Condition 2 RMR Unit Dispatch

Before dispatching a Condition 2 RMR Unit in accordance with this Section, the CAISO must notify Market Participants of (a) the situation for which the CAISO is contemplating dispatching a Condition 2 RMR Unit in accordance with this Section, and (b) the date and time the CAISO requires the Condition 2 RMR Unit so dispatched to be operating. The CAISO shall provide such notice as far in advance as practical and prior to directing the Condition 2 RMR Unit to Start-Up

Notwithstanding anything to the contrary in the applicable RMR Contract, all MWh, Start-Ups and service hours provided by a Generating Unit that has currently selected Condition 2 of its RMR Contract pursuant to this Section 41.9.1 through an Exceptional Dispatch outside of the RMR Contract shall not be used to determine future “Annual Service Limits” as defined in the RMR Contract. Payment for Dispatches pursuant to this Section 41.9.1 is governed by Section 11.

Appendix A

Master Definition Supplement

- Adjusted RMR Invoice

The monthly invoice issued by the RMR Owner to the CAISO for adjustments made to the Revised Estimated RMR Invoice pursuant to the RMR Contract reflecting actual data for the billing month.

- CAISO Invoice

The invoices issued by the CAISO to the Responsible Utilities or RMR Owners based on the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice.

- Condition 1 RMR Unit

A resource operating pursuant to Condition 1 of its RMR Contract.

- Condition 2 RMR Unit

A resource operating pursuant to Condition 2 of its RMR Contract.

- Estimated RMR Invoice

The monthly invoice issued by the RMR Owner to the CAISO for estimated RMR Payments or RMR Refunds pursuant to the RMR Contract.

- Facility Trust Account

For each RMR Contract, the account established and operated by the CAISO to and from which all payments under Section 11.13 shall be made. Each Facility Trust Account will have two segregated commercial bank accounts, an RMR Owner Facility Trust Account and a Responsible Utility Facility Trust Account.

- Final Invoice

The invoice due from a RMR Owner to the CAISO at termination of the RMR Contract.

- Maximum Net Dependable Capacity (MNDC)]

A term defined in and used in association with an RMR Contract.

- MNDC

Maximum Net Dependable Capacity.

- Prior Period Change

Any correction, surcharge, credit, refund or other adjustment pertaining to a billing month pursuant to an RMR Contract which is discovered after the Revised Adjusted RMR Invoice for such billing month has been issued.

- Prior Period Change Worksheet

A worksheet prepared by the RMR Owner and submitted to the CAISO following discovery of a necessary change to an RMR Invoice after the Revised Adjusted RMR Invoice for the billing month has been issued.

- RMR Dispatch

The quantity of Energy or Ancillary Services that is mandated by the CAISO to be delivered in a given market for a resource by an RMR Unit under an RMR Contract.

- Manual RMR Dispatch

An RMR Dispatch Notice issued by the CAISO other than as a result of the MPM process.

- Reliability Must-Run Charge (RMR Charge)

The sum payable by a Responsible Utility to the CAISO pursuant to Section 41 for the costs, net of all applicable credits, incurred under the Reliability Must-Run Contract.

- Reliability Must-Run Contract (RMR Contract)

A Must-Run Service Agreement between the owner of a Reliability Must-Run Unit and the CAISO.

- Reliability Must-Run Unit (RMR Unit)

A Generating Unit of a Participating Generator which is the subject of a Reliability Must-Run Contract.

- Responsible Utility

The utility which is a party to the Transmission Control Agreement in whose PTO Service Territory the Reliability Must-Run Unit is located or whose PTO Service Territory is contiguous to the PTO Service Territory in which a Reliability Must-Run Unit owned by an entity outside of the CAISO Controlled Grid is located.

- Responsible Utility Facility Trust Account

A segregated commercial bank account under the Facility Trust Account containing funds held in trust for the Responsible Utility under an RMR Contract.

Revised Adjusted RMR Invoice

The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting any appropriate revisions to the Adjusted Reliability Must-Run Invoice based on the CAISO's validation and actual data for the billing month.

- Revised Estimated RMR Invoice

The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting appropriate revisions to the Estimated Reliability Must-Run Invoice based on the CAISO's validation of the Estimated Reliability Must-Run Invoice.

- RMR Default Amount

Any amount due to be received into the relevant Facility Trust Account from the RMR Owner or the Responsible Utility in accordance with an RMR Contract.

- RMR Energy

Total Expected Energy under RMR Dispatch. RMR Energy is calculated independent of other Expected Energy types and it may overlap with any other Expected Energy type. It is used for RMR Contract based settlement as provided in Section 11.13.

- RMR Invoice

Any Estimated RMR Invoice, Revised Estimated RMR Invoice, Adjusted RMR Invoice, or Revised Adjusted RMR Invoice under an RMR Contract.

- RMR Owner

The provider of services under a Reliability Must-Run Contract.

- RMR Owner Facility Trust Account

The commercial bank account held in trust by the CAISO for the benefit of the owner of an RMR Unit subject to an RMR Contract as required and specified in Section 9.2 of the pro forma RMR Contract.

- RMR Payment

Any amounts which the CAISO is obligated to pay to RMR Owners under the RMR Contracts, net of any applicable credits under the RMR Contracts.

- RMR Security

The form of security provided by a Responsible Utility to cover its liability under Section 11.13.

9.3.6—Maintenance Outage Planning

~~Each Operator or Scheduling Coordinator shall, by not later than October 15 each year, provide the CAISO with a proposed schedule of all Maintenance Outages it wishes to undertake in the following year. The proposed schedule shall include all of the Operator's transmission facilities that comprise the CAISO Controlled Grid and Generating Units subject to a Participating Generator Agreement, Net Scheduled PGA, or Pseudo-Tie Participating Generator Agreement (including its Reliability Must-Run Units). In the case of a Participating TO's transmission facilities, that proposed schedule shall be developed in consultation with the UDCs interconnected with that Participating TO's system and shall take account of each UDC's planned maintenance requirements. The nature of the information to be provided and the detailed Maintenance Outage planning procedure shall be established by the CAISO. This information shall include:~~

~~The following information is required for each Generating Unit of a Participating Generator:~~

- ~~(a) — the Generating Unit name and Location Code;~~
- ~~(b) — the MW capacity unavailable;~~

- ~~(c) — the scheduled start and finish date for each Outage; and~~
- ~~(d) — where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.~~

The following information is required for each transmission facility:

- ~~(a) — the identification of the facility and location;~~
- ~~(b) — the nature of the proposed Maintenance Outage;~~
- ~~(c) — the preferred start and finish date for each Maintenance Outage; and~~
- ~~(d) — where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.~~

Either the CAISO, pursuant to Section 9.3.7, or an Operator or Scheduling Coordinator, subject to Section 9.3.6.11, may at any time request a change to an Approved Maintenance Outage. An Operator or Scheduling Coordinator may, as provided in Section 9.3.6.3, schedule with the CAISO a Maintenance Outage on its system, subject to the conditions of Sections 9.3.6.4.1, 9.3.6.8, and 9.3.6.9.

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~~36.4 — FNM for CRR Allocation and CRR Auction~~

When the CAISO conducts its CRR Allocation and CRR Auction, the CAISO shall use the most up-to-date DC FNM, which is based on the AC FNM used in the Day Ahead Market.

The Seasonal Available CRR Capacity shall be based on the DC FNM, taking into consideration the following, all of which are discussed in the applicable Business Practice Manual: (i) any long-term scheduled transmission Outages; (ii) TTC adjusted for any long-term scheduled derates; (iii) a downward adjustment due to TOR or ETC as determined by the CAISO; and (iv) the impact on transmission elements used in the annual CRR Allocation and Auction of

- ~~(a) — transmission Outages or derates that are not scheduled at the time the CAISO conducts the Seasonal CRR Allocation or Auction determined through a methodology that calculates the breakeven point for revenue adequacy based on historical Outages and derates, and~~

~~(b) — known system topology changes, both as further defined in the Business Practice Manuals.~~

~~The Monthly Available CRR Capacity shall be based on the DC FNM, taking into consideration: (i) any scheduled transmission Outages known at least thirty (30) days in advance of the start of that month as submitted for approval consistent with the criteria specified in Section 36.4.3; (ii) adjustments to compensate for the expected impact of Outages that are not required to be scheduled thirty (30) days in advance, including unplanned transmission Outages; (iii) adjustments to restore Outages or derates that were applied for use in calculating Seasonal Available CRR Capacity but are not applicable for the current month; (iv) any new transmission facilities added to the CAISO Controlled Grid that were not part of the DC FNM used to determine the prior Seasonal Available CRR Capacity and that have already been placed in service and energized at the time the CAISO starts the applicable monthly process; (v) TTC adjusted for any scheduled derates or Outages for that month; (vi) a downward adjustment due to TOR or ETC as determined by the CAISO; and (vii) adjustments for possible unscheduled flow at the Interties. For the first monthly CRR Allocation and CRR Auction for CRR Year One, to account for any planned or unplanned Outages that may occur for the first month of CRR Year One, the CAISO will derate all flow limits, including Transmission Interface limits and normal thermal limits, based on statistical factors determined as provided in the Business Practice Manuals.~~

~~36.4.1 Transmission Capacity for CRR Allocation and CRR Auction~~

~~With the exception of the Tier LT, the CAISO makes available seventy-five percent (75%) of Seasonal Available CRR Capacity for the annual CRR Allocation and CRR Auction processes, and one hundred percent (100%) of Monthly Available CRR Capacity for the monthly CRR Allocation and CRR Auction processes. The CAISO makes available sixty percent (60%) of Seasonal Available CRR Capacity in the Tier LT. Available capacity at Scheduling Points shall be determined in accordance with Section 36.8.4.2 for the purposes of CRR Allocation and CRR Auction of CRRs that have a CRR Source identified at a Scheduling Point. Before commencing with the annual or monthly CRR Allocation and CRR Auction processes, the CAISO may distribute Merchant Transmission CRRs and will model those as fixed injections and withdrawals on the DC FNM to be used in the allocation and auction. These fixed injections and withdrawals are not modified by the Simultaneous Feasibility Test. Similarly, before~~

~~commencing the annual or monthly CRR Allocation and CRR Auction processes, the CAISO will model any previously allocated Long Term CRRs as fixed injections and withdrawals on the DC-FNM to be used in the CRR Allocation and CRR Auction. These fixed injections and withdrawals are not modified by the Simultaneous Feasibility Test, which will ensure no degradation of previously allocated and outstanding Long Term CRRs due to the CRR Allocation and CRR Auction processes. Maintaining the feasibility of allocated Long Term CRRs over the length of their terms also is accomplished through the transmission planning process in Section 24.1.3.~~

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~~36.4.3 Outages that may Affect CRR Revenue; Scheduling Requirements~~

~~As provided in Section 9.3.6.4.2, Outages that may have a significant effect upon CRR revenue adequacy must be submitted for approval no less than thirty (30) days in advance of the first day of the month in which the Outage is proposed to begin. Outages that may have a significant effect upon CRR revenue adequacy are defined in terms of the type of facility and the planned duration of the Outage. Outages of the types of transmission facilities described below that extend beyond a twenty four (24) hour period must be submitted for CAISO approval consistent with this 30-day advance submittal requirement. The types of transmission facilities on the CAISO Controlled Grid to which this 30-day advance submittal and approval requirement applies consist of transmission facilities that:~~

- ~~(a) — are rated above 200-kV; or~~
- ~~(b) — are part of any defined flow limit as described in a CAISO Operating Procedure; or~~
- ~~(c) — were out of service in the last three (3) years and for which the CAISO determined a special flow limit was needed for real-time operation.~~

~~A list of the transmission facilities that satisfy criteria (b) and (c) above is provided in the Operating Procedures. The list will be initially created in collaboration with the respective Participating TOs and will be reviewed by the CAISO in collaboration with the Participating TOs on an annual basis and revised as appropriate; provided, however, that the CAISO will ultimately determine the lines that are included in the list. The list will be reviewed by the CAISO on an annual basis and revised as appropriate. The following~~

~~types of Outages need not be submitted for approval within this thirty day time frame and will not be designated as Forced Outages if they otherwise comply with the requirements in Section 9.3.6: (1) Outages previously approved by CAISO that are moved within the same calendar month either by the CAISO or by request of the Participating TO; and (2) Outages associated with CAISO approved allowable transmission maintenance activities during restricted maintenance operations as covered in CAISO Operating Procedures.~~

~~* * * * *~~

~~**36.8.4.2.2 Scheduling Points as CRR Sources for LSEs Beyond CRR Year One**~~

~~In the annual CRR Allocation processes subsequent to CRR Year One, there will be no special provisions regarding CRR Sources at Scheduling Points in tiers 1 and 2 for LSEs. For tier 3 the CAISO will calculate and set aside for the annual CRR Auction fifty percent (50%) of the import capacity at each Scheduling Point that remains after the tier 1 and tier 2 CRR Allocations and after considering any previously allocated Long Term CRRs that are valid for that month as described in Section 36.4.1. In the monthly CRR Allocation processes subsequent to CRR Year One there will be no special provisions regarding CRR Sources at Scheduling Points in tier 1 for LSEs. For tier 2 the CAISO will calculate and set aside for the monthly CRR Auction fifty percent (50%) of the import capacity that remains at each Scheduling Point after accounting for the annual CRR Allocation and CRR Auction results for that month, any previously allocated Long Term CRRs that are valid for that month, and the results of tier 1 of the monthly CRR Allocation.~~

~~* * * * *~~

~~**36.13 CRR Auction**~~

~~The CAISO shall conduct CRR Auctions on an annual and monthly basis subsequent to each annual and monthly CRR Allocation process. Candidate CRR Holders may bid to purchase and may acquire CRR Obligations, and may sell CRRs, through the CAISO's annual and monthly CRR Auctions in accordance with the provisions of this Section 36.13. CRR Auction results shall be settled as provided in Section~~

11.2.4.3.

36.13.1 Scope of the CRR Auctions

~~The CAISO will conduct a CRR Auction corresponding to and subsequent to the completion of each CRR Allocation process, and prior to the start of the period to which the auctioned CRRs will apply. Each CRR Auction will release CRRs having the same seasons, months and time of use specifications as the CRRs released in the corresponding CRR Allocation. Each CRR Auction will utilize the same DC-FNM that was utilized in the corresponding CRR Allocation. For each CRR Auction, the CRRs allocated in the corresponding CRR Allocation will be modeled as fixed injections and withdrawals on the DC-FNM and will not be adjusted by the SFT in the CRR Auction process. Thus the CRR Auction will release only those CRRs that are feasible given the results of the corresponding CRR Allocation. CRRs released in a CRR Auction will be indistinguishable from CRRs released in the corresponding CRR Allocation for purposes of settlement and secondary trading. The following additional provisions apply. First, participants in the CRR Auctions will have more choices regarding CRR Sources and CRR Sinks than are eligible for nomination in the CRR Allocations, as described in Section 36.13.5. Second, to the extent a Market Participant receives CRRs in both a CRR Allocation and the corresponding CRR Auction, the CRRs obtained in the CRR Auction will not be eligible for nomination in the PNP. Third, in CRR Year One the CRR Auction cannot be used by CRR Holders to offer for sale CRRs they acquired in a prior CRR Allocation, CRR Auction or through the Secondary Registration System. In the annual and monthly CRR Auction processes for years following CRR Year One, CRR Holders may offer for sale any CRRs held by such holders, subject to the limitations on sale and transfer of Long-Term CRRs specified in Section 36.7.1.2. Merchant Transmission CRRs that are CRR Options may be offered for sale in the annual and monthly CRR Auctions for years following CRR Year One, subject to the same temporal limitations that apply to Long-Term CRRs as specified in Section 36.7.1.2. As further described in Section 36.13.4, sales of CRRs in the CRR Auctions are accomplished through the submission of a CRR bid to procure a counterflow CRR of the CRR to be liquidated.~~

~~*****~~

36.13.4 Bids in the CRR Auctions

~~Bids to purchase CRRs shall be submitted in accordance with the requirements set out in this Section 36.13.4 and as further specified in the applicable Business Practice Manuals. Once submitted to the CAISO, CRR bids may not be cancelled or rescinded by the Market Participant after the CRR Auction is closed. Market Participants may bid for Point-to-Point CRRs. Each bid for a Point-to-Point CRR shall specify:~~

- ~~(a) — The associated month or season and time of use period;~~
- ~~(b) — The associated CRR Source and CRR Sink;~~
- ~~(c) — A monotonically non-increasing piecewise linear bid curve in quantities (denominated in thousandths of a MW) and prices (\$/MW).~~

~~Bid prices in all CRR bids may be negative. Sales of CRRs in the CRR Auctions are accomplished through the submission of a CRR bid to procure a counterflow CRR of the CRR to be liquidated. If such bids for sale of CRRs are cleared through the CRR Auction, the entitlements rights of the CRR Holder that sold the CRR in this manner are effectively liquidated.~~

36.13.5 Eligible Sources and Sinks for CRR Auction

~~Allowable CRR Sources for CRRs acquired/sold in the CRR Auction will be PNodes, Scheduling Points, Trading Hubs, LAPs, MSS-LAPs and Sub-LAPs. Allowable CRR Sinks for CRRs acquired/sold in the CRR Auction will be PNodes, Scheduling Points, Trading Hubs, LAPs, MSS-LAPs and Sub-LAPs.~~

Attachment B-2 – Marked Tariff Pro Forma Agreement
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation

Appendix G

Pro Forma Reliability Must-Run Contract

MUST-RUN SERVICE AGREEMENT

THIS MUST-RUN SERVICE AGREEMENT is made as of the ___ day of _____, 20___, between _____, a [corporation/limited liability company/municipal corporation] organized under the laws of the State of _____ (the "Owner"), and the CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION, a nonprofit public benefit corporation incorporated under the laws of the State of California (the "CAISO").

RECITALS

- A. Owner is the owner or lessee of, or is otherwise entitled to dispatch and market the Energy, ~~and Ancillary Services, Black Start, and other reliability services~~, produced from and provided by, the electrical generating Units located at the Facility described in Schedule A to this Agreement;
- B. Under Section 345 of the California Public Utilities Code, CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid;
- C. CAISO has determined that it needs the ability to dispatch Units under the terms and conditions of this Agreement to have Owner deliver Energy into or provide Ancillary Services, ~~Black Start, or other reliability services~~ to the CAISO Controlled Grid when required by CAISO to ensure the reliability of the CAISO Controlled Grid; and
- D. Each Unit covered by this Agreement has been designated as a Reliability Must-Run Unit.

In consideration of the covenants and agreements contained in this Agreement, the Parties agree as follows:

ARTICLE 1

DEFINITIONS

Terms, when used with initial capitalization in this Agreement and the attached schedules shall have the meanings set out below. The singular shall include the plural and vice versa. "Includes" or "including" shall mean "including without limitation." References to a section, article or schedule shall mean a section, article or schedule of this Agreement, unless another agreement or instrument is specified. Unless the context otherwise requires, references to any law shall be deemed references to such law as amended, replaced or restated from time to time. Unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal identity. References to "Owner" or "CAISO" shall, unless the context otherwise requires, mean Owner and CAISO respectively and their permitted assigns and successors. References to sections or provisions of the CAISO Tariff include any succeeding sections or provisions of the CAISO Tariff.

~~"Adjusted RMR Invoice" is defined in Section 9.1(b).~~

"ADR" means alternative dispute resolution pursuant to Section 11.1 and Schedule K.

"Agreement" means this Must-Run Service Agreement, including schedules, as amended from time to time.

~~"Ancillary Services" means those ancillary services identified in Schedule E as defined in Appendix A to the CAISO Tariff.~~

“Applicable UDC Tariff” means the applicable retail tariff(s), of the utility distribution company in whose service territory the Unit is located, under which the Unit is eligible to purchase power to meet its auxiliary power requirements, whether or not the Unit actually purchases auxiliary power under the tariff(s). The Applicable UDC Tariff for the Facility is set out on Schedule CA.

~~“Availability” means, in relation to a Unit, the maximum quantity of Energy or Ancillary Services, measured at the Delivery Point, the Unit is capable of producing at any given time assuming adequate time to ramp the Unit to that maximum quantity. For hydroelectric Units, Availability measures the extent to which the Unit is capable of producing Energy or providing Ancillary Services, given sufficient usable water to produce Energy or provide Ancillary Services. The Availability of a Unit is measured in MW.~~

~~“Availability Deficiency Factor” is calculated as set forth in Section 8.5.~~

~~“Availability Payment” means the payment to Owner described in Section 8.1 for Condition 1 and 8.2 for Condition 2.~~

~~“Availability Test” means a test of a Unit's Availability requested by CAISO or Owner pursuant to Section 4.9(a).~~

~~“Bid Sufficiency Test” means the test described in Section 4.1(c).~~

~~“Billable MWh” is defined in Section 8.3(a).~~

~~“Billing Month” is defined in Section 9.1(b).~~

~~“Black Start” means the ability of a Unit to start without an external source of electricity or the process of doing so is defined in Appendix A to the CAISO Tariff.~~

~~“BPM” is defined in Appendix A to the CAISO Tariff.~~

~~“Business Day” means any of Monday through Friday, excluding any day which is a Federal bank holiday is defined in Appendix A to the CAISO Tariff.~~

~~“CAISO Availability Notice” means a notice given by CAISO to Owner modifying the Availability of the Unit under Section 4.9 (a)(vi) or Section 5.4 (b).~~

~~“CAISO Controlled Grid” is defined in Appendix A to the CAISO Tariff.~~

~~“CAISO Invoice” is defined in Section 9.1(b).~~

~~“CAISO’s Repair Share” is defined in Section 7.5 (g).~~

~~“CAISO Settlements Calendar” is defined in Section 9.1(b).~~

“CAISO Tariff” means the California Independent System Operator Tariff on file with FERC and in effect from time to time.

~~“Calculation Hour” is defined in Section 8.3(c)(i)(A).~~

“CPUC California Agency” means the California Public Utilities Commission, or its successor agency or agencies responsible for representing the State of California in FERC proceedings involving the rates, terms and conditions of service under this Agreement.

“Capital Item” means an addition or modification to, change in or repair, replacement or renewal of plant, equipment or facilities used by Owner to fulfill Owner’s obligations under this Agreement.

A Capital Item does not include Repairs to such plant, equipment or facilities. A Capital Item does not include an Upgrade, unless recovery of costs of the Upgrade has been approved by CAISO. For purposes of this Agreement, Capital Items are “retirement units” or other items the costs of which are properly capitalized in accordance with the FERC Uniform System of Accounts, 18 C.F.R. Part 101.

“**Closed**” is defined in Section 2.5.

~~“**Commitment Costs**” is defined Appendix A to the CAISO Tariff.~~

~~“**Collateral**” is defined in Section 9.7.~~

~~“**Comparable RMR Unit**” is defined in Section 4.7 (f).~~

~~“**Competitive Constraints Run**” is defined in Appendix A to the CAISO Tariff.~~

~~“**Condition 1**” means the terms of this Agreement applicable to a Unit providing service under Condition 1 as described in Section 3.1.~~

~~“**Condition 2**” means the terms of this Agreement applicable to a Unit providing service under Condition 2 as described in Section 3.1.~~

“**Confidential Information**” is defined in Section 12.5.

~~“**Contract Service Limits**” for a given Unit means the Maximum Annual MWh, Maximum Annual Service Hours, Maximum Annual Start-ups, and, if applicable, the Maximum Monthly MWh as stated in Section 13 of Schedule A.~~

“**Contract Year**” means a calendar year; provided, however, that the initial Contract Year shall commence on the Effective Date and expire at the end of the calendar year in which the Effective Date occurred. If the Agreement terminates during a calendar year, the last Contract Year shall end on the termination date.

~~“**Counted MWh**” is defined in Section 5.3.~~

~~“**Counted Service Hours**” is defined in Section 5.3.~~

~~“**Counted Start-ups**” is defined in Section 5.3.~~

~~“**Credit Carryforward**” is defined in Section 9.1(e) and Section 9.1(f).~~

“**Daily Availability Payment**” is defined in Schedule B.

“**Daily Payment**” is defined in Schedule B.

“**Day-Ahead Schedule**” is defined in Appendix A to the CAISO Tariff.

~~“**Deliver**” means to deliver Energy into the CAISO Controlled Grid or Distribution Grid (at the Delivery Point or such other point as the Parties may otherwise agree) or to provide Ancillary Services (whether or not any Energy is Delivered as part of the Ancillary Service) pursuant to a Dispatch Notice (including deliveries for which a Dispatch Notice has been issued under Section 4.5 and deliveries in substitute Market Transactions under Section 5.2) and the terms “Delivered” and “Delivering” shall be construed accordingly.~~

“**Delivered Ancillary Services**” means the type and, if applicable, the MW of Ancillary Services Delivered by Owner.

~~“Delivered MWh” means the MWh of Energy Delivered by Owner and shall be equal to the sum of Billable MWh, Hybrid MWh, MWh deemed Delivered under Section 5.1 (f); and MWh Delivered from Substitute Units under Section 5.1 (c) or Section 5.1 (d).~~

“**Delivery Point**” means the point identified in Section 4 of Schedule A where Energy and Ancillary Services are to be Delivered.

“**Direct Contract**” means a contract between Owner and one or more identified persons for the sale of Energy or Ancillary Services other than under this Agreement, and shall in no event include a transaction in a market run by CAISO.

~~“Dispatch Notice” means a notice delivered by CAISO to Owner’s Scheduling Coordinator on a daily, hourly or real-time basis requesting dispatch of one or more Unit(s) to provide Energy or Ancillary Services under this Agreement. Dispatch Notices include: (a) Day Ahead Schedules and Real Time Dispatches where the RMR Unit or Units are flagged as RMR Dispatches as a result of the Market Power Mitigation and Reliability Requirements Determination processes pursuant to the CAISO Tariff, (b) Manual RMR Dispatch Notices, (c) notices deemed to have been given by CAISO for the Energy actually Delivered by a Unit that starts or increases Energy output as a result of a “system emergency” as defined in the CAISO Tariff whether the start or increase occurs automatically (for Units specified in Section 2 of Schedule A as having the ability to Start up or ramp automatically) or pursuant to a standing written order of the CAISO, and (d) Test Dispatch Notices given by CAISO under Section 4.9 other than Test Dispatch Notices issued at Owner’s request to test Availability or heat input of the Unit.~~

“**Distribution Grid**” means the radial lines, distribution lines and other facilities used to transmit or distribute Energy from the Facility other than the CAISO Controlled Grid.

~~“Due Date” means the date which is the 30th day after the date on which a Party submits an invoice to the other Party. Notwithstanding the above, the Due Dates for the Revised Estimated RMR Invoice, the Revised Adjusted RMR Invoice, and the CAISO Invoice shall be as specified in Section 9.1(b). If the 30th day, or other Due Date as specified in Section 9.1(b), is not a Business Day, the Due Date shall be the next Business Day.~~

“**Effective Date**” means the date this Agreement becomes effective pursuant to Section 2.1 thereof.

“**Energy**” means electrical energy.

“Energy Bid” is defined in Appendix A to the CAISO Tariff.

“Estimated RMR Invoice” is defined in Section 9.1(b).

“Exceptional Dispatch” is defined in Appendix A to the CAISO Tariff.

~~“Existing Contractual Limitation” means a contractual limitation on the Start-up or operation of a Unit existing prior to the date the Unit was designated as a Reliability Must-Run Unit. All Existing Contractual Limitations are described in Section 14 of Schedule A.~~

“**Facility**” means the electrical generating facility described in Schedule A. A hydroelectric facility may include one or more electric generating facilities which are hydraulically linked by a common water system.

“Facility Trust Account” is defined in Section 9.2.

“**FERC**” means the Federal Energy Regulatory Commission, any successor agency, or any other

agency to whom authority under the Federal Power Act affecting this Agreement has been delegated.

~~“Final Invoice” is defined in Section 9.10(a).~~

“**Financing Agreement**” means agreements for financing the Facility or any portion of the Facility.

~~“Fixed Option Payment Factor” is set forth in Section 2 of Schedule B.~~

“**Force Majeure Event**” means any occurrence beyond the reasonable control of a Party which causes the Party to be unable to perform an obligation under this Agreement in whole or in part and which could not have been avoided by the exercise of Good Industry Practice. Force Majeure Event includes an act of God, war, civil disturbance, riot, strike or other labor dispute, acts or failures to act of Governmental Authority, fire, explosion, flood, earthquake, storm, drought, lightning and other natural catastrophes. A Force Majeure Event shall not include lack of finances or the price of fossil fuel.

~~“Forced Outage” means a reduction in Availability of a Unit for which sufficient notice is not given to allow the outage to be factored into CAISO’s Day Ahead Market or Real Time Market.~~

“Gas Price Index” is defined in Appendix A to the CAISO Tariff.

“**Good Industry Practice**” means any of the practices, methods, and acts engaged in or approved by a significant portion of the electric power industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in the light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Industry Practice does not require use of the optimum practice, method, or act, but only requires use of practices, methods, or acts generally accepted in the region covered by the Western Systems Coordinating Council.

“**Governmental Authority**” means the government of any nation, any state or other political subdivision thereof, including any entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to a government.

~~“Hourly Metered Total Net Generation” means the electric generation in MWh for the Unit in any Settlement Period as measured by the Unit’s electrical meter described in Schedule A, Section 5, “Metering and Related Arrangements”, minus any auxiliary loads metered on the load side of such electrical meter for that Settlement Period in accordance with the CAISO Tariff.~~

~~“Hybrid MWh” is defined in Section 8.3(b).~~

~~“Hydroelectric Dependable Capacity” is the amount of MWh forecast to be produced by a hydroelectric Facility in an adverse hydrologic year.~~

“**Interest Rate**” means the lesser of the rate of interest per annum calculated in accordance with 18 C.F.R. 35.19a of the FERC’s Regulations or the maximum rate permitted by law.

“**Local Capacity Area**” is defined in Appendix A to the CAISO Tariff.

~~“Long term Planned Outage” means a planned interruption, in whole or in part, in the electrical output of a Unit to permit Owner to perform a major equipment overhaul and inspection or for new construction work but only if the outage is scheduled to last 21 consecutive days or more (which may span more than one Contract Year) and either (a) is scheduled in accordance with the CAISO’s outage coordination protocol prior to the beginning of the Contract Year or (b) was~~

~~scheduled as a Long-term Planned Outage for the last quarter of the expiring Contract Year but, with approval of the CAISO, was postponed and rescheduled into the new Contract Year.~~

~~“Manual RMR Dispatch Notice” is a Dispatch Notice issued other than as a result of the Market Power Mitigation and Reliability Requirements Determination process as described in the CAISO Tariff.~~

~~“Market Power Mitigation and Reliability Requirements Determination” or “MPM-RRD” is as defined in the CAISO Tariff.~~

~~“Market Schedule” is defined in Section 8.3(c)(i)(C).~~

~~“Market Transaction” means a delivery of Energy or provision of Ancillary Services from a Unit pursuant to a Direct Contract or bids into markets run by the, CAISO or any similar entity.~~

~~“Maximum Annual MWh” means, for each Unit, the maximum MWh of Energy that Owner may be obligated to Deliver from the Unit in each Contract Year without becoming entitled to charges for excess service under Schedule G. The Maximum Annual MWh for each Unit is set out in Section 12 of Schedule A. The rules for counting MWh are set out in Section 5.3.~~

~~“Maximum Annual Service Hours” means, for each Unit, the maximum Service Hours that Owner may be obligated to provide service from the Unit in each Contract Year without becoming entitled to charges for excess service under Schedule G. The Maximum Annual Service Hours for each Unit is set out in Section 12 of Schedule A. The rules for counting Service Hours are set out in Section 5.3.~~

~~“Maximum Annual Start-ups” means, for each Unit, the maximum number of times Owner may be obligated to Start-up the Unit in each Contract Year without becoming entitled to charges for Start-ups under Schedule G. The Maximum Annual Start-ups for each Unit is set out in Section 12 of Schedule A. The rules for counting Start-ups are set out in Section 5.3.~~

~~“Maximum Monthly MWh” means, for each hydroelectric Unit, the maximum MWh of Energy that Owner may be obligated to Deliver from the Unit without becoming entitled to charges for excess service under Schedule G. The Maximum Monthly MWh for each hydroelectric Unit is set out in Section 12 of Schedule A. The rules for counting MWh are set out in Section 5.3.~~

~~“Maximum Net Dependable Capacity” means the amount shown in Section 1 of Schedule A as the Maximum Net Dependable Capacity of a Unit.~~

~~“Minimum Load” means, for each Unit, the higher of (1) the lowest level in MW at which the Unit can maintain stable continuous operations, or (2) the Minimum Load for the Unit as shown in Section 9 of Schedule A.~~

~~“Minimum Off Time” means, for each Unit, the minimum time following Shutdown that the Unit must remain off line before initiation of the next Start-up. The Minimum Off Time for each Unit is shown in Section 11 of Schedule A.~~

~~“Minimum Run Time” means, for each Unit, the minimum time the Unit must remain Synchronized following Start-up. The Minimum Run Time for each Unit is shown in Section 10 of Schedule A.~~

~~“Maser File” is defined in Appendix A to the CAISO Tariff.~~

~~“Month” means a calendar month.~~

~~“Monthly Option Payment” is defined in Section 8.1(a) for Condition 1 and Section 8.2(a) for~~

~~Condition 2.~~

“Motoring Charge” means the payment in accordance with Schedule E for the Energy required to spin a generator or condenser that is electrically connected to the CAISO Controlled Grid or Distribution Grid to provide Ancillary Services in circumstances where the generator is not producing Energy.

“MW” means one megawatt.

“MWh” means one megawatt hour.

“Net Repair Costs” is defined in Section 7.5(a).

~~**“New Responsible Utility”** is defined in Section 9.4 (f).~~

~~**“Nonmarket Transaction”** means a Delivery of Energy or Ancillary Services other than Hybrid MWh from a Unit pursuant to a Dispatch Notice.~~

~~**“Non-Performance Penalty”** means a penalty computed pursuant to Section 8.5.~~

~~**“Other Outage”** means any reduction in the Availability of a Unit as reflected in an CAISO Availability Notice or Owner’s Availability Notice (whether characterized by the North American Electric Reliability Council (“NERC”) as a “forced outage”, “planned outage” or “maintenance outage”) other than a Long-term Planned Outage.~~

~~**“Owner’s Availability Notice”** means a notice given under Section 4.9(a)(vii) or Section 7.3(b) by Owner to CAISO notifying CAISO of the Availability of a Unit.~~

~~**“Operating Procedures”** is defined in Appendix A to the CAISO Tariff.~~

~~**“Opportunity Costs”** as defined in Appendix A to the CAISO Tariff.~~

“Owner’s Repair Cost Obligation” is an allowance for Repairs to be made during the Contract Year calculated pursuant to Section 7.5 (k). Owner’s Repair Cost Obligation is set out in Section 13 of Schedule A.

“Party” means either CAISO or Owner, and “Parties” means CAISO and Owner.

~~**“PMax”** is defined in Appendix A to the CAISO Tariff.~~

~~**“Proxy Cost”** is defined in Appendix A to the CAISO Tariff.~~

~~**“Proxy Cost Methodology”** is defined in Appendix A to the CAISO Tariff.~~

~~**“Penalty Period”** is defined in Section 8.5 (a).~~

~~**“Pre-empted Dispatch Payment”** is defined in Schedule E.~~

~~**“Prepaid Start-ups”** is defined in Section 8.4.~~

~~**“Prepaid Start-up Charge”** means the payment to Owner for Prepaid Start-ups described in Section 8.1.~~

~~**“Prepaid Start-up Cost”** is defined in Schedule D.~~

~~**“Prior Period Change(s)”** is defined in Section 9.1(g).~~

~~“Prior Period Change Examples” is defined in Section 9.1(l).~~

~~“Prior Period Change Guidelines” is defined in Section 9.1(l).~~

~~“Prior Period Change Worksheet” is defined in Section 9.1(g).~~

~~“Ramp Rate” is the applicable Ramp Rate as stated in Section 8 of Schedule A.~~

~~“Ramping Constraint” means the limits on ramping a Unit to higher or lower output as set out in Section 7 of Schedule A.~~

~~“Real-Time Dispatch” is defined in Appendix A of the CAISO Tariff.~~

~~“Recalculation Settlement Statement” is defined in Appendix A of the CAISO Tariff.~~

~~“Reliability Must-Run Unit” means a “reliability must-run unit” as defined in Appendix A of the CAISO Tariff.~~

~~“Reasonable Efforts” is defined in Appendix A to the CIAOS Tariff.~~

“Repair” means repairs or replacement required to remedy or prevent any loss or damage that impairs the capability of the Unit to Deliver Energy or Ancillary Services, the cost of which is properly treated as an expense in accordance with the FERC Uniform System of Accounts, 18 C.F.R. Part 101.

“Repair Payment Factor” is determined pursuant to Section 7.5(g).

~~“Requested Ancillary Services” means the type and, if applicable, the MW of Ancillary Services CAISO requests Owner to Deliver from a Unit pursuant to a Dispatch Notice.~~

~~“Requested MW” means the MW of Energy CAISO requests Owner to Deliver pursuant to a Dispatch Notice.~~

~~“Requested MWh” means the product of the Requested MW of Energy and the time in hours (or fraction thereof) during which the Dispatch Notice requested Delivery of the Requested MW. This includes ramping energy calculated pursuant to the CAISO Tariff.~~

“Requested Operation Period” means the time during which CAISO requests that a Unit Deliver Energy or Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement, pursuant to an RMR Dispatch Notice.

~~“Residual Unit Commitment,” or “RUC,” is defined in Appendix A to the CAISO Tariff.~~

“Response Notice” is defined in Section 14.3(b)(ii).

“RMR Contract Capacity” means the PMax value reflected in Schedule A of this Agreement and maintained in the CAISO Master File.

~~“Responsible Utility” is an entity which, under the CAISO Tariff, is responsible for paying all or part of the costs incurred by CAISO under this Agreement.~~

~~“Responsible Utility Facility Trust Account” is defined in Section 9.2.~~

~~“Revised Adjusted RMR Invoice” is defined in Section 9.1(b).~~

~~“Revised Estimated RMR Invoice” is defined in Section 9.1(b).~~

~~“RMR Dispatch” is as defined in Appendix A toef the CAISO Tariff.~~

~~“RMR Dispatch Notice” means a notice delivered manually by CAISO to Owner’s Scheduling Coordinator on a daily, hourly, or real-time basis requesting dispatch of one or more Unit(s) to provide Ancillary Services, Voltage Support or Black Start under this Agreement.~~

~~“RMR Invoices” means the four invoices issued each Billing Month by Owner to CAISO pursuant to Section 9.1 for payment of charges under this Agreement. The four invoices are the Estimated RMR Invoice, Revised Estimated RMR Invoice, Adjusted RMR Invoice, and Revised Adjusted RMR Invoice is defined Schedule C.~~

~~“RMR Invoice Template” is defined in Section 9.1(d).~~

~~“RMR Owner Facility Trust Account” is defined in Section 9.2.~~

~~“RMR Payments Calendar” means the calendar issued by CAISO pursuant to Section 11.13 of the CAISO Tariff.~~

~~“Scheduling Coordinator” means an entity certified by CAISO for the purposes of undertaking the functions specified in Section 4.5 of the CAISO Tariff with respect to a unit.~~

~~“Scheduling Coordinator Revenues” is defined in Section 9.1(f).~~

~~“Service Hours” means the amount of time (measured in hours or fractions thereof) a Unit is Delivering Energy or Ancillary Services pursuant to a Dispatch Notice.~~

~~“Settlement Period” means the period beginning at the start of the hour and ending at the end of the hour.~~

~~“Shutdown” means the condition of a Unit when it is not Synchronized and not in Start-up.~~

~~“Small Project Estimate” is defined in Section 7.4 (b).~~

~~“Start-up” means the action of bringing a Unit from Shutdown to Minimum Load and the terms “Starts-up”, “Started-up” and “Starting-up” shall be construed accordingly.~~

~~“Start-up Lead Time” means, for each Unit, the amount of time required to Start-up the Unit, as shown in Section 6 of Schedule A.~~

~~“Start-up Payment” is defined in Schedule D.~~

~~“Substitute Unit” means a generating unit or combination of units, other than the Unit identified in the Dispatch Notice (whether or not located at the Facility, whether or not designated as a Reliability Must Run Unit and whether or not owned by Owner), which, under the circumstances existing at the time, is capable of providing system reliability benefits equivalent to the system reliability benefits provided by the Unit identified in the Dispatch Notice. In the case of Units providing Ancillary Services, a Substitute Unit must (i) be certified to provide the requested type of Ancillary Service, (ii) provide the same or higher ramp rate and MW of capacity and, (iii) is located in the same Local Capacity Area as the Unit identified in the Dispatch Notice.~~

~~“Surcharge Payment” means the payment to Owner for Capital Items described in Section 8.1 for Condition 1 and Section 8.2 for Condition 2.~~

~~“Surcharge Payment Factor” means the percentage of the cost of a Capital Item that CAISO is obligated to pay.~~

~~“Synchronized” means the condition where a Unit is electrically connected to and capable of delivering Energy to the CAISO Controlled Grid or Distribution Grid.~~

~~“Termination Fee” means amounts determined pursuant to the termination fee formula contained in Section 2.5(b).~~

“Termination Fee” means amounts determined pursuant to the termination fee formula contained in Section 2.5(b).

“Termination Fee Invoice” is defined in Section 9.9(a).

~~“Test Dispatch Notice” means a notice issued to test a Unit pursuant to Section 4.9.~~

~~“Trading Day” means the day on which Energy or Ancillary Services are to be Delivered.~~

“Unit” means an individual electricity generating unit which has been designated a Reliability Must-Run Unit and is part of the Facility identified in Schedule A.

~~“Unit Availability Limit” means for any hour the maximum MW which Owner is obligated to make available to CAISO from a Unit. The Unit Availability Limit shall be the lower of (a) the Maximum Net Dependable Capacity of the Unit or (b) the Availability of the Unit as stated in the currently effective Owner’s Availability Notice or CAISO Availability Notice.~~

“Unplanned Capital Item Notice” is defined in Section 7.6(b).

“Unplanned Repair Notice” is defined in Section 7.5(b).

“Upgrade” means any change or modification to the Facility that increases the nameplate capacity rating of an existing Unit or adds a new unit.

“Variable Cost Default Energy Bid” is defined in Appendix A to the CAISO Tariff.

“Variable Cost Payment” means the payment to Owner for delivery of Energy and Ancillary Services Billable MWh as described in Schedule C Section 8.

“Voltage Support” is defined in Appendix A to the CAISO Tariff.

“WECC” is defined in Appendix A to the CAISO Tariff.

ARTICLE 2

TERM

2.1 Term

- (a) This Agreement shall become effective on the later of ~~March 31, 2008~~ January 31, 2020, or the date it is permitted to become effective by FERC, and shall continue in effect for one Contract Year.
- (b) CAISO may extend the term of this Agreement for an additional calendar year as to one or more Unit by notice given not later than October 1 of the expiring Contract Year. CAISO may extend the term for less than a full calendar year as to one or more Unit but only if CAISO gives notice not less than 12 months prior to the date to which it proposes to extend the term.

2.2 Termination

- (a) Subject to any necessary authorization from FERC, this Agreement may be terminated as to one or more Unit in accordance with this Section 2.2; provided, however, that if this Agreement applies to a Facility having hydroelectric Unit, this Agreement may be terminated only as to all hydroelectric Units at the Facility. If this Agreement terminates as to fewer than all Units, the Agreement shall remain in effect as to the remaining Units. If this Agreement terminates as to all Units, the Agreement shall terminate.
- (b) This Agreement may be terminated as to one or more Units:
 - (i) by CAISO pursuant to Section 11.4 in the event of default by Owner;
 - (ii) by Owner pursuant to Section 11.4 in the event of default by CAISO;
 - (iii) by Owner pursuant to Section 7.4 (f), 7.5 (i) or 7.6 (h);
 - (iv) by Owner or CAISO, if the Unit is condemned by a Governmental Authority; or
 - (v) by Owner or CAISO, if Owner's authorization from a Governmental Authority (including, where applicable, licenses under Part I of the Federal Power Act) that is necessary to site, operate or obtain access to such Unit is terminated or expires or is reissued or modified so that it becomes illegal, uneconomical or otherwise impractical for the Owner to continue operating the Facility. Owner shall be obligated to use its best efforts to renew and keep effective its licenses and authorizations and to oppose conditions or modifications which would make continued operation illegal, uneconomical or otherwise impractical.
- (c) To the extent that Owner transfers the right to control the dispatch of the Facility or Unit which right is necessary to satisfy its obligations under this Agreement, Owner shall assign this Agreement to the transferee in accordance with Section 13.1.
- (d) ~~Except as provided in Section 2.2(f),~~ if CAISO terminates the Agreement or does not extend the term of the Agreement as to a Unit, CAISO shall not redesignate the same Unit, or designate another non-reliability must-run unit at the same Facility, as a Reliability Must-Run Unit during the one year period following termination or expiration of the Agreement as to that Unit unless (i) CAISO demonstrates that the unit is required to maintain the reliability of the CAISO Controlled Grid or any portion thereof and the need to designate the unit as a Reliability Must-Run Unit is caused by an extended outage of a generation or transmission facility not known to CAISO at the time of the termination or expiration or (ii) the unit is selected through an CAISO competitive process in which Owner participated. For purposes of the foregoing, CAISO's need for spinning reserves, nonspinning reserves, replacement reserves or regulation as defined in the CAISO Tariff shall not be grounds for redesignating the Unit or designating another unit at the Facility as a Reliability Must-Run Unit.
- (e) Subject to any necessary authorization from FERC, this Agreement shall terminate as to any Unit leased by Owner in the event that, for any reason, the lease expires or is terminated unless Owner acquires ownership of such Unit upon such expiration or termination. Any termination under this Section 2.2 (e) shall not affect any right CAISO may have thereafter to designate such Unit as a Reliability Must-Run Unit and the conditions in Section 2.2 (d) shall not apply to such redesignation.
- ~~(f) CAISO may redesignate the same Unit or designate another non-reliability must-run unit at the same Facility immediately following a termination under Section 2.2(b)(vi).~~

2.3 Effective Date of Expiration or Termination

If FERC authorization is required to give effect to expiration or termination of this Agreement as to one or more Units, the effective date of the expiration or termination shall be the date FERC permits the expiration or termination to become effective. Owner shall promptly file for the requisite FERC authorizations to terminate service under this Agreement as of the proposed effective date of expiration or termination; provided, that nothing in this Agreement shall prejudice the right of either Party to contest the other Party's claim that a termination or expiration has occurred. If FERC authorization is not required to terminate service under this Agreement, the effective date of expiration or termination shall be the later of (i) the date specified in CAISO or Owner's notice of termination or (ii) the date that all conditions to the termination or expiration have been satisfied.

2.4 Effect of Expiration or Termination

Expiration or termination of this Agreement shall not affect the accrued rights and obligations of either Party, including either Party's obligations to make all payments to the other Party pursuant to this Agreement or post-termination audit rights under Section 12.2.

2.5 Termination Fee

- (a) CAISO shall pay Owner a Termination Fee calculated pursuant to Section 2.5 (b) if the Unit is Closed within six months after the Unit ceases to be subject to this Agreement as a result of termination pursuant to Sections 2.2 (b) (ii), (iii), (iv) or (v) or because CAISO does not extend the term under Section 2.1 (b). ~~This Termination Fee shall not apply if there is a redesignation under Section 2.2(f).~~ Within 60 days after the Unit is Closed, Owner will send CAISO a notice stating (i) the date the Unit Closed and (ii) the amount of the Termination Fee due Owner pursuant to this Section 2.5 including detailed calculations of each component of the formula in Section 2.5(b) identifying the source of each input used. For purposes of this Section, "Closed" shall mean that the Unit is not producing Energy or providing capacity and there are no Direct Contracts obligating any entity to deliver Energy or provide capacity from the Unit during the 36 month period beginning at the date the Unit Closed. A Unit shall cease to be Closed if, during the 36 month period beginning at the date the Unit Closed, any entity: (i) sells Energy or capacity; (ii) executes a Direct Contract for service or (iii) obtains a new permit from any Governmental Authority for operations, in each case that would involve use of the Capital Item for which a Termination Fee is being paid.
- (b) The Termination Fee shall be determined using the following formula:

$$T = \text{NCI} + \text{CWIP} - S$$

Where:

$$T = \text{Termination Fee (\$)}$$

$$\text{NCI} = \text{Undepreciated portion of the cost of Capital Items which constitute part of the Closed Unit which were approved in accordance with Section 7.4 or 7.6 and were in service at the date the Unit Closed with the cost and depreciation rates determined under Section 7.4 or 7.6, as applicable. In calculating NCI, the undepreciated cost of each Capital Item shall be multiplied by the Surcharge Payment Factor applicable to that Capital Item.}$$

CWIP = The actual cost, at the date the Unit Closed, of Capital Items for the Closed Unit which were approved in accordance with Section 7.4 or 7.6, as applicable, but were not in service at the date the Unit Closed, plus the cost to pay or terminate any remaining obligations incurred in connection with installation of the Capital Items. In calculating CWIP, the cost of each Capital Item shall be multiplied by the Surcharge Payment Factor applicable to that Capital Item.

S = The salvage value, if any, of the Capital Items included in the calculation of either NCI or CWIP.

The cost for each Capital Item shall be determined by agreement or ADR pursuant to Section 7.4 or 7.6. Except for those items for which a ten-year depreciation life is specified in Section 7.4 of this Agreement, the depreciation rate for each Capital Item shall be determined by agreement or ADR in connection with the applicable Capital Item approval process under Section 7.4 or 7.6.

- (c) The Termination Fee shall be payable in 36 equal monthly installments calculated using the following formula:

$$M = T [r/1 - (1+r)^{-36}]$$

Where

M = the monthly payment,

T = Termination Fee under Section 2.5(b), and

r = an annual discount rate equal to the interest rate used by FERC for the calculation of refunds (as set forth in 18 C.F.R. § 35.19a) in effect on the date that Owner provides notice to the CAISO pursuant to Section 2.5(a) of this Agreement, divided by 12.

- (d) If the Unit ceases to be Closed at any time within 36 months following the date the Unit Closed, CAISO shall cease payment of Termination Fee installments as of the Month in which the Unit ceased to be Closed, but Owner shall not be obligated to refund installments for any Month in which the Unit was Closed. Once a Unit has ceased to be Closed, CAISO shall not be required to pay any remaining Termination Fee installments even if the Unit again Closes.
- (e) Any dispute regarding an element of the Termination Fee (e.g. salvage value) not resolved at the time the Capital Item was approved shall be subject to ADR. ~~If the amount of the Termination Fees associated with a single termination or expiration is \$5 million or more as billed by Owner, the Responsible Utility shall have the same rights as CAISO to receive notice that the Unit(s) Closed and to initiate or participate in ADR.~~

ARTICLE 3

INTENTIONALLY LEFT BLANK ~~CONDITIONS OF MUST-RUN AGREEMENT~~

3.1 Intentionally left blank. ~~Conditions Under Which Units Will Operate~~

~~This Agreement includes two conditions of service under which Owner may provide service from its Unit(s). By way of general description and subject to the specific provisions set forth in this Agreement:~~

- ~~(i) A Unit under Condition 1 may participate in Market Transactions and Owner will retain all revenues from participation in Market Transactions;~~
- ~~(ii) A Unit under Condition 2 shall bid in accordance with Section 6.1 (b) to participate in Market Transactions when CAISO has issued a Dispatch Notice for the Unit and Owner will not retain revenues from participation in Market Transactions. A Unit under Condition 2 shall not participate in a Market Transaction when CAISO has not issued a Dispatch Notice for the Unit.~~

~~Owner shall begin operating each Unit under the Condition designated by Owner prior to the Effective Date and thereafter may transfer the Unit to a different Condition pursuant to Section 3.2.~~

3.2 Intentionally left blank. Transfer Between Conditions

- ~~(a) Except for a hydroelectric Unit, Owner may, from time to time, transfer a Unit from one Condition to the other Condition, provided that it may not do so without CAISO's consent unless, as of the transfer date, the Unit will have been subject to its existing Condition for at least twelve months. If a transfer is to become effective at the beginning of a Contract Year, Owner shall provide CAISO at least 30 days prior notice of the transfer. For a transfer to become effective at any other time, Owner shall give CAISO notice at least 90 days prior to the transfer. If a Unit is transferred from Condition 1 to Condition 2 during a Contract Year, Owner shall credit to CAISO on the first invoice after the transfer is effective an amount computed by multiplying (i) the positive difference, if any, of the Prepaid Start-ups minus the Counted Start-ups by (ii) the Prepaid Start-up Cost. If a Unit is transferred from Condition 2 to Condition 1, CAISO shall not be required to pay a Condition 1 Prepaid Start-up Charge for the remainder of the Contract Year in which the transfer occurred, but shall pay, for each Start-up, the Condition 1 Start-up Payment calculated pursuant to Equation D-1 in Schedule D.~~
- ~~(b) A hydroelectric Unit may only operate under Condition 1.~~
- ~~(c) CAISO may not transfer a Unit from one Condition to the other Condition.~~
- ~~(d) Any transfer of a Unit from one Condition to the other Condition shall be effective on the first day of the Month following expiration of the applicable notice.~~
- ~~(e) If a Unit is transferred from Condition 1 to Condition 2, Surcharge Payments for Capital Items shall be changed prospectively from the effective date of the transfer to reflect a Surcharge Payment Factor of 1.0. If a Unit is transferred from Condition 2 to Condition 1, Surcharge Payments for Capital Items shall be changed prospectively from the effective date of the transfer to reflect the Condition 1 Surcharge Payment Factor previously determined for the Capital Item, or if the factor was not previously determined, the Surcharge Payment Factor agreed to by CAISO and Owner. If Owner and CAISO do not agree on the Surcharge Payment Factor, the Surcharge Payment Factor shall be determined through ADR in accordance with Schedule B.~~

ARTICLE 4

DISPATCH OF UNITS

4.1 CAISO's Right to Dispatch

- ~~(a) Subject to the limitations set forth in this Agreement, CAISO shall direct will dispatch of a the Units by delivering a Dispatch Notice to Owner's Scheduling Coordinator in~~

accordance with Day-Ahead Market and Real-Time Market awards in accordance with the CAISO Tariff and Article 6.

- (b) CAISO has the right to issue any dispatch notice for any product and service pursuant to the terms and conditions of the CAISO Tariff that the Unit is capable of providing. Dispatch Notices for Energy, other than Energy associated with Ancillary Services, shall be issued solely for purposes of meeting local reliability needs or managing congestion on non-competitive paths. For purposes of dispatching Energy, local reliability needs do not include Energy required to manage congestion on competitive paths. CAISO shall issue Dispatch Notices to meet local reliability needs or manage congestion on non-competitive paths, whenever market bids cannot be used to meet those needs or manage such congestion or such market bids cannot be used to meet those needs or manage such congestion without taking a bid out of merit order or requiring CAISO to decrement another supplier's schedule to accommodate the unit which provided the bid. CAISO may not issue a Dispatch Notice to fill a need for imbalance energy.

- (c) CAISO has the right to issue Exceptional Dispatch instructions for any Energy product or service pursuant to the CAISO Tariff, including but not limited to CAISO Tariff Section 34.11. An Exceptional Dispatch instruction issued to a Unit is not eligible for compensation under the Capacity Procurement Mechanism, CAISO Tariff Section 43A, Except as needed for black start or voltage support required to meet local reliability needs, to meet operating criteria associated with the Potrero power plant, or as outlined below, CAISO may issue Dispatch Notices for Ancillary Services only if the available bids in Ancillary Service capacity markets do not provide sufficient capacity to meet CAISO's requirements.
 - ~~(i) If the CAISO determines on a Trading Day that it needs additional Ancillary Service on that Trading Day, CAISO shall use the following procedures:
 - ~~(A) CAISO shall communicate such needs to all Scheduling Coordinators as quickly as possible after such needs are identified.~~
 - ~~(B) After completing (A), CAISO shall attempt to procure those additional Ancillary Services from the CAISO's Real Time market (in the appropriate region if CAISO is procuring Ancillary Services on a regional basis) that have not closed, subject to the Bid Sufficiency Test described below.~~
 - ~~(C) CAISO shall not issue a Dispatch Notice for Ancillary Services for any hour of the Trading Day before the earlier of (a) the time at which the real-time market for that hour closes or (b) if a Start-up would be required to provide the Ancillary Service, such earlier time as is necessary to comply with the applicable Start up Lead Time and Ramping constraints on Schedule A.~~~~
 - ~~(ii) CAISO shall not be required to accept any bid for an Ancillary Service above applicable bid caps then in effect under the CAISO Tariff before issuing a Dispatch Notice for Ancillary Services.~~
 - ~~(iii) Bid Sufficiency Test
 - ~~(A) The Bid Sufficiency Test may only be applied:
 - ~~(1) To purchases from the real-time market;~~
 - ~~(2) If CAISO has fully complied with its obligation to promptly notify~~~~~~

~~Scheduling Coordinators of its need to acquire additional ancillary services from the real-time market; and~~

~~(3) — To the extent that the approved CAISO Tariff does not preclude such a test.~~

~~(B) — The Bid Sufficiency Test shall be applied on an individual hourly basis and for an individual Ancillary Service type. The test result shall be considered "insufficient" in real-time market if, and only if — (1) bids in the real-time market for the particular Ancillary Service (including any bids that can be used to satisfy that particular Ancillary Services requirement under Section 8.2.3.5 of the CAISO Tariff) represent less than two times such remaining Ancillary Service requirement; or (2) there are fewer than two unaffiliated bidders to provide such remaining Ancillary Service requirement. If the application of the Bid Sufficiency Test results in a determination of "insufficiency", the CAISO may issue a Dispatch Notice to satisfy its needs for that hour and that individual Ancillary Service.~~

~~(C) — If the result of the Bid Sufficiency Test is a finding that available bids are "insufficient", CAISO may nonetheless accept available market bids if it determines in its sole discretion that the prices bid and the supply curve created by the bids indicate that the bidders were not attempting to exercise market power.~~

4.2 Timing of RMR Dispatch Notices for Ancillary Services, Voltage Support, and Black Start

~~Subject to the terms and conditions of this Agreement, CAISO shall can an issue Manual AN RMR Dispatch Notices to the Owner's Scheduling Coordinator for Ancillary Services, Voltage Support (including synchronous condenser operation), Black Start, or any other reliability service available promptly after it makes a determination that it will require Energy or Ancillary Services under this Agreement to meet reliability requirements.~~

4.3 Form and Content of RMR Dispatch Notices

~~For any product or service available under the CAISO Tariff, CAISO will issue the appropriate CAISO Tariff instruction. If CAISO needs to dispatch the resource for any product or service that is not available under the CAISO Tariff but is available under this Agreement, CAISO will issue an RMR Dispatch Notice. (a) — All Dispatch Notices shall be in writing if circumstances permit. If circumstances require that a Dispatch Notice be given or changed orally, the Dispatch Notice shall be confirmed in writing within 24 hours after the oral notice or change was given.~~

~~(b) — Each Dispatch Notice shall specify the Unit from which CAISO requests Owner to Deliver Energy or Ancillary Services, the time of commencement and termination of the Requested Operation Period and, for each hour of the Requested Operation Period, the Requested MW or the Requested Ancillary Services. A Dispatch Notice for a hydroelectric Facility must request that Owner Deliver Energy from the entire Facility rather than from a specific Unit. However, CAISO may request that Owner Deliver Ancillary Services from specific Units in a hydroelectric Facility; provided that Energy associated with such Ancillary Services shall be Delivered from the Facility and not the specified Units. CAISO may issue Dispatch Notices in real-time without specifying the time the Requested Operation Period is to terminate and may adjust the Requested MW or Requested Ancillary Services in real-time if CAISO provides all such information in writing as provided in Section 4.3(a).~~

4.4. Non-complying RMR Dispatch Notices

Owner shall not be obligated to comply with a RMR Dispatch Notice that does not comply with Section 4.3 or 4.6 and Owner shall not be liable, suffer any penalties or suffer any reduction in payments for

failure to comply with an RMR Dispatch Notice which is not in compliance with those Sections, provided that Owner promptly notifies CAISO that the notice does not comply with Section 4.3 or 4.6 and provides the reasons the RMR Dispatch Notice does not comply. Owner may provide such notice after the Requested Operation Period if the notice concerns an RMR Dispatch Notice given during, or less than one-half hour prior to, the Requested Operation Period. Compliance with an RMR Dispatch Notice shall not be deemed a waiver of objections to the RMR Dispatch Notice.

4.5 Intentionally left blank.

4.6 Limitations on CAISO's Right to Dispatch

~~CAISO will honor performance characteristics in accordance with the CAISO Tariff.'s Dispatch Notice may not request Owner to, and Owner shall not be obligated to:~~

- ~~(i) Provide service from a Unit at less than the Minimum Load for the Unit;~~
- ~~(ii) Provide service from a Unit for less than the Minimum Run Time;~~
- ~~(iii) Start up a Unit after less than the Minimum Off Time;~~
- ~~(iv) Start up a Unit unless the time between the delivery of the Dispatch Notice requesting such Start up and the commencement of the applicable Requested Operation Period equals at least the Start up Lead Time for the Unit and the Dispatch Notice provides sufficient time to satisfy the Ramping constraint of the Unit;~~
- ~~(v) Provide service from a Unit in excess of its Unit Availability Limit;~~
- ~~(vi) Provide service from a Unit when to do so would violate environmental limitations applicable to the Unit as set forth in Section 3 of Schedule A;~~
- ~~(vii) Start up or provide service from a Unit in violation of any applicable law, regulation, license or permit; or~~
- ~~(viii) Start up or provide service from a Unit to the extent that doing so would cause a breach of an Existing Contractual Limitation; or~~
- ~~(ix) Deliver Energy or Ancillary Services to the extent such Delivery would cause a breach of a contract for capacity made available through an Upgrade or a Capital Item or Repair for which CAISO is not obligated to make a Surcharge Payment or pay CAISO's Repair Share.~~

4.7 Intentionally left blank. Dispatch in Excess of Contract Service Limits

- ~~(a) CAISO shall use its best efforts in accordance with Good Industry Practice not to issue a Dispatch Notice that would cause a Unit's Counted Start-ups, Counted MWh, or Counted Service Hours to exceed any of the Unit's Contract Service Limits.~~
- ~~(b) CAISO may issue a Dispatch Notice requiring a Unit to Deliver Energy or Ancillary Services after the Unit has exceeded a Contract Service Limit only if the Requested MWh or Requested Ancillary Services cannot be obtained by CAISO either (i) by accepting market bids in accordance with Section 4.1 or (ii) from Comparable RMR Unit(s) without exceeding the contract service limits or violating other operational limitations under CAISO's agreement with the Comparable RMR Unit(s). Owner shall use its best efforts, in accordance with Good Industry Practice, to comply with such Dispatch Notice.~~
- ~~(c) If Owner of a hydroelectric Facility complies with a request to exceed the Maximum~~

~~Monthly MWh, Owner may reduce the Maximum Monthly MWh for remaining Months of the Contract Year to reflect the accelerated use of available water. Not later than 15 days after any delivery in excess of Maximum Monthly MWh, Owner shall provide CAISO a notice showing revised Maximum Monthly MWh for remaining Months of the Contract Year.~~

- ~~(d) If the Owner does not comply with a Dispatch Notice under Section 4.7(b), Owner at CAISO's request shall provide a written explanation.~~
- ~~(e) If Owner, in compliance with a Dispatch Notice, Starts up a Unit and the Counted Start-ups for the Contract Year exceed the Maximum Annual Start-ups for the Unit, CAISO shall pay for each such excess Start-up at the rate set out in Schedule G. If Owner, in compliance with a Dispatch Notice, Delivers Energy and the Counted MWh for the Unit for the Contract Year exceeds the Maximum Annual MWh, the Counted Service Hours from the Unit for the Contract Year exceed the Maximum Annual Service Hours, or if applicable, the Counted MWh for the Month exceed the Maximum Monthly MWh, CAISO shall pay for the Billable MWh Delivered in response to such Dispatch Notice and exceeding the Contract Service Limit at the rates set forth in Schedule G.~~
- ~~(f) For purposes of this Section 4.7:
 - ~~(i) "Best efforts" does not require Owner to provide service inconsistent with the limitations set forth in Section 4.6 or if Owner reasonably believes providing the service might cause significant physical harm to the Unit.~~
 - ~~(ii) The term "Good Industry Practice" shall not be applied to permit CAISO to consider the relative costs of Comparable RMR Units when determining whether to request dispatch of a Unit in excess of the Contract Service Limits.~~
 - ~~(iii) "Comparable RMR Unit" means a unit which has been designated a Reliability Must Run Unit and which, in CAISO's reasonable judgment, is capable of providing system reliability benefits to CAISO equivalent to the system reliability benefits provided by the Unit which otherwise would be subject to the Dispatch Notice. In the case of Units providing Ancillary Services, a Comparable RMR Unit must: (A) be certified to provide the Requested type of Ancillary Service, (B) provide the same or higher ramp rate and MW capacity and (C) is located in the same Local Capacity Area as the Unit which otherwise would be subject to the Dispatch Notice.~~~~
- ~~(g) CAISO and Owner shall have the right to dispute the other Party's actions or inactions under this Section 4.7 and any dispute shall be subject to resolution through ADR.~~

4.8 Intentionally left blank. Air Emissions

~~If CAISO determines that it is necessary to reserve MWh to satisfy potential dispatches under this Agreement without violating present or future limitations on the discharge of air pollutants or contaminants into the atmosphere specified by any federal, state, regional or local law by any regulation, air quality implementation plan, or permit condition promulgated or imposed by any Governmental Authority, the terms and conditions of such reservation shall be set out on Schedule P.~~

4.9 Unit Testing Dispatch Notices

- ~~(a) Availability Tests (PMax test)
 - ~~(i) CAISO may from time to time test the Availability-PMax of a Unit by requiring the Unit to Deliver Energy pursuant to an Exceptional Dispatch instruction ~~Test~~~~~~

~~Dispatch Notice~~ provided to Owner's Scheduling Coordinator using the procedures described for PMax testing in CAISO BPM rules and Operating Procedures Section 4.2 and 4.3. CAISO, without cause, may request one Availability Test each Contract Year. CAISO may request additional Availability Tests if the Unit fails to comply fully with an Exceptional Dispatch Notice instruction for the Availability Test. Start-up and min-load cost for any re-test of an Availability Test shall not be recoverable by the Owner within the Contract Year. ~~CAISO shall not request an Availability Test for a hydroelectric Unit during periods of constrained water availability. Lack of available water shall not be deemed to result in a failed test and reduction of the Unit Availability Limit for a hydroelectric Unit.~~

- (ii) Owner may request an Availability Test at any time; and CAISO shall conduct the Availability Test in accordance with the applicable CAISO BPM rules and Operating Procedures for PMax testing. Start-up and min-load cost for any Owner-requested Availability Test shall not be recoverable by the Owner within the Contract Year. ~~issue a Test Dispatch Notice within three days after receipt of Owner's request, but for good cause, CAISO may reschedule the test to a date acceptable to Owner. Owner's request shall state the amount of Energy to be produced. The effect of operations pursuant to such a request is set out in Section 5.3.~~
- ~~(iii) The Test Dispatch Notice shall be marked "Availability Test Dispatch Notice." The Test Dispatch Notice shall specify a Requested Operation Period of four hours of continuous operations at the requested output plus any applicable Start-up Lead Time, time to satisfy Ramping constraints and time for Shutdown (or for hydroelectric Units the time sufficient water is available, if that is less).~~
- ~~(iv) Subject to the other conditions or restrictions expressed in this Agreement, Owner shall provide service from the Unit and Deliver the Requested MWh in accordance with the Availability Test Dispatch Notice; provided, however, that Owner, in response to such Test Dispatch Notice, may deliver all or part of the Requested MWh in a Market Transaction by complying with the procedures set forth in Section 5.2.~~
- ~~(v) An Availability Test shall be treated as having been successfully completed if the average MW Delivered at the Delivery Point during the Availability Test was not less than 99% of the Requested MW for the Requested Operation Period. The average MW Delivered during the Availability Test shall be computed by dividing (i) the total MWh produced during the four-hour period immediately following completion of the ramp up, multiplied by the appropriate ambient temperature correction factors for the Unit as set out in Section 3 of Schedule A, by (ii) four hours.~~
- ~~(vi) If a Unit fails an Availability Test, CAISO may issue a CAISO Availability Notice restating the Availability of the Unit to a level not less than the average MW Delivered during the Availability Test. Following the notice, Owner shall not issue an Owner's Availability Notice increasing the Availability of the Unit above the level determined through such failed Availability Test until (A) the Unit has successfully completed a subsequent Availability Test, (B) the Unit has delivered in Market Transactions, pursuant to a Dispatch Notice or in a combination of the two, during a continuous four-hour operating period, average MW in excess of those determined in the Availability Test or (C) Owner has otherwise demonstrated to CAISO's reasonable satisfaction that the Availability of the Unit has been restored.~~

~~(vii) If the average MW Delivered during the Availability Test exceed 101% of the Unit Availability Limit in effect prior to the Availability Test, Owner may issue an Owner's Availability Notice setting Availability retroactive to the time the request was received by CAISO to the lesser of (A) the average MW Delivered during the Availability Test or (B) the Maximum Net Dependable Capacity.~~

~~(b) Emissions/Other Tests~~

~~The CAISO and the Owner can request and conduct all other tests for the Unit in accordance with the CAISO Tariff, CAISO BPMs, and Operating Procedures.~~

~~If it is necessary for Owner to operate a Unit to fulfill regulatory requirements for emissions testing, Owner may request CAISO to issue a Dispatch Notice for such operation. Owner shall provide a request specifying the test date at least seven days in advance of the emissions test. CAISO shall issue a Dispatch Notice to schedule the requested operation on the date specified in Owner's request, or for good cause, CAISO may cause the test to be rescheduled to a date acceptable to Owner, provided that CAISO shall not delay the test by more than seven days without Owner's consent. The Test Dispatch Notice shall be marked "Emissions Test Dispatch Notice".~~

~~(c) Black Start Test~~

~~CAISO may from time to time test Unit(s) designated to provide Black Start service by requiring the Unit to deliver Black Start service pursuant to a Test Dispatch Notice provided to Owner's Scheduling Coordinator using the procedures described in Sections 4.2 and 4.3. Such Test Dispatch Notice shall be marked "Black Start Test Notice." The Black Start Test shall be performed in accordance with the Ancillary Services Requirements Protocol in the CAISO Tariff. CAISO shall not request a Black Start Test for a hydroelectric Unit during periods of constrained water availability.~~

~~(d) Heat Input Test~~

~~Not more frequently than once each Contract Year, Owner may, by giving at least seven days' prior notice to CAISO, request CAISO to issue a Test Dispatch Notice in order for Owner to determine the heat input of a Unit. CAISO shall not unreasonably refuse to issue a Test Dispatch Notice for a heat input test. The Test Dispatch Notice shall be marked "Heat Input Test Notice." The heat input test shall be conducted in accordance with testing standards and procedures agreed to by CAISO and Owner. In the absence of such agreement, the standards and procedures shall be determined through ADR before such test may be conducted. The arbitrator shall specify procedures for testing which are consistent with Good Industry Practice. Following such a heat input test, Owner shall be permitted to make a filing under Section 205 of the Federal Power Act limited to modifying the heat inputs used in the Variable Cost Payment, Start-up Payment, Preempted Dispatch Payment and Mandatory Energy Bid in Schedules C, D, E and M, respectively, to reflect the results of such test.~~

4.10 Intentionally left blank. Forecasts Of CAISO's Requirements

~~Not later than November 15 of each year, CAISO shall provide Owner and the Responsible Utility with a non-binding forecast representing CAISO's then current best estimate of the monthly MWh, monthly peak day MW, and monthly Service Hours that CAISO will require each Unit to provide each month during the ensuing Contract Year ("Annual Forecast"). In addition, not later than June 15 of each year, CAISO shall provide Owner and with a non-binding forecast ("Update") representing CAISO's then current best estimate of the monthly MWh, monthly peak day MW, and monthly Service Hours that CAISO will require each Unit to provide each month from June through the end of the Contract Year. Each Annual Forecast and Update will take into account the Long-term Planned Outages. The Annual Forecasts and Updates shall be treated as confidential pursuant to Section 12.5 and shall not be binding.~~

4.11 Intentionally left blank. Determination of Contract Service Limits

- (a) ~~If CAISO has extended the term of this Agreement pursuant to Section 2.1 (b), then not later than October 31 of the expiring Contract Year Owner shall make a filing under Section 205 of the Federal Power Act limited to revising Schedule A to reflect the Contract Service Limits for all Units other than hydroelectric Units for the ensuing Contract Year. The Contract Service Limits for each year after the initial Contract Year shall be determined through application of the following rules:~~
- (i) ~~Maximum Annual MWh for each Unit shall be the average annual MWh produced in Market and Nonmarket Transactions by the Unit during the 60 month period ending June 30 of the expiring Contract Year;~~
 - (ii) ~~Maximum Annual Service Hours for each Unit shall be the average annual Service Hours the Unit operated in Market and Nonmarket Transactions during the 60 month period ending June 30 of the expiring Contract Year; and~~
 - (iii) ~~Maximum Annual Start Ups shall be the number of Start ups of the Unit for Market and Nonmarket Transactions during the year selected by CAISO. CAISO may select any of the five preceding years to determine Maximum Annual Start-Ups but shall select the same year for all Units at the Facility. For purposes of the foregoing sentence only, a year shall mean a 12 month period ending June 30. Thus, by way of example, CAISO may determine Maximum Annual Start-ups for calendar year 2002 based on the Maximum Annual Start-ups during any of the following five periods: (A) 12 months ended June 30, 2001; (B) 12 months ended June 30, 2000; (C) 12 months ended June 30, 1999; (D) 12 months ended June 30, 1998; or (E) 12 months ended June 30, 1997~~

~~Owner shall provide the information necessary to determine the Contract Service Limits to CAISO and the Responsible Utility not less than 15 days prior to the filing. CAISO shall give notice to Owner and Responsible Utility identifying the year to be used to determine Maximum Annual Start-ups not later than five Business Days after it receives the information from Owner.~~

- (b) ~~If CAISO has extended the term of this Agreement pursuant to Section 2.1 (b), then not later than 15 days prior to the beginning of the ensuing Contract Year, Owner of a hydroelectric Facility shall make a filing under Section 205 of the Federal Power Act to reflect the revised Contract Service Limits to be in effect during the ensuing Contract Year for the hydroelectric Facility. Such filing shall be based on Owner's current water management forecast and shall reflect the water expected to be available for electric generation above the Hydroelectric Dependable Capacity. Such filing, if accepted or approved, shall set the Maximum Monthly MWh in Schedule A for the ensuing Contract Year, subject to adjustment in accordance with the notice described below giving revised Monthly Maximum MWh. The Maximum Monthly MWh in Schedule A of this Agreement on the Effective Date reflects the Hydroelectric Dependable Capacity. Not later than April 15 of each Contract Year, Owner shall provide notice to CAISO giving revised Maximum Monthly MWh for each remaining Month of the Contract Year based on its then current water management forecast. If, during any Contract Year, Owner determines that drought conditions jeopardize its ability to supply Hydroelectric Dependable Capacity, Owner shall promptly give notice to the CAISO of this determination, including revised Maximum Monthly MWh for each remaining Month of the Contract Year. Following such a determination, Owner shall provide CAISO with weekly updated water management forecasts until the earlier of the end of the Contract Year or Owner's determination that its ability to supply the Hydroelectric Dependable Capacity is no longer jeopardized by such conditions. CAISO acknowledges that the accuracy of a water management forecast~~

~~may be substantially affected by a Force Majeure Event at any time after the Owner provides the forecast and consequently Owner shall not be liable for the accuracy of the water management forecast or any reliance on it other than a Monthly Maximum MWh amount.~~

ARTICLE 5

DELIVERY OF ENERGY AND ANCILLARY SERVICES, VOLTAGE SUPPORT, AND BLACK START BY OWNER

5.1 Owner's Delivery of Energy and Ancillary Services

- (a) ~~In accordance with the CAISO Tariff and this Agreement and subject to limits in this Agreement, the Owner shall provide Energy, Ancillary Services, Voltage Support, Black Start, or other reliability service available under this Agreement, in accordance with each RMR Dispatch Notice, CAISO Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches. Owner shall deliver the requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability service at the Delivery Point or such other point(s) reasonably acceptable to CAISO. Subject to the limits in this Agreement, and subject to the CAISO's Real Time Dispatch instructions whether flagged as an RMR Dispatch or not, Owner shall provide service from the Units and Deliver the Requested MWh or Requested Ancillary Services in accordance with each Dispatch Notice. To the maximum extent practical, and except for regulation, Owner shall Deliver at each moment of each hour during the Requested Operation Period not less than the Requested MW or Requested Ancillary Services. If Owner has disputed a Dispatch Notice under Section 4.6 (i) (Minimum Load) (ii) (Minimum Run Time) (iii) (Minimum Off Time) (iv) (Start-up Lead Time and Ramping constraint), or (v) (Unit Availability Limit) and such dispute is not resolved prior to the time for delivery, Owner will use reasonable efforts to comply with the Dispatch Notice, but shall not be liable to CAISO if it is unable to do so and Owner prevails in the dispute.~~
- ~~(b) If Owner has disputed a Dispatch Notice under Section 4.6 (vi) (environmental), (vii) (violation of law), (viii) (Existing Contractual Limitations) or (ix) (Upgrade Contract), Owner shall not be required to Deliver Energy or Ancillary Services pending resolution of the dispute as to whether the Dispatch Notice violated such Section; provided, however, that Owner shall not be relieved from any liability that it would otherwise have for failure to comply with the disputed Dispatch Notice if it subsequently is determined that the Dispatch Notice did not violate Section 4.6 (vi), (vii), (viii) or (ix).~~
- ~~(c) Subject to CAISO approval, if Owner cannot Deliver the Requested MWh or Requested Ancillary Services by providing service from the Unit identified in a Dispatch Notice, Owner may Deliver the requested services by providing service from a Substitute Unit. Owner shall provide oral or written notice to CAISO as soon as possible in advance of the first Real Time Dispatch of the Requested Operation Period stating why it cannot provide the requested service from the Unit identified in the Dispatch Notice, identifying the Substitute Unit, describing the services it will provide from the Substitute Unit and specifying the charges applicable to service from the Substitute Unit. CAISO may deny approval only if the proposed unit does not qualify as a Substitute Unit or if there is insufficient time to accommodate the request prior to the running of the MPM-RRD process and the operator determines that the substitution would affect the MPM-RRD results, in which case the substitution request will be accommodated for any remaining portion of the Requested Operation Period, if the unit is otherwise acceptable. The total cost to CAISO for service from the Substitute Unit shall be at the rate specified by the Owner, provided that the total cost will not exceed the total costs for the same amount of service from the Unit specified in the Dispatch Notice.~~

- ~~(d) If Owner can Deliver the Requested MWh or Requested Ancillary Services by providing service from the Unit identified in the Dispatch Notice, Owner may Deliver the requested services by providing service from (i) the Unit identified in CAISO's Dispatch Notice or (ii) with CAISO's consent, a Substitute Unit. Owner of a hydroelectric Unit will Deliver the Requested MWh from the Facility and will Deliver the Voltage Support and Black Start requested in a Dispatch Notice from the specified Unit or a Substitute Unit. If Owner proposes to satisfy its delivery obligations by providing service from a Substitute Unit, Owner shall provide oral or written notice to CAISO prior to the Requested Operation Period identifying the Substitute Unit, describing the services it will provide from Substitute Unit and specifying the charges applicable to service from the Substitute Unit. Owner may Deliver the agreed services from the Substitute Unit and will be paid at the agreed rates if CAISO accepts Owner's proposal, or CAISO and Owner otherwise agree on the services and applicable rates for service from a Substitute Unit. CAISO's decision shall not be subject to ADR.~~
- ~~(e) Owner shall Deliver the Requested MWh or Requested Ancillary Services at the Delivery Point or such other point(s) reasonably acceptable to CAISO and shall comply with the metering and related arrangements set forth in Section 5 of Schedule A to this Agreement or as otherwise specified in Owner's applicable Meter Service Agreement.~~
- ~~(bf) If Owner would have been able to Deliver the Requested MWh or Requested Energy, Ancillary Services, Voltage Support, or Black Start but for an outage in the CAISO Controlled Grid or Distribution Grid beyond Owner's reasonable control, Owner shall be deemed to have complied with the RMR Dispatch Notice, CAISO Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, for purposes of Sections 5.4 and 8.5.~~

5.2 Intentionally left blank. Substitution of Market Transactions for Dispatch Notices

- ~~(a) Owner may satisfy, in whole or in part, its obligation to Deliver Energy, but not Ancillary Services, during a Requested Operation Period by delivering Energy under a Market Transaction from the Unit identified in a Dispatch Notice if Owner complies with the requirements and procedures of this Section 5.2.~~
- ~~(b) Owner shall give notice of its intent to substitute a Market Transaction through the submission of bids in the CAISO's Markets. Any dispatch level that clears the Competitive Constraints Run of the MPM-RRD process through the submission of Economic Bids or Self-Schedules, and is reflected in the Day-Ahead Schedule or Real-Time Dispatch, shall be deemed a Market Transaction.~~
- ~~(c) Owner may substitute a Market Transaction only if the deadline for bids into the market selected by Owner has not passed.~~
- ~~(d) Intentionally left blank.~~

5.3 Intentionally left blank. Rules for Calculating Counted Start-ups, Counted MWh and Counted Service Hours

- ~~(a) The following rules shall govern calculation of Counted Start-ups:

 - ~~(i) Except as limited below, all Start-ups successfully completed in compliance with a Dispatch Notice shall be included in Counted Start-ups for the Unit for which the Dispatch Notice was issued.~~
 - ~~(ii) If a Start-up required by a Dispatch Notice is canceled by CAISO after the Start-~~~~

~~up is initiated, Counted Start-ups shall include a fractional Start-up computed by dividing (i) the lesser of (a) the time elapsed between initiation of the Start-up and cancellation or (b) the Start-up Lead Time by (ii) the applicable Start-up Lead Time for the Unit.~~

- ~~(iii) For Units under Condition 1, if a Dispatch Notice is issued pursuant to Section 4.5 for a period in which the Unit is scheduled to operate or is operating in a Market Transaction for which a Start-up was required, or Owner substitutes a Market Transaction under Section 5.2 for a Requested Operation Period for which a Start-up was required, Counted Start-ups shall include one-half of the Start-up for the Unit for which the Dispatch Notice was issued. No Start-up shall be counted more than once.~~
- ~~(iv) For Units under Condition 2, Counted Start-ups shall include each Start-up whether the Energy is Delivered to the CAISO in a Nonmarket Transaction or is delivered in a Market Transaction pursuant to bids made under Section 6.1 (b).~~
- ~~(v) If Owner complies with a Dispatch Notice by Delivering the Requested MWh or Ancillary Services from a Substitute Unit, any Start-ups of the Substitute Unit will not be included in Counted Start-ups for the Unit specified in the Dispatch Notice or the Substitute Unit.~~
- ~~(vi) Except as provided in Section 5.3(a)(iii), any Start-up not required to comply with a Dispatch Notice will not be included in Counted Start-ups.~~

~~(b) The following rules shall govern calculation of Counted MWh:~~

- ~~(i) Except as limited below, all MWh Delivered in compliance with a Dispatch Notice shall be included in Counted MWh for the Unit for which the Dispatch Notice was issued.~~
- ~~(ii) For Units under Condition 1, if a Dispatch Notice is issued pursuant to Section 4.5 for a period in which a Unit is scheduled to operate or is operating in a Market Transaction or if Owner, in response to a Dispatch Notice, substitutes a Market Transaction under Section 5.2 for all or part of the Requested MWh, MWh equal to the sum of (A) Billable MWh plus (B) 50% of the Hybrid MWh, will be included in Counted MWh for the Unit for which the Dispatch Notice was issued.~~
- ~~(iii) If a Unit operating under Condition 2 sells Energy pursuant to bids made under Section 6.1 (b), the Billable MWh shall be included in Counted MWh for the Unit.~~
- ~~(iv) Intentionally left blank.~~
- ~~(v) If Owner Delivers Requested MWh or Energy associated with Ancillary Services from a Substitute Unit, the MWh Delivered from the Substitute Unit will not be included in Counted MWh for the Unit specified in the Dispatch Notice or the Substitute Unit.~~

~~(c) The following rules shall govern calculation of Counted Service Hours:~~

- ~~(i) Except as limited below, all Service Hours expended in compliance with a Dispatch Notice other than Service Hours expended for Ancillary Services during which the Unit is not Synchronized shall be included in Counted Service Hours for the Unit for which the Dispatch Notice was issued.~~
- ~~(ii) For Units under Condition 1, if a Dispatch Notice is issued pursuant to Section~~

~~4.5 for a period in which a Unit is scheduled to operate or is operating in a Market Transaction or if Owner, in response to a Dispatch Notice, substitutes a Market Transaction under Section 5.2 for all or part of the Requested MWh, one-half of the Requested Operation Period will be included in Counted Service Hours for the Unit for which the Dispatch Notice was issued.~~

~~(iii) If a Unit operating under Condition 2 sells Energy pursuant to bids made under Section 6.1 (b), each Service Hour expended by the Unit to produce the Energy shall be included in Counted Service Hours.~~

~~(iv) If Owner Delivers Requested MWh or Ancillary Services from a Substitute Unit, the Service Hours expended by the Substitute Unit will not be included in Counted Service Hours for the Unit specified in the Dispatch Notice or the Substitute Unit.~~

~~(d) Counted MWh, Counted Service Hours and Counted Start-ups for the Contract Year ending December 31, 1999 shall include MWh, Service Hours and Start-ups for the period January 1, 1999 through the Effective Date under the reliability must-run rate schedule which is superseded by this Agreement using the rules set out in this Section 5.3 as if this Agreement had been in effect during that period. Owner's initial report under Section 5.5 shall show the MWh, Service Hours and Start-ups for the period January 1, 1999 through the Effective Date calculated using the rules set out in this Section 5.3.~~

5.4 Owner's Failure To Deliver Requested MWh or Requested Ancillary Services, Voltage Support, or Black Start

(a) ~~Owner shall promptly notify CAISO if Owner will not be able to Deliver in accordance with its RMR Dispatch Notice, CAISO's Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, all or part of the Requested MWh for Requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services available under this Agreement, from the Unit identified in the RMR Dispatch Notice or from the Substitute Unit previously accepted by CAISO.~~

(b) ~~If a Unit fails to Deliver the full amount of its RMR Dispatch Notice, CAISO Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, for Energy, Requested MWh or Requested Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement, CAISO may issue an CAISO Availability Notice restating the Availability to a level not less than the Availability indicated by the actual deliveries. If CAISO has issued an CAISO Availability Notice under this Section 5.4(b), Owner shall not issue an Owner's Availability Notice increasing the Availability of the Unit until (i) the Unit has successfully completed an Availability Test, (ii) the Unit has delivered in Market Transactions or in a combination of Market Transactions and Nonmarket Transactions pursuant to a Dispatch Notice during a continuous four hour operating period, average MW in excess of those shown in the CAISO Availability Notice, or (iii) Owner has otherwise demonstrated to the CAISO's reasonable satisfaction that the Availability of the Unit has been restored. CAISO's only other remedies for Owner's failure to Deliver the Requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement Requested MWh are as set out in Sections 8.5, 11.3, and 12.6.~~

5.5 Intentionally left blank. Reports

~~Not less than two days prior to the beginning of every Month during the Contract Year, Owner or Owner's Scheduling Coordinator shall provide CAISO and the Responsible Utility a report for each Unit setting forth as of the day before the date of the report the Counted MWh, Counted Service Hours and Counted Start-ups for the current Contract Year. All reports shall be treated as confidential pursuant to Section~~

ARTICLE 6

OBLIGATIONS TO PARTICIPATE IN CAISO MARKETS TRANSACTIONS6.1 Must-Offer Obligation~~Right To Engage In Market Transactions~~

- (a) ~~All Units are subject to all applicable CAISO Tariff provisions based on resource type and all applicable Resource Adequacy CAISO Tariff provisions, including the must-offer obligation to submit Energy, Ancillary Services, and Residual Unit Commitment bids for all RMR Contract Capacity in all hours as applicable. Consistent with Section 40 of the CAISO Tariff, Units subject to this Agreement will be subject to Resource Adequacy bid generation provisions unless otherwise exempted pursuant to CAISO Tariff Section 40. In addition to the right to substitute a Market Transaction pursuant to Section 5.2, if a Unit is operating under Condition 1, Owner may enter into Market Transactions for Energy or Ancillary Services at any level outside of a Requested Operation Period. If CAISO has issued a Dispatch Notice for Energy to a Unit under Condition 1, Owner may enter into Market Transactions for Energy at any level during the Requested Operation Period, and may enter into a Market Transaction for Ancillary Services at any level that does not preclude compliance with the Dispatch Notice. If CAISO has issued a Dispatch Notice for Ancillary Services to a Unit under Condition 1, Owner may enter into Market Transactions for Energy or Ancillary Services at any level that does not preclude compliance with the Dispatch Notice.~~
- (b) ~~All Units must seek to establish a major maintenance adder pursuant to CAISO Tariff Section 30.4.1.1.4. If CAISO issues a Dispatch Notice for a Unit operating under Condition 2, Owner shall submit bids in succeeding available Energy and Ancillary Services markets for the Requested Operation Period in accordance with the following requirements:~~
- ~~(i) If the next available market is an Energy market, Owner shall bid all Energy the Unit can produce, up to the Unit Availability Limit, in excess of the higher of (A) Energy or Ancillary Services capacity cleared in a prior market; or (B) capacity required to Deliver Requested Ancillary Services. Owner shall bid all Energy at the bid price calculated using the formula in Part I of Schedule M.~~
 - ~~(ii) If the next available market is an Ancillary Services market, Owner shall bid all available capacity, up to the Unit Availability Limit, in excess of the higher of the capacity needed to (A) deliver Energy and Ancillary Services cleared in a prior market or (B) Deliver the Requested MWh or Ancillary Services different from the Requested Ancillary Service.~~
 - ~~(iii) If the markets are concurrent, Owner shall bid in the Ancillary Services market all available capacity, up to the Unit Availability Limit, in excess of the higher of the capacity needed to (A) deliver Energy and Ancillary Services cleared in a prior market or (B) Deliver the Requested MWh or Ancillary Services different from the Requested Ancillary Service.~~
 - ~~(iv) Owner shall bid all Ancillary Service capacity at the bid price calculated using the formula in Part II of Schedule M.~~
 - ~~(v) Owner shall not bid Energy or Ancillary Services in excess of the quantities the Unit can provide during the Requested Operation Period given the Unit's ramp rates, Ramping constraints and any other applicable operating limitations, with due allowance for a Unit's ability to change output during the Requested~~

Operation Period.

- ~~(vi) Neither Owner nor Owner's Scheduling Coordinator shall bid Energy or Ancillary Services to the extent that participating in a Market Transaction would conflict with a contract entered into prior to the Effective Date. Owner shall include in Section 14 of Schedule A a description of all contract restrictions affecting Owner's ability to participate in Market Transactions.~~
- (c) If the Unit has an eligible use limit Owner must establish an Opportunity Cost, if applicable under CAISO Tariff Section 30.4.1.1.6. In addition, Owner must provide on Schedule L, on an annual basis, the number of remaining start-ups, run hours and MWhs for each Unit prior to the need for Capital Items to perform major maintenance. If the resource can safely provide the reliability service that is needed for the Contract Year in issue, CAISO may direct Owner to include these limits in the Opportunity Cost calculation process established under CAISO Tariff Section 30.4.1.1.6.
- (d) Owner has the obligation to submit marginal cost-based bids that include 100 percent of Commitment Costs using the Proxy Cost Methodology set forth in CAISO Tariff Section 30.4.1.1, including any major maintenance adder and Opportunity Cost using limits established under Section 6.1(c) and calculated pursuant to CAISO Tariff Section 30.4.1.1. Marginal cost-based Commitment Cost and Energy Bids must be based on the same cost-based components used in CAISO's generated Proxy Costs and Variable Cost Default Energy Bids set forth in the CAISO Tariff and applicable CAISO BPM, plus 100 percent of any approved adders. Cost-based Ancillary Services and Residual Unit Commitment bids must equal \$0/MW. Units may not exercise any bidding flexibility with respect to Commitment Cost or Energy bidding with the exception of fuel costs, where the fuel cost component can be higher than the price reflected in the CAISO Gas Price Index if the actual fuel costs exceed the Gas Price Index. The Owner shall procure all required fuel for operation of the Unit using prudent and good utility practice.
- (e) For Units exempt from bid insertion, CAISO will monitor compliance with the bidding obligation.
- (f) If the Unit has eligible use-limits under the CAISO Tariff or this Agreement, CAISO may order Owner not to submit an appropriate outage card pursuant to the applicable CAISO BPM bid to participate in a Market Transaction if CAISO determines that participation in CAISO Markets Transactions would cause a Unit to exceed Contract Service Limits or impair CAISO's ability to dispatch the Unit to meet reliability needs at other times during the Contract Year. A Unit operating under Condition 2 shall not otherwise engage in Market Transactions.

ARTICLE 7

OPERATION AND MAINTENANCE

7.1 Owner's Obligation

Owner shall fuel, operate and maintain each Unit, or cause the Unit to be fueled, operated and maintained, in accordance with applicable law and Good Industry Practice and with due regard for the reliability purpose of this Agreement. ~~Owner is not required to have or maintain fuel oil burning capability, fuel oil inventories, or permits to burn fuel oil and shall not be required to burn fuel oil to respond to a Dispatch Notice unless, and then only to the extent that, the Unit's primary fuel is distillate fuel oil or Schedule H requires Owner to maintain fuel oil capability.~~

7.2 Outages and Overhauls

~~(a) — Owner shall be entitled to take a Unit out of operation or reduce the Availability of the Unit to repair and maintain the Unit in accordance with Good Industry Practice by taking outages in accordance with the requirements of Section 9 of the CAISO Tariff. ~~The dates and times of the outages and any changes to those dates and times shall be determined in accordance with the CAISO Tariff. For purposes of complying with the requirements of the CAISO Tariff, Other Outage shall be separated between “maintenance outage” and “forced outage,” as defined in the CAISO Tariff.~~~~

~~(b) — Owner shall have the right to curtail or discontinue, in whole or in part, Deliveries of Energy or Ancillary Services from a Unit for so long as, and to the extent that, a Forced Outage affecting the Unit continues or when, in Owner’s judgment in accordance with Good Industry Practice, operating conditions at the Unit so require. Curtailment or discontinuance under this Section shall give rise to applicable remedies under Article 8.~~

7.3 Intentionally left blank. Reports and Notices

~~(a) — As soon as practical after commencement of a Forced Outage, Owner shall give CAISO notice of the Forced Outage, the expected duration of the outage, and the expected time when the Unit will be available to generate electricity and the expected Availability during and following the Forced Outage. Owner shall keep CAISO informed of any developments that will affect either the duration of the Forced Outage or the Availability of the Unit during or after the end of the Forced Outage.~~

~~(b) — Owner shall keep CAISO advised of the Availability of each Unit by promptly issuing Owner’s Availability Notices any time Owner becomes aware that the Unit’s Availability changed in accordance with Section 9 of the CAISO Tariff. Owner may not reduce a Unit’s Availability due to the cost of fuel. An Owner’s Availability Notice shall become effective when issued, provided, however, that if Owner becomes subject to a Non-Performance Penalty under Section 8.5, any Owner’s Availability Notice given during the Penalty Period shall not become effective until 72 hours after the Owner’s Availability Notice is given. An Owner’s Availability Notice or CAISO’s Availability Notice shall continue in effect until it is superseded by a subsequent Owner’s Availability Notice or CAISO’s Availability Notice.~~

7.4 Planned Capital Items

(a) On or before March 1 of each year, Owner shall provide CAISO a preliminary report in the form required by this Section 7.4 showing Owner’s proposed Capital Items for the next Contract Year and a five-year forecast of anticipated Capital Items in the Form attached as Schedule L-1, assuming the Agreement will be extended. Owner shall submit a final report in the form required by this Section 7.4 reflecting updated information by August 1 of each year. Owner may, but shall not be obligated to, include an Upgrade as a proposed Capital Item in either the preliminary or final report.

(b) The preliminary and final reports for proposed Capital Items for the next Contract Year shall be submitted on the form attached as Schedule L-1. Owner shall provide additional information requested by the CAISO necessary to evaluate the proposal. Each preliminary and final report shall separately list individual projects expected to cost more than \$500,000 and shall include two “Small Project Estimates.” One Small Project Estimate shall identify Capital Items (projected to cost less than \$500,000 each) required to maintain or enhance reliability. The second Small Project Estimate shall identify all other Capital Items projected to cost less than \$500,000 each. Individual Capital Items projected to cost more than \$50,000 shall be identified separately in one of the two Small Project Estimates. All Capital Items covered by the Small Project Estimate will be depreciated over 10 years.

- (c) Within 60 days after submission of the final report, CAISO will notify Owner of the proposed Capital Items CAISO has approved and the Capital Items it has not approved. If CAISO fails to provide notice within such 60 day period, all Capital Items included in the final report shall be deemed approved as proposed by Owner. Approval constitutes CAISO agreement that the CAISO's share of the estimated cost of the Capital Item will be recovered through Surcharge Payment under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. If the actual cost of the Capital Item exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay through Surcharge Payments or as a Termination Fee any portion of the overrun found to be unreasonable in such ADR proceeding. If CAISO contests the additional costs, Owner shall have the burden of proving that the additional costs were reasonable. If CAISO does not initiate ADR or makes a separate agreement with Owner, the additional costs shall be deemed reasonable and CAISO shall be obligated to pay CAISO's share of the actual costs through Surcharge Payments or as a Termination Fee.
- (d) If a proposed Capital Item is not approved, CAISO shall provide Owner a detailed statement of the reasons for the disapproval and, if the proposal would be acceptable with modifications, a detailed list of the proposed modifications. Owner may accept the modifications proposed by CAISO, or CAISO or Owner may initiate an ADR proceeding to review CAISO's rejection or proposed modification if the Capital Item is necessary for Owner to meet its obligations under this Agreement. In such proceeding, CAISO may not support its disapproval on any basis not shown in its detailed statement of the reasons for disapproval. Any Capital Items approved through such ADR proceeding shall be recovered by Owner through Surcharge Payments under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. Owner shall not be obligated to install any Capital Item unless CAISO is obligated to pay a Surcharge Payment for the Capital Item.
- (e) The preliminary and final reports and all additional information about proposed Capital Items provided to CAISO shall be treated as Confidential Information in accordance with Section 12.5.
- (f) If CAISO rejects a proposed Capital Item, such rejection is not reversed by ADR and it would be uneconomical, impractical or illegal to continue operation without the Capital Item, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor, except as provided in Section 2.4.

7.5 Unplanned Repairs

- (a) In the event of any loss or damage to the Facility that impairs the capability of one or more Units to ~~D~~deliver Energy, ~~or~~ Ancillary Services, Voltage Support, Black Start, or any other reliability service available under this Agreement, Owner shall, without additional charge, make necessary Repairs, to the extent that:
 - (i) the total cost (net of proceeds received by Owner from Insurers and other third parties pursuant to applicable insurance, warranties and other contracts in connection with all Repairs and excluding costs covered by clause (ii)) of all Repairs for all Units ("Net Repair Costs") during the Contract Year does not exceed Owner's Repair Cost Obligation for the Facility; or
 - (ii) the loss or damage impairing the Unit's capability to produce Energy, ~~or~~ Ancillary Services, Voltage Support, Black Start, or any other reliability service available under this Agreement, was caused by Owner's failure to comply with Good

Industry Practice or by any wrongful act or omission by Owner. The reference to "Units" in clause (i) includes all Reliability Must-Run Units located at the Facility, but no other Reliability Must-Run Units. Except as provided above, Owner shall not be obligated to make any Repairs unless CAISO is obligated to pay CAISO's Repair Share for the Repairs.

- (b) If the Net Repair Costs incurred by Owner for all Repairs since the beginning of the Contract Year exceed Owner's Repair Cost Obligation, then Owner shall provide a notice thereof ("Unplanned Repair Notice") in the form attached as Schedule L-1 to CAISO. Owner shall provide such additional information as CAISO may reasonably require to evaluate such proposed Repairs.
- (c) CAISO shall submit a written acceptance or objection to Owner's proposal within 21 days of receipt of an Unplanned Repair Notice. CAISO shall be deemed to have accepted Owner's proposal in the Unplanned Repair Notice if CAISO does not submit a written objection within 21 days after receipt of the Unplanned Repair Notice, as provided above. Any objection shall be based on one or more of the following grounds:
 - (i) the loss or damage was caused by Owner's failure to comply with Good Industry Practice;
 - (ii) the loss or damage was caused by a wrongful act or omission by Owner;
 - (iii) the Repairs are not required or are more extensive than required in order to make good the loss or damage concerned or to comply with applicable law;
 - (iv) the Net Repair Costs for the Contract Year will not exceed or has not exceeded the Owner's Repair Cost Obligation;
 - (v) the estimated cost of Repairs exceeds that which is reasonably necessary to effect such Repairs;
 - (vi) the Repair will not result in benefits to CAISO as compared to alternatives available to CAISO;
 - (vii) Owner's proposals for carrying out the Repairs or the proposed CAISO's Repair Share are unreasonable;
 - (viii) Owner's proposal includes estimated costs which are not properly treated as an expense under FERC's Uniform System of Accounts; or
 - (ix) Owner has not provided sufficient information to evaluate Owner's proposal. In addition to providing the basis of the objection, any objection of CAISO shall include a list of all changes CAISO contends should be made to Owner's proposal and justification of all such changes.
- (d) If CAISO submits an objection to an Unplanned Repair Notice, the Parties shall attempt to reach agreement on changes to Owner's proposal. If the Parties have not reached agreement within 30 days after CAISO's receipt of the Unplanned Repair Notice, Owner or CAISO may refer the matter to ADR under a schedule (specified by the arbitrator if the participants cannot agree) requiring a decision within 30 days following appointment of the arbitrator. The ADR decision will be effective without delay.
- (e) Owner shall proceed with the Repairs if it is agreed or determined pursuant to ADR that CAISO will pay CAISO's Repair Share or that Owner is otherwise obligated to make the Repairs. Owner shall keep full and detailed records of the cost of the Repairs and shall

make them available to CAISO for inspection upon reasonable request.

- (f) If the actual cost of the Repairs exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay any portion of the additional cost found to be unreasonable in such ADR proceeding. Owner shall have the burden of proving that the additional costs were reasonable.
- (g) If it is agreed or determined pursuant to ADR that CAISO will pay for a Repair, CAISO shall pay CAISO's Repair Share of the actual cost as a lump sum within 60 days after the later of (i) the completion of the Repair and (ii) the effective date of authorization by FERC, if any is necessary, for Owner to charge such cost to CAISO. "CAISO's Repair Share" means the Repair Payment Factor for the Repair at issue multiplied by the amount by which (i) the agreed or determined cost of Repairs at issue plus the Net Repair Costs of all prior Repairs for the Contract Year minus the cost of all prior Repairs for which CAISO is obligated to pay CAISO's Repair Share during the Contract Year exceeds (ii) Owner's Repair Cost Obligation. The Repair Payment Factor shall be as agreed to by Owner and CAISO. ~~If Owner and CAISO do not agree on the Repair Payment Factor, the Repair Payment Factor shall equal the Fixed Option Payment Factor, unless the Owner demonstrates in ADR that it would not have made the proposed Repair in accordance with Good Industry Practice but for its obligations under this Agreement, in which case the Repair Payment Factor shall be as determined in ADR.~~
- (h) Owner shall use commercially reasonable efforts to recover its full entitlements under applicable insurance policies, warranties and other contracts even after CAISO has paid CAISO's Repair Share. Owner shall keep CAISO informed of the status of such recovery efforts and will refund to CAISO any portions of CAISO's Repair Share payment that is later recovered from any other party as a credit to CAISO on the next invoice with interest at the Interest Rate from the date such proceeds are received by Owner to the Due Date of such next invoice, or if this Agreement is terminated, as a payment upon submission of the Final Invoice.
- (i) If Owner is not obligated to make a Repair and does not do so, and if it would be uneconomical, impractical or illegal to continue operation without the Repair, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor, except as provided in Section 2.4.
- (j) If Owner makes a Repair notwithstanding that CAISO is not obligated to pay for the Repair, Owner shall not be entitled to recover the costs of the Repair from CAISO unless FERC approves recovery of the costs.
- (k) Owner's Repair Cost Obligation shall be an amount computed as follows:
 - (i) Intentionally left blank
 - (ii) The Owner's Repair Cost Obligation shall be equal to 3% of the fixed operation and maintenance costs for all Units at the Facility, underlying the rates in effect at the beginning of the Contract Year.

7.6 Unplanned Capital Items

- (a) To the extent a Capital Item is required to remedy or prevent impairment of the Unit's capability to ~~D~~deliver Energy, ~~or~~ Ancillary Services, Voltage Support, Black Start, or other reliability service available under this Agreement, and the impairment was caused by Owner's failure to comply with Good Industry Practice or by any wrongful act or omission by Owner, Owner shall install such Capital Item at Owner's expense. Otherwise, Owner

shall not be obligated to install any Capital Item unless CAISO is obligated to pay a Surcharge Payment for the Capital Item. The issue of whether Owner is obligated to install a Capital Item is subject to ADR.

- (b) If, during the Contract Year, Owner determines it is necessary to install Capital Items not approved under Section 7.4 and Owner has expended all amounts covered by the approved Small Project Estimates under Section 7.4, Owner shall provide a notice thereof ("Unplanned Capital Item Notice") on the form attached as Schedule L-1 to CAISO. Owner shall provide such information as CAISO may reasonably require in order to evaluate the proposed Capital Items.
- (c) CAISO shall submit a written acceptance or objection to Owner's proposal within 21 days after receipt of a complete Unplanned Capital Item Notice provided that if the proposal does not involve either loss or damage to the Facility or a Capital Item required by law or regulation, CAISO shall respond within 60 days. If CAISO fails to provide notice within such period, Owner's proposal in the Unplanned Capital Item Notice shall be deemed approved. Any objection shall be based on one or more of the following grounds:
 - (i) the impairment being remedied or prevented was caused by Owner's failure to comply with Good Industry Practice;
 - (ii) the impairment being remedied or prevented was caused by a wrongful act or omission by Owner;
 - (iii) the Capital Item is not required or is more extensive than required in order to remedy or prevent impairment to the Facility or to comply with applicable law;
 - (iv) the estimated cost of the Capital Item exceeds that which is reasonably necessary;
 - (v) installation of the Capital Item will not result in benefits to CAISO as compared to alternatives available to CAISO;
 - (vi) Owner's proposals for installing or testing the Capital Item are unreasonable;
 - (vii) Owner's proposals for depreciation of the cost of the Capital Item or calculation of the Annual Capital Item Cost and Surcharge Payment Factor are unreasonable; or
 - (viii) Owner has not provided sufficient information to evaluate Owner's proposal. In addition to providing the basis of the objection, any objection of CAISO shall include a list of all changes CAISO contends should be made to Owner's proposal and justification of all such changes.
- (d) If CAISO submits an objection to an Unplanned Capital Item Notice, the Parties shall attempt to reach agreement on changes to Owner's proposal. If Owner's proposal involves either loss or damage to the Facility or the Capital Item is required by law and the Parties have not reached agreement 30 days after CAISO's receipt of the Unplanned Capital Item Notice, either Owner or CAISO may refer the matter to ADR under a schedule (specified by the arbitrator if the participants cannot agree) requiring a decision within 30 days following appointment of the arbitrator. The ADR decision will be effective without delay. Failure to agree on other proposed Capital Items may also be referred to ADR but without an expedited schedule.
- (e) Owner shall proceed to install the Capital Item if it is agreed or determined pursuant to ADR that CAISO will pay a Surcharge Payment for the Capital Item or that Owner is

otherwise required to install the Capital Item. Owner shall keep full and detailed records of the cost of the Capital Item and shall make them available to CAISO for inspection upon reasonable request.

- (f) If the actual cost of the Capital Item exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay any portion of the additional cost found to be unreasonable in such ADR proceeding. Owner shall have the burden of proving that the additional costs were reasonable.
- (g) If it is agreed or determined pursuant to ADR that CAISO will pay for the Capital Item, CAISO shall be deemed to have agreed that the cost of the Capital Item will be recovered through a Surcharge Payment under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. The costs included in Surcharge Payments and Termination Fees to be paid by CAISO shall be net of all proceeds received by Owner from insurers and other third parties pursuant to applicable insurance, warranties and other contracts after deducting all costs Owner incurred to collect the proceeds. Owner shall use commercially ~~r~~Reasonable ~~e~~Efforts to recover its full entitlements under applicable insurance policies, warranties and other contracts. Owner shall keep CAISO informed of the status of such recovery efforts and will adjust future Surcharge Payments to reflect proceeds later recovered from any other party.
- (h) If the capability or performance of a Unit is impaired, if Owner is not obligated to install a Capital Item to remedy such impairment under Section 7.6(a) and does not do so, and if it would be uneconomical, impractical or illegal to continue operation without the Capital Item, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor except as provided in Section 2.4.
- (i) If Owner installs a Capital Item notwithstanding that CAISO is not obligated to pay for the Capital Item, Owner shall not be entitled to recover the costs of the Capital Item from CAISO unless FERC approves recovery of the costs.
- (j) Notwithstanding any other provision of this Agreement, if a Capital Item is required to remedy impairment of the Facility, the Unit's ~~Monthly Option-Daily~~ Payment shall not be decreased for any of the period of time during which Owner is waiting for CAISO's response to an Unplanned Capital Item Notice or during which ADR concerning an Unplanned Capital Item Notice is pending unless it is determined that Owner is required to install the Capital Item pursuant to Section 7.6 (a).

7.7 Adjustments to Performance Characteristics

- (a) If Owner installs any Capital Item or makes any Repairs the costs of which are paid by CAISO under this Agreement, Owner shall modify the ~~Maximum Net Dependable Capacity~~~~RMR Contract Capacity~~, Unit Availability Limit, and performance characteristics of the affected Unit to reflect the resulting changes in operating costs effective as of the date CAISO's payment of CAISO's Repair Share of the Repairs is made, or in the case of a Capital Item, the date the cost of the Capital Item is included in a Surcharge Payment or the rates paid by CAISO.
- (b) If FERC authorization is required to permit Owner to recover the CAISO's Repair Share from CAISO or to include the costs of a Capital Item in a Surcharge Payment or the rates paid by CAISO hereunder, Owner shall make a Section 205 filing limited to recovery of the costs and implementation of related changes to performance characteristics, shall request that the filing become effective as of the date the Capital Item or Repair was placed in service and request expedited consideration of the filing. If CAISO has approved the Capital Item or Repair, CAISO shall intervene in support of such filing

including support of requests to place the change in effect without suspension or hearing.

- (c) If Owner makes Repairs or installs a Capital Item when not required to do so and CAISO has not agreed or is not required by ADR to pay for such Repair or Capital Item, Owner may either:
 - (i) make an appropriate adjustment to the ~~RMR Contract Maximum Net Dependable Capacity, Unit Availability Limit~~ and performance characteristics of the affected Unit to reflect the capability the Unit would have had if the Capital Item had not been installed or the Repairs had not been made; or
 - (ii) make appropriate adjustment to the ~~Maximum Net Dependable RMR Contract Capacity, Unit Availability Limit~~ and performance characteristics of the affected Unit to reflect the Repairs or installation of the Capital Item.
- ~~(d) — Any adjustment to the Heat Input characteristics of the Unit shall be made in accordance with Section 4.9(d).~~

7.8 Upgrades of Generating Units

Owner may Upgrade any Unit at the Facility, provided that no Upgrade shall release Owner from Owner's performance obligations under this Agreement. CAISO shall secure no rights under this Agreement to any capacity or services increased or enhanced by any Upgrade unless the Parties agree as to the terms of CAISO's rights and the amount of CAISO's payment for such Upgrade. If the Parties so agree, the ~~Maximum Net Dependable RMR Contract Capacity, Unit Availability Limit~~ and performance characteristics of the affected Unit shall be adjusted to reflect CAISO's agreed upon rights to the Upgrade ~~provided that any adjustment in heat input shall be made in accordance with Section 4.9(d), with any changes of performance characteristics of the Unit being reflected in the Master File.~~ If FERC authorization is required to permit Owner to recover the portion of the Upgrade cost CAISO has agreed to pay for the agreed revisions to the Unit characteristics, Owner shall make a Section 205 filing limited to recovery of the costs and implementation of related changes to the ~~Maximum Net Dependable RMR Contract Capacity, Unit Availability Limit~~ and performance characteristics, shall request that the filing become effective as of the date CAISO begins paying its agreed portion of the cost of the Upgrade and request expedited consideration of the filing. CAISO shall intervene in support of such filing including support of requests to place the change in effect without suspension or hearing.

7.9 Third-Party Participation in CAISO Review Process

- (a) Subject to fulfillment of the requirements of Section 7.9 (b), CAISO shall consult with the ~~Responsible Utility and the California Agencies CPUC~~ prior to approving Capital Items or Repairs. CAISO may approve Capital Items or Repairs ~~aggregating less than \$5,000,000~~ for the Facility in a Contract Year without approval of the ~~Responsible Utility or the California Agencies CPUC~~. ~~After Capital Items and Repairs aggregating \$5,000,000 for the Facility in a Contract Year have been approved by CAISO, CAISO's approval of all other Capital Items and Repairs for that Contract Year shall not be effective unless the Responsible Utility has consented to such Capital Item or Repair.~~
- (b) ~~The requirements of Section 7.9 (a) relating to Responsible Utilities shall apply only if and to the extent that the Responsible Utility agrees to waive its right to challenge before the FERC Owner's recovery of approved costs of Repairs or Capital Items.~~ The requirement of Section 7.9 (a) relating to the ~~California Agency CPUC~~ shall apply only if and to the extent that ~~each California Agency the CPUC~~ agrees to waive its right to challenge Owner's recovery of costs associated with the proposed Repairs or Capital Item on any grounds not set out in written objections provided by the ~~California Agencies CPUC~~ to CAISO and Owner within 30 days of the ~~California Agencies' CPUC's~~ receipt of the preliminary and final reports under Section 7.5 or Section 7.6.

- (c) Provided that the ~~California Agencies and Responsible Utility are~~ CPUC is bound by the provisions of the Confidentiality and Non-disclosure Agreement attached as Schedule N and make the waivers required in Section 7.9 (b), Owner will provide copies of the required reports and notices under Section 7.4, Section 7.5 or Section 7.6, and any additional information provided to the CAISO pursuant to Sections 7.4, 7.5 and 7.6, as the case may be, to the ~~California Agencies and Responsible Utility~~ CPUC at the same time as the reports, notices and information are provided to CAISO, and CAISO will provide copies of all information provided to Owner pursuant to such Sections to the ~~California Agencies and Responsible Utility~~ CPUC.

ARTICLE 8

RATES AND CHARGES

8.1 ~~Condition 1~~ Owner Rates and Charges

~~When a Unit is under Condition 1,~~ CAISO shall pay Owner ~~each Month for each Unit the sum of:~~

- (a) the ~~Monthly Option~~ Daily RMR Capacity Payment, which shall be equal to the Monthly Daily Availability Payment plus the Monthly-Daily Surcharge Payment, ~~minus the sum of all Non-Performance Penalties for the Month.~~ In no event shall (i) the ~~Monthly Option~~ Daily RMR Capacity Payment for any ~~month-day~~ be less than zero, (ii) the sum of the Monthly-Daily Availability Payments for a Contract Year exceed the Annual Fixed Revenue Requirement for the Contract Year, or (iii) the sum of the Monthly-Daily Surcharge Payments for the Contract Year exceed the Annual Capital Item Cost (as defined in Schedule B) for the Contract Year. The Monthly-Daily Availability Payment and the Monthly-Daily Surcharge Payment shall each be computed in accordance with Schedule B, and the Daily RMR Capacity Payment shall be adjusted by RMR Excess Revenues pursuant to CAISO Tariff Section 11.13.5; ~~The Non-Performance Penalties for the Month shall be calculated in accordance with Section 8.5;~~
- (b) the Daily Variable Cost Payment computed in accordance with ~~Schedule~~ CAISO Tariff Section 11.13.3;
- (c) Daily Additional Cost Settlement for variable cost associated with Exceptional Dispatches pursuant to CAISO Tariff Section 11.13.4; and one-twelfth of the Prepaid Start-up Charge as set out on Schedule D;
- (d) the RMR Invoice payment for RMR costs payable pursuant to this Agreement that are not recoverable through the CAISO Tariff shall be paid in accordance Schedule C and CAISO Tariff Section 11.18.6.sum of the Start-up Adjustments calculated in accordance with Schedule D for each Start-up during the Month which was a Prepaid Start-up;
- ~~(e) the sum for all Settlement Periods in the Month of the Pre-empted Dispatch Payments and Motoring Charges calculated in accordance with Schedule E;~~
- ~~(f) once the Counted MWh for the Contract Year equals the Maximum Annual MWh, the Counted Service Hours for the Contract Year equals the Maximum Annual Service Hours, or the Counted MWh for hydroelectric units for the Month equals the Maximum Monthly MWh, a payment for each subsequent Billable MWh at the rate set out on Schedule G;~~
- ~~(g) once the Counted Start-ups for the Contract Year equals the Maximum Annual Start-ups, a payment for each additional Start-up calculated in accordance with Schedule G; and~~

~~(h) — charges for services Delivered from Substitute Units pursuant to Sections 5.1(c) and (d).~~

8.2 Intentionally left blank. Condition 2

When a Unit is operating under Condition 2, CAISO shall pay Owner the sum of:

- ~~(a) — the Monthly Option Payment, which shall be equal to the Monthly Availability Payment plus the Monthly Surcharge Payment, minus the sum of all Non-Performance Penalties for the Month. In no event shall (i) the Monthly Option Payment for any month be less than zero, (ii) the sum of the Monthly Availability Payments for a Contract Year exceed the Annual Fixed Revenue Requirement for the Contract Year or (iii) the sum of the Monthly Surcharge Payments for the Contract Year exceed the Annual Capital Item Cost (as defined in Schedule B) for the Contract Year. The Monthly Availability Payment and the Monthly Surcharge Payment shall each be computed in accordance with Schedule B. The Non-Performance Penalties for the Month shall be calculated in accordance with Section 8.5.~~
- ~~(b) — the Variable Cost Payment computed in accordance with Schedule C;~~
- ~~(c) — the sum of all Start-up Payments for the Month until Counted Start-ups equal Maximum Annual Start-ups computed in accordance with Schedule D;~~
- ~~(d) — the sum for all Settlement Periods in the Month of Motoring Charges calculated in accordance with Schedule E;~~
- ~~(e) — once the Counted MWh for the Contract Year equals the Maximum Annual MWh or the Counted Service Hours for the Contract Year equals the Maximum Annual Service Hours, a payment for each subsequent Billable MWh at the rate set out on Schedule G;~~
- ~~(f) — once the Counted Start-ups for the Contract Year equals the Maximum Annual Start-ups, a payment for each additional Start-up calculated in accordance with Schedule G; and~~
- ~~(g) — charges for services Delivered from Substitute Units pursuant to Section 5.1(c) and (d).~~

8.3 Intentionally left blank. Determination of Billable MWh and Hybrid MWh

- ~~(a) — “Billable MWh” shall be determined by application of the following rules:
 - ~~(i) — If a Unit under Condition 1 or Condition 2 Delivers MWh only in Nonmarket Transactions during a Settlement Period, the Billable MWh shall be the lesser of (A) the Hourly Metered Total Net Generation or (B) the Requested MWh.~~
 - ~~(ii) — If a Unit under Condition 1 delivers MWh in both Market and Nonmarket Transactions during a Settlement Period:
 - ~~(A) — If the Hourly Metered Total Net Generation during the Settlement Period is equal to or greater than the Requested MWh applicable to the Settlement Period, the Billable MWh shall be (1) the Requested MWh minus (2) the Hybrid MWh, but shall never be less than zero.~~
 - ~~(B) — If the Hourly Metered Total Net Generation during the Settlement Period is less than the Requested MWh applicable to the Settlement Period, the Billable MWh shall be (1) Hourly Metered Total Net Generation minus (2) the Hybrid MWh, but shall never be less than zero.~~~~
 - ~~(iii) — If a Unit is under Condition 2, the Billable MWh shall be the lesser of (A) the~~~~

~~Hourly Metered Total Net Generation or (B) the sum of (1) Requested MWh and (2) the amount, if any, by which the total MWh for which Owner's bids pursuant to Section 6.1 (b) cleared the market exceeds the Requested MWh.~~

- ~~(b) — "Hybrid MWh" shall be the sum of the MWh scheduled in Market Transactions which were substituted for Requested MWh under Section 5.2 and the MWh scheduled in Market Transactions for which CAISO issued a Dispatch Notice pursuant to Section 4.5 provided that Hybrid MWh shall never exceed the Hourly Metered Total Net Generation.~~

8.4 Intentionally left blank. Determination of Prepaid Start-ups

~~Prepaid Start-ups for Condition 1 shall be the Maximum Annual Start-ups. There shall be no Prepaid Start-ups for Condition 2.~~

8.5 Availability Incentive Mechanism Non-Performance Penalty

~~Units shall be subject to the same availability incentive mechanism that Resource Adequacy Resource are subject to in the CAISO Tariff. In the event CAISO determines the default availability incentive mechanism is inadequate with respect to reliability needs and the performance characteristics of the Unit, CAISO will off an alternative availability incentive mechanism.~~

- ~~(a) — If a Unit fails to comply fully with a Dispatch Notice and such failure is not due to a Force Majeure Event under this Agreement, the Unit shall be subject to a Non-Performance Penalty computed in accordance with this Section 8.5.~~
- ~~(b) — The Non-Performance Penalty shall be calculated for each hour of the Penalty Period in which Owner is not deemed to be in full compliance with a Dispatch Notice and is not excused from performance. The Non-Performance Penalty shall be the sum of the amounts calculated for each Settlement Period in the Month by multiplying (i) the Availability Deficiency Factor for the Settlement Period by (ii) the sum of the Hourly Penalty Rate and the Hourly Surcharge Penalty Rate for the Unit as set forth on Schedule B; provided that the Non-Performance Penalty for any Month shall not exceed the sum of the Condition 1 Availability Payment and Condition 1 Surcharge Payment (for Units on Condition 1), or the sum of the Condition 2 Availability Payment and Condition 2 Surcharge Payment (for Units on Condition 2) for the Month. For purposes of this calculation:~~
- ~~(i) — an Availability Deficiency Factor shall be calculated for each hour of the Penalty Period as one minus the number determined by dividing (a) the Delivered MWh for the hour in question by (b) the product of the Unit Availability Limit and the percentage of the hour (up to 100%) that the Unit was subject to a Dispatch Notice;~~
- ~~(ii) — the Penalty Period shall be the 72-hour period beginning at the time Owner fails to comply fully with a Dispatch Notice, provided that if Owner in accordance with Section 7.2(a) had scheduled an outage to begin during the 72-hour period, the Penalty Period will terminate at the time the outage was scheduled to begin.~~
- ~~(iii) — the Unit Availability Limit shall be the Unit Availability Limit as it existed at the time CAISO issued the Dispatch Notice with which Owner failed to comply but reduced to eliminate the effect of any Force Majeure Event affecting deliveries during the Penalty Period.~~
- ~~(c) — For purposes of this Section 8.5 and Section 4.9(a)(i), a Unit shall be deemed to be in full compliance with a Dispatch Notice if the Unit Delivers (i) at least 97 percent of the Requested MW or (ii) not more than 2 MW less than the Requested MW.~~

8.6 Intentionally left blank. Long-term Planned Outage Adjustment

~~Not later than 60 days after the end of each Contract Year, Owner shall submit to CAISO a statement showing the Long-term Planned Outage Adjustment for the Contract Year. The Long-term Planned Outage Adjustment shall equal (a) the Hourly Availability Charge plus each Hourly Capital Item Charge, as shown in Schedule B, multiplied by (b) the difference, if positive, of (i) the hours scheduled for performance of Long-term Planned Outages minus (ii) the actual hours spent performing Long-term Planned Outages during the Contract Year. Owner shall credit any Long-term Planned Outage Adjustment on the next invoice or, if this Agreement has terminated, shall pay any Long-term Planned Outage Adjustment to the CAISO upon submission of the Final Invoice.~~

ARTICLE 9

STATEMENTS AND PAYMENTS

9.1 Settlement Statements and Invoicing

- (a) ~~The settlement billing, invoicing, market clearing, and payments of and charges will be under CAISO Tariff Section 11 generally, including the settlement, invoicing, and market clearing processes, as well as the resolution process for settlement-related disputes. The payments and charges pursuant to this Agreement shall be provided in this Agreement and Section 11.18.6 and Section 41 of the CAISO Tariff, as specified in this Article 9, Schedule O to this Agreement and Section 11.13 of the CAISO Tariff. CAISO shall not modify any provision of Section 41 of the CAISO Tariff or Section 11.13 of Section 11.18.6 of the CAISO Tariff as they apply to this Agreement without Owner's consent, provided that Owner's consent shall not be required for a change of allocations of RMR costs among market participants under the CAISO Tariff. Notwithstanding anything in this Agreement to the contrary, invoices either due or from the RMR Owner or Responsible Utility for an amount less than \$10.00 will be adjusted to \$0.00 and no amounts will be due to or from that RMR Owner or Responsible Utility for that invoice.~~
- (b) ~~For any other charges payable by CAISO to Owner pursuant to this Agreement, and not recovered through Section 11.13 of the CAISO Tariff, Owner will invoice the CAISO pursuant to Schedule C of this Agreement and Section 11.18.6 of the CAISO Tariff, submit to CAISO RMR Invoices for each Month during the term of this Agreement, which are defined in this Section 9.1(b) as follows: (i) Estimated RMR Invoice; (ii) Revised Estimated RMR Invoice; (iii) Adjusted RMR Invoice; and (iv) Revised Adjusted RMR Invoice. In the event there are no revisions to the Estimated RMR Invoice or the Adjusted RMR Invoice, Owner shall submit an e-mail to CAISO with a copy to the Responsible Utility indicating that the Estimated RMR Invoice or the Adjusted RMR Invoice shall be deemed to be the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice.~~
- ~~(i) Within 14 days after the end of each Month during the term of this Agreement (and, if this Agreement does not expire or terminate at the end of a Month, within 14 days after the end of the Month in which the Agreement expires or terminates), Owner shall submit an estimated invoice ("Estimated RMR Invoice") to CAISO for all charges and credits due under this Agreement for the Month ("Billing Month"). Each Estimated RMR Invoice shall reflect actual data for the Billing Month to the extent actual data is available and shall otherwise reflect estimated data.~~
- ~~(ii) By the date specified on the RMR Payments Calendar, Owner shall submit a revised estimated invoice ("Revised Estimated RMR Invoice") to CAISO, which will include appropriate revisions based on the CAISO's validation of the Estimated RMR Invoice. The Due Date of the Revised Estimated RMR Invoice shall be the 30th day after the date on which Owner submitted the Estimated~~

~~RMR Invoice to CAISO, or if such date is not a Business Day, the Due Date shall be the next Business Day.~~

- ~~(iii) — By the date specified on the RMR Payments Calendar, CAISO shall submit an invoice (“CAISO Invoice”) to the Responsible Utility, with an e-mail notification to Owner and the Responsible Utility, which specifies the payment due from the Responsible Utility to CAISO and from CAISO to Owner on the basis of the Revised Estimated RMR Invoice. However, in the event the payment is due from Owner to CAISO and from CAISO to the Responsible Utility, then CAISO shall submit the CAISO Invoice to Owner with an e-mail notification to Owner and the Responsible Utility.~~
- ~~(iv) — Within 7 days of receipt by Owner of the Recalculation Settlement Statement for the last day of the Billing Month, Owner shall submit an adjusted invoice (“Adjusted RMR Invoice”) to CAISO, reflecting actual data for the Billing Month.~~
- ~~(v) — By the date specified on the RMR Payments Calendar, Owner shall submit to CAISO an invoice reflecting actual data for the Billing Month and including appropriate revisions based on the CAISO’s validation of the Adjusted RMR Invoice (“Revised Adjusted RMR Invoice”). The Due Date of the Revised Adjusted RMR Invoice shall be the 30th day after the date on which Owner submitted the Adjusted RMR Invoice to CAISO, or if such date is not a Business Day, the Due Date shall be the next Business Day.~~
- ~~(vi) — By the date specified on the RMR Payments Calendar, CAISO shall submit an CAISO Invoice to the Responsible Utility, with an e-mail notification to Owner and the Responsible Utility, which specifies the payment due from the Responsible Utility to CAISO and from CAISO to Owner on the basis of the Revised Adjusted RMR Invoice. However, in the event the payment is due from Owner to CAISO and from CAISO to the Responsible Utility, then CAISO shall submit the CAISO Invoice to Owner with an e-mail notification to Owner and the Responsible Utility.~~
- ~~(c) — If the day on which any RMR Invoice is due to be issued is not a Business Day, such RMR Invoice shall be issued on the next succeeding Business Day.~~
- ~~(d) — Each RMR Invoice shall use the template posted on the CAISO Website in accordance with Schedule O (“RMR Invoice Template”). Each RMR Invoice shall set out detailed calculations and breakdowns of the amounts due, shall identify the source of each input used in the calculations, and shall identify all relationships among data in different invoice levels.~~
- ~~(e) — This section 9.1(e) applies to all Condition 1 Units. Any amounts received by or due to Owner’s Scheduling Coordinator for Billable MWh and Ancillary Services Delivered in Nonmarket Transactions during the Billing Month shall be subtracted from the amount otherwise due under each RMR Invoice. If subtraction of the Energy and any Ancillary Service amounts for a Unit under Condition 1 results in a credit to CAISO on an RMR Invoice, the credit shall be carried forward (“Credit Carryforward”) to the RMR Invoices for each succeeding Billing Month in that Contract Year until extinguished; provided that Owner shall not be required to carry any such credit into a later Contract Year or to pay any part of such credit to CAISO.~~
- ~~(f) — This section 9.1(f) applies to all Condition 2 Units. All amounts received by or due to Owner’s Scheduling Coordinator in connection with Market Transactions and Nonmarket Transactions during the Billing Month (“Scheduling Coordinator Revenues”) shall be subtracted from the amount otherwise due under each RMR Invoice. If subtracting the Scheduling Coordinator Revenues results in a credit to CAISO on an RMR Invoice, the~~

~~credit shall be carried forward ("Credit Carryforward") to the appropriate RMR Invoices for each succeeding Billing Month in that Contract Year until extinguished. If there is an unextinguished credit balance remaining at the end of the Contract Year, Owner shall refund to CAISO an amount equal to the lesser of (i) the remaining balance of Scheduling Coordinator Revenues or (ii) the total amounts due Owner pursuant to Section 8.2 for the Contract Year minus all Scheduling Coordinator Revenues previously credited to Owner during such Contract Year. Such refund amount will be included on December's Adjusted RMR Invoice, or the Final Invoice if the Agreement is terminated.~~

- ~~(g) In the event any corrections, surcharges, credits, refunds or other adjustments pertaining to a Billing Month are discovered after the Revised Adjusted RMR Invoice for such Billing Month has been issued ("Prior Period Changes"), then such Prior Period Changes shall be included in a worksheet for the prior period ("Prior Period Change Worksheet") and submitted for payment in the next allowed Billing Month for Prior Period Changes. The allowed Billing Months for Prior Period Changes are as follows. Any Prior Period Changes pertaining to the months of January through June of a Contract Year which are discovered prior to the submission of the December Estimated RMR Invoice for such Contract Year shall be included in a Prior Period Change Worksheet submitted with the December Estimated RMR Invoice. Any Prior Period Changes pertaining to the months of July through December of a Contract year which are discovered prior to the submission of the May Estimated RMR Invoice for the subsequent Contract year shall be included, subject to Section 9.8, in a Prior Period Change Worksheet submitted with the May Estimated RMR Invoice for the subsequent Contract Year. Any Prior Period Changes pertaining to a Billing Month for a prior Contract Year which are discovered after the first opportunity to submit a Prior Period Change Worksheet has passed, shall be included in a Prior Period Change Worksheet submitted with the Estimated RMR Invoice for the next December or May Billing Month, whichever comes first. Any Prior Period Changes pertaining to the time when the Facilities were under a superseded rate schedule using Conditions of Must Run Agreement A, B, and C, shall be calculated through a separate process and not included on RMR Invoices issued under this Agreement unless the Prior Period Changes result from the Revenue Requirements Settlements outlined in the Stipulation and Agreement approved on May 28, 1999, in FERC Docket No. ER98-441-000, et al.~~
- ~~(h) Owner shall send a copy of each RMR Invoice and any Prior Period Change Worksheet(s) to the Responsible Utility at the time it sends such invoices to CAISO.~~
- ~~(i) Owner shall provide supporting detail with the Prior Period Change Worksheets to identify the relevant Contract Year and provide clear calculations by Facility, by Billing Month, and such other detail as necessary to support the Prior Period Change(s). This level of detail shall be consistent with the level of detail originally required to perform the computation(s) that are being corrected in the Prior Period Change Worksheet. Prior Period Change Worksheets, when required, shall include all identified Prior Period Changes for each applicable prior Contract Year, and shall be computed as specified in section 9.1(j).~~
- ~~(j) A Prior Period Change Worksheet shall contain the following information and calculations for each Billing Month in the relevant Contract Year(s), commencing with the Billing Month pertaining to the Prior Period Change(s):~~
- ~~(i) The Revised Adjusted RMR Invoice for the Billing Month or, if such Billing Month has previously been submitted on a Prior Period Change Worksheet, the most recent revision of such RMR Invoice.~~
 - ~~(ii) A revision of the RMR Invoice specified in paragraph (1) above which shows the RMR Invoice revised to incorporate the Prior Period Change(s) as if such Prior~~

~~Period Change(s) had been invoiced in the Billing Month which gave rise to the Prior Period Change(s). Such revision shall incorporate the impact of the Prior Period Change(s) on RMR payments, including any impact resulting from the Credit Carryforward calculation for the current or previous Billing Months in the Contract Year. For Condition 2 Units, such calculation shall include a recalculation of the refund described in Section 9.1(f).~~

- ~~(iii) The difference between the amounts calculated under paragraph (2) above and paragraph (1) above. The amount due to or from Owner as a result of this calculation shall be clearly specified, with interest shown separately from any other amount due. Interest shall be calculated at the Interest Rate from the Due Date of the Revised Estimated RMR Invoice for the Billing Month to the date payment of the amount due is made.~~

~~Owner shall total for all Billing Months which are included on the Prior Period Change Worksheet, the amount due as a result of the calculation in paragraph (3) above for each Billing Month. Owner shall also total for all Billing Months which are included on the Prior Period Change Worksheet, the interest due as a result of the calculation in paragraph (3) above for each Billing Month. The total amount due and interest due shall be transferred from the Prior Period Change Worksheet to the appropriate Estimated RMR Invoice, and such amounts shall be due as specified on the Estimated RMR Invoice.~~

- ~~(k) Any time a Unit switches from Condition 1 to Condition 2 or Condition 2 to Condition 1 during a Contract Year, the provisions of Section 9.1(e) shall apply to the months when the unit was on Condition 1 and the provisions of Section 9.1(g) shall apply to the months when the unit was on Condition 2.~~

- ~~(l) CAISO shall separately post on the CAISO Website examples ("Prior Period Change Examples") developed and agreed to by the RMR Invoice Task Force created under Schedule O of the calculations described in Sections 9.1(e), 9.1(f), 9.1(g) and 9.1(j) to provide guidance on the correct treatment of Prior Period Changes and to show the correct preparation of the Prior Period Change Worksheet and transfer of amount due to the appropriate Estimated RMR Invoice. Additionally, the RMR Invoice Task Force shall develop and agree to, and CAISO shall post on the CAISO Website, guidelines ("Prior Period Change Guidelines") underlying the calculations described in Sections 9.1(e), 9.1(f), 9.1(g) and 9.1(j). The Prior Period Change Worksheet shall be prepared, and the amount due shall be calculated and transferred to the Estimated RMR Invoice, in accordance with the RMR Invoice Template, the Prior Period Change Examples, and the Prior Period Change Guidelines posted on the CAISO Website. In the event of a dispute regarding the treatment of Prior Period Changes, all Parties to such dispute shall refer to the Prior Period Change Examples and Prior Period Change Guidelines posted on the CAISO Website for guidance.~~

9.2 Intentionally left blank. Facility Trust Accounts

~~CAISO shall establish two segregated commercial bank accounts under the "Facility Trust Account" referred to in Sections 11.13 and 41 of the CAISO Tariff for each Responsible Utility. One commercial bank account, the "RMR Owner Facility Trust Account", shall be held in trust by CAISO for Owner. The other commercial bank account, the "Responsible Utility Facility Trust Account", shall be held in trust by CAISO for the Responsible Utility. Payments received by CAISO from a Responsible Utility in connection with this Agreement, including payments following termination of this Agreement, will be deposited into the RMR Owner Facility Trust Account and payments from CAISO to Owner will be withdrawn from such Account, all in accordance with Sections 11.13 and 41 of the CAISO Tariff and this Article 9. Any payments received by CAISO from Owner in connection with this Agreement, including payments following termination of this Agreement, will be deposited into the Responsible Utility Facility Trust Account. Any payments to a Responsible Utility of funds received from Owner under this Agreement will~~

~~be withdrawn from the Responsible Utility Facility Trust Account, all in accordance with Section 11.13 and 41 of the CAISO Tariff, and this Agreement. Neither the RMR Owner Facility Trust Account nor the Responsible Utility Facility Trust Account shall have other funds commingled in it at any time.~~

9.3 Intentionally left blank. Payment

- ~~(a) CAISO shall pay Owner all invoiced amounts due on Revised Estimated RMR Invoices, Revised Adjusted RMR Invoices, and Final Invoices whether or not disputed by CAISO or the Responsible Utility except to the extent that CAISO (i) is entitled to a refund on a Revised Estimated or Revised Adjusted RMR Invoice or Final Invoice against such payment under this Agreement or (ii) is entitled to deduct an amount under Section 9.6. All payments shall be remitted from the RMR Owner Facility Trust Account on or before the Due Date by Fedwire transfer or optionally via ACH in accordance with instructions from Owner. If Owner is also the Responsible Utility, at the discretion of Owner payments to it may be made by memorandum account instead of Fedwire transfer or ACH. Owner shall at all times establish and maintain a settlement account at a commercial bank located in the United States and reasonably acceptable to CAISO which can effect money transfers via Fedwire and, at its option, may also maintain an account capable of ACH transfers, where payments to and from the Facility Trust Accounts shall be made in accordance with Section 9.2 and Section 11.13 of the CAISO Tariff. Owner shall notify CAISO of its settlement account details prior to the Effective Date. Owner may from time to time change its settlement account details, provided that, Owner shall give CAISO 15 days notice before making changes. In the event there is a refund amount due to CAISO, Owner shall refund the amount due CAISO in accordance with Section 9.2 and Section 11.13 of the CAISO Tariff.~~
- ~~(b) If a Revised Adjusted RMR Invoice is less than the amount paid by CAISO on the Revised Estimated RMR Invoice, the difference shall be paid by Owner to CAISO with interest at the Interest Rate from the Due Date of the Revised Estimated RMR Invoice to the Due Date of the Revised Adjusted RMR Invoice, or, if the Agreement is terminated, shall be paid to CAISO on submission of the Final Invoice. If a Revised Adjusted RMR Invoice is greater than the amount paid by CAISO under the Revised Estimated RMR Invoice, CAISO shall pay Owner the difference with interest at the Interest Rate from the Due Date of the Revised Estimated RMR Invoice to the Due Date of the Revised Adjusted RMR Invoice by CAISO.~~

9.4 Payment Default

Payment default is subject to CAISO Tariff Section 11.29.

- ~~(a) Except as provided in Section 9.4 (b), Owner, in addition to any other remedy it may have, may pursue all claims against CAISO and the Collateral, as defined in Section 9.7 below, if CAISO fails to pay any invoice in full by the Due Date as required under Section 9.3. CAISO, in addition to any other remedy it may have, may pursue all claims against Owner if Owner fails to pay any invoice in full by the Due Date as required under Section 9.3. The parties' remedies shall be subject to the limitations set forth in Article 11.~~
- ~~(b) If the amounts CAISO has not paid have been invoiced by CAISO to the Responsible Utility and the Responsible Utility has not paid such amounts to CAISO, Owner shall cause execution to issue against, and shall collect solely from the Collateral or the Responsible Utility, and not CAISO, if all of the following conditions have been satisfied:~~
- ~~(i) The Responsible Utility is [INSERT SCE, PGE or SDGE, as applicable]~~
 - ~~(ii) CAISO has invoiced via the CAISO Invoice [INSERT SCE, PGE or SDGE, as applicable] for costs (net of any applicable credits, all as shown on the Revised~~

~~Estimated or Revised Adjusted RMR Invoice) after deducting only amounts permitted to be deducted under Section 9.6.~~

- ~~(iii) — The CAISO Tariff expressly requires [INSERT SCE, PGE or SDGE, as applicable] to pay all amounts shown on the CAISO Invoices without offset, recoupment or deduction (except to the extent that Section 41 of the CAISO Tariff permits deduction of amounts that are due the Responsible Utility after resolution of a dispute) and, to the extent that [INSERT SCE, PGE or SDGE, as applicable] disputes any amounts due under the CAISO Invoices, to pay the disputed amounts under protest and subject to refund with interest; and~~
- ~~(iv) — [INSERT SCE, PGE or SDGE, as applicable] fails to pay all or a portion of the amounts due under the CAISO Invoices and did not have the right to have such amount deducted under Section 41 of the CAISO Tariff.~~
- ~~(c) — Notwithstanding the provisions of Section 9.4 (b), Owner may cause execution to issue against, and collect from, CAISO, the Responsible Utility, the Collateral or insurance maintained by CAISO pursuant to Section 12.1(a), if notwithstanding the requirement to pay CAISO Invoices without offset, recoupment or deduction (except to the extent that Section 41 of the CAISO Tariff permits deduction of amounts that are due the Responsible Utility after resolution of a dispute), a Responsible Utility nonetheless offsets amounts unrelated to this Agreement or withholds amounts based on a breach or default by CAISO of any of its obligations to the Responsible Utility.~~
- ~~(d) — The CAISO Invoices shall separately show the amounts due for services from each Facility. If the Responsible Utility withholds any portion of the amount due under the CAISO Invoices, CAISO shall inform Owner of the specific Facility and time periods for which the Responsible Utility withheld payments.~~
- ~~(e) — As a condition for Owner's agreement not to seek to recover amounts from CAISO under Section 9.4(b), CAISO agrees to include and retain in the CAISO Tariff provisions expressly recognizing that Owner is a third party beneficiary of, and has all rights that CAISO has under the CAISO Tariff, at law, in equity or otherwise, to enforce the Responsible Utility's obligation to pay all sums invoiced to it in the CAISO Invoices but not paid by the Responsible Utility, to the extent that, as a result of the Responsible Utility's failure to pay, CAISO does not pay Owner on a timely basis amounts due under this Agreement. Owner recognizes that its rights as a third party beneficiary are (i) no greater than CAISO's rights against the Responsible Utility, and (ii) subject to Section 13 of the CAISO Tariff regarding dispute resolution. Either CAISO or Owner (but not both) will be entitled to enforce any claim arising from unpaid CAISO Invoices, and only one party will be a "disputing party" under Section 13 of the CAISO Tariff with respect to such claim so that the Responsible Utility will not be subject to duplicate claims or recoveries. Owner shall have the right to control the disposition of claims against the Responsible Utility for non-payments which result in payment defaults by CAISO under this Agreement. To that end, CAISO agrees that in the event of nonpayment by the Responsible Utility of amounts due under the CAISO Invoices, CAISO will not take any action to enforce its rights against the Responsible Utility unless CAISO is requested to do so by Owner. CAISO shall cooperate with Owner in a timely manner as necessary or appropriate to most fully effectuate Owner's rights related to such enforcement, including using its best efforts to enforce the Responsible Utility's payment obligations if, as, to the extent, and within the time frame, requested by Owner. CAISO shall intervene and participate where procedurally necessary to the assertion of a claim by Owner.~~
- ~~(f) — If a Responsibility Utility was not the Responsible Utility on April 1, 1998 (a "New Responsible Utility") and if:~~

- ~~(i) The senior unsecured debt of the New Responsible Utility is rated or becomes rated at less than A- from Standard & Poors (“S&P”) or A3 from Moody’s Investment Services (“Moody’s), and~~
- ~~(ii) Such ratings do not improve to A- or better from S&P or A3 or better from Moody’s within 60 days,~~

~~CAISO shall then require the New Responsible Utility to issue and confirm to CAISO an irrevocable and unconditional letter of credit in an amount equal to three times the highest monthly payment invoiced by CAISO to the New Responsible Utility (or the prior Responsible Utility) in connection with services provided under this Agreement during the last 3 months for which invoices have been issued. The letter of credit must be issued by a bank or other financial institution whose senior unsecured debt rating is not less than A- from S&P and A2 from Moody’s. The letter of credit shall authorize CAISO or Owner to draw on the letter of credit for deposit solely into the RMR Owner Facility Trust Account in an amount equal to any amount due and not paid by the Responsible Utility under the CAISO Invoices.~~

9.5 Intentionally left blank. Interest

~~If CAISO or Owner fails to make any payment by the Due Date, the amount due but not paid shall accrue interest at the Interest Rate from the Due Date until the amount is paid.~~

9.6 Intentionally left blank. Disputed Amounts

- ~~(a) If CAISO or the Responsible Utility disputes a Revised Estimated or Revised Adjusted RMR Invoice or Final Invoice or part thereof submitted by Owner under this Agreement, or if the Responsible Utility disputes an CAISO Invoice or part thereof that relates to an RMR Invoice or Final Invoice submitted by Owner to CAISO under this Agreement, and if such dispute is based in whole or part on an alleged error or breach or default of Owner’s obligations to CAISO under this Agreement, then CAISO promptly shall give written notice to Owner of the reasons for the dispute and the amount in dispute. CAISO shall pay Owner the disputed amount without offset, recoupment or reduction of any kind or nature. Such payment may, however, be made by CAISO under protest with reservation of the right to seek a refund with interest at the Interest Rate from the date of the disputed payment to the date of repayment. If CAISO notifies Owner that CAISO or the Responsible Utility disputes any amount of Owner’s RMR Invoice or Final Invoice, Owner shall at its own cost provide CAISO with all information and assistance CAISO reasonably requires to resolve the dispute and shall join with CAISO in any discussions and negotiations with the Responsible Utility to resolve the dispute. The dispute shall be subject to ADR provided that in such ADR proceeding only one entity (CAISO or Responsible Utility) will be the disputing party with respect to such claim. Owner shall be obligated to refund to CAISO as a result of resolution of such dispute only if, and to the extent, the resolution determines the amount invoiced by Owner exceeded the amounts due Owner under this Agreement for the period covered by the RMR Invoice(s) and/or Final Invoice. Any amount agreed or determined to be owed by Owner to CAISO under this Section 9.6 (a) shall be refunded by Owner to CAISO with interest, by Owner’s inclusion of such refund (including interest) in a Prior Period Change Worksheet included with the next appropriate May or December Estimated RMR Invoice as specified in Sections 9.1(g) through 9.1(l) of this Agreement. If Owner does not include such refund (including interest) in the appropriate RMR Invoice, then such refund shall be made by CAISO’s deduction of such amount from the next Revised Estimated and Revised Adjusted RMR Invoice(s) and Final Invoice submitted by Owner to CAISO under this Agreement until such amount is extinguished, or, if this Agreement has terminated, by paying such amount to CAISO. Interest shall be at the Interest Rate unless it is determined through ADR that the amount invoiced by Owner was submitted without a~~

good faith basis in fact or law, in which case interest shall be at twice the Interest Rate.

(b) ~~It is expressly understood that the Responsible Utility shall, to the extent set forth herein, be a third party beneficiary of, and shall have all rights that CAISO has under this Agreement, at law, in equity and otherwise, to dispute an RMR Invoice or Final Invoice submitted to CAISO by Owner under this Agreement and to enforce Owner's obligation to make any required payment to CAISO under this Agreement to the extent CAISO does not make a related deposit into the Responsible Utility Facility Trust Account as a result of Owner's failure to make the required payment. The rights of the Responsible Utility as third party beneficiary shall be no greater than CAISO's rights against Owner and shall be subject to the ADR provisions of this Agreement. Either CAISO or the Responsible Utility, but not both, will be entitled to enforce any claim arising from a related set of facts, and only one such entity will be a disputing party under Article 11 of this Agreement with respect to any such claim so that Owner shall not be subject to duplicate claims or recoveries. If the Responsible Utility is not the Owner, the Responsible Utility shall control the disposition of all claims against Owner for non-payment described in this Section 9.6, including the choice of disputing party. The CAISO shall have the right to intervene for the purpose of participating in the proceeding even if it is not the disputing party. CAISO shall cooperate with the Responsible Utility in a timely manner as necessary or appropriate to most fully effectuate the Responsible Utility rights related to such enforcement, including using its best efforts to enforce Owner's payment obligations if, as, to the extent, and within the time frame, requested by Responsible Utility. Subject to the foregoing, CAISO shall intervene and participate where procedurally necessary to the assertion of a claim by the Responsible Utility.~~

9.7 Intentionally left blank. Payment Security

~~To secure all of CAISO's payment obligations to Owner under this Agreement, CAISO agrees to grant Owner a security interest and lien in the following collateral (collectively, the "Collateral"): (a) all past, present and future accounts and other amounts Responsible Utility owes CAISO at any time pursuant to Section 41 of the CAISO Tariff attributable to invoices submitted by Owner under this Agreement (collectively, the "Accounts"), (b) the RMR Owner Facility Trust Account, all funds in the RMR Owner Facility Trust Account at any time, and all funds paid on account of any Accounts, (c) all proceeds of the Collateral, if any, and (d) all of CAISO's right, title and interest in the Collateral. CAISO represents and warrants to Owner that (a) CAISO has the authority to grant such security interest, (b) CAISO will have good, marketable and exclusive title to all of the Collateral, (c) such security interest and lien will at all times be a valid, enforceable and first priority lien on the Collateral, and (d) such security interest will be duly perfected by the filing of a financing statement under the California Uniform Commercial Code describing the Collateral in the office of the Secretary of State of California and the delivery of a written notice of Owner's security interest to the bank with which the RMR Owner Facility Trust Account is maintained. If CAISO defaults on its obligation to pay under this Agreement, Owner shall be entitled to enforce such security interest, to exercise its rights in the Collateral, to collect the Accounts from Responsible Utility, to collect all funds in the RMR Owner Facility Trust Account, and to exercise all other rights and remedies under the California Uniform Commercial Code. CAISO agrees to promptly execute and deliver all financing statements and other documents Owner reasonably requests, including but not limited to a written notice of Owner's security interest in the Collateral to the bank with which the RMR Owner Facility Trust Account is maintained, in order to maintain, perfect and enforce such security interest.~~

9.8 Intentionally left blank. Errors

~~If a Party discovers an error in the amount of an invoice or payment under this Agreement and notifies the other Party within 60 days after discovering the error, the error shall be corrected as specified in Sections 9.1(g) through 9.1(l) of this Agreement; provided that a Party shall not be entitled to have an error corrected unless the Party notifies the other Party within 12 months after the date of the applicable Revised Adjusted RMR Invoice or Final Invoice, or within 60 days after issuance of the final report with~~

~~respect to an audit pursuant to Section 12.2(g), whichever is later.~~

9.9 Payment of Termination Fee

- (a) ~~Within 14 days after the end of e~~Each Month during the period in which any Termination Fee is payable under Section 2.5, Owner shall submit an invoice ("Termination Fee Invoice") ~~in accordance with Schedule C to CAISO and a copy to the Responsible Utility~~ for all Termination Fee amounts due for the Month. Each Termination Fee Invoice shall:
 - (i) be broken down by Unit and
 - (ii) clearly identify the source of each input used.
- (b) CAISO shall pay Owner amounts invoiced under this Section 9.9 in accordance with ~~Sections 9.3 through 9.8~~~~Schedule C and CAISO Tariff Section 11.18.6~~. If CAISO or, ~~if applicable, the Responsible Utility~~, has disputed the amount of a Termination Fee stated in a Termination Fee Invoice, then ~~neither CAISO nor the Responsible Utility~~ shall not be required to give notice of the same disputed amount as to subsequent Termination Fee Invoices.

9.10 Intentionally left blank. Payment of Final Invoice

- ~~(a) Within 7 days of receipt by Owner of the Recalculation Settlement Statement for market transactions for the effective date of termination of this Agreement, Owner shall submit an invoice ("Final Invoice") to CAISO and a copy to the Responsible Utility for all charges and other amounts then due under this Agreement. Amounts then due shall include: (i) charges for all Billable MWh and Ancillary Services provided under this Agreement and not previously invoiced; (ii) the Long term Planned Outage Adjustment under Section 8.6, and (iii) refunds described in section 9.1(f) for Condition 2 Units. Calculation of the Long term Planned Outage Adjustment shall be made by deeming the effective date of termination to be the end of the Contract Year, and by assuming that all Long term Planned Outages scheduled to occur after the termination date under this Agreement or any successor agreement entered into upon a redesignation pursuant to Section 2.2(f) occur as scheduled. The Final Invoice shall not include remaining Monthly payments of a Termination Fee under Section 2.5, which shall continue to be paid monthly until the obligation is extinguished.~~
- ~~(b) CAISO shall pay Owner the amount stated in the Final Invoice in accordance with Section 9.3 through 9.8.~~

ARTICLE 10

FORCE MAJEURE EVENTS

10.1 Notice of Force Majeure Events

If either Party is unable to perform its obligations under this Agreement due to a Force Majeure Event, the Party unable to perform shall notify the other Party of the Force Majeure Event promptly after the occurrence thereof. The Party's notice may be given orally but shall promptly be confirmed in writing or electronically.

10.2 Effect of Force Majeure Event

- (a) If a Force Majeure Event prevents a Party from performing, in whole or in part, its obligations under this Agreement, such Party's obligations, other than obligations to pay money (unless the means of transferring funds is affected), shall be suspended and such Party shall have no liability with respect to such obligations; provided, that the suspension of the Party's obligations is of no greater scope and of no longer duration than is required by the Force Majeure Event.

- (b) If a Force Majeure Event (other than a flood, storm or drought affecting a hydroelectric Unit) reduces the Availability of a Unit, the Availability shall be determined as if the Unit were available up to the Unit Availability Limit in effect prior to the Force Majeure Event through the earlier of the 120th day following the Force Majeure Event or until the Unit's Availability is restored, whichever occurs first. If a flood or storm Force Majeure Event reduces the Availability of a hydroelectric Unit, the Availability shall be determined as if the Unit were available up to its Unit Availability Limit in effect prior to the Force Majeure Event through the earlier of the 120th day following the Force Majeure Event or until the Unit's Availability is restored, and as if the Unit were available up to one-half of such Unit Availability Limit from the 120th day through the earlier of the 240th day or the date on which the Unit's Availability is restored. If a drought Force Majeure Event reduces the Availability of a hydroelectric Unit, the Availability shall be determined as if the Unit were available up to its Unit Availability Limit in effect prior to the Force Majeure Event until the Unit's Availability is restored following the end of the drought Force Majeure Event.

10.3 Remedial Efforts

The Party that is unable to perform by reason of a Force Majeure Event shall use commercially ~~r~~Reasonable ~~e~~Efforts to remedy its inability to perform and to mitigate the consequences of the Force Majeure Event as soon as reasonably practicable; provided, that no Party shall be required to obtain replacement power or to settle any strike or other labor dispute on terms which, in the Party's sole discretion, are contrary to its interest and, ~~except to the extent that the Unit's primary fuel is distillate fuel oil or Schedule H expressly requires Owner to maintain fuel oil capability for the Unit,~~ Owner shall not be required to obtain or use fuel oil to operate a Unit. The Party unable to perform shall advise the other Party of its efforts to remedy its inability to perform and to mitigate the consequences of the Force Majeure Event, and shall advise the other Party of when it believes it will be able to resume performance of its obligations under this Agreement.

ARTICLE 11

REMEDIES

11.1 Dispute Resolution

The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. Unless this Agreement expressly provides that a particular type of dispute is not subject to ADR, the Parties shall use ADR procedures in Schedule K to resolve all disputes which are not otherwise settled. Owner and CAISO will promptly join with all other owners of Reliability Must-Run Units and all Responsible Utilities to jointly develop ADR procedures to be used in connection with such disputes. Following unanimous agreement of Owner, CAISO and Responsible Utilities to the ADR procedures, such procedures shall be posted on CAISO Website. Until there is unanimous agreement on such procedures, the Parties shall use the ADR procedures contained in Schedule K.

11.2 Waiver of Damages

- (a) Except for the obligations set forth in Section 11.4 (Termination for Default) and Section 12.6 (Indemnity), neither Party shall be liable to the other Party for any claim, loss or damage of any nature arising out of or relating to the performance or breach of this Agreement including replacement power costs, loss of revenue, loss of anticipated profits or loss of use of, or damage to, plant or other property, personal injury, or death; provided, however, that this waiver of liability shall not include or cover any claim, damage or loss arising out of the willful misconduct of either Party. Amounts that are specifically payable or reimbursable by the other Party under the terms of this Agreement shall not be considered "claims, losses or damages" for purposes of this Section.

- (b) Neither Party shall be liable to the other for any special, indirect, incidental or consequential damages suffered by the other Party or by third parties arising out of, or relating to, this Agreement or the performance of, or breach of any obligation under, this Agreement, or the negligence of any Party. This limitation shall apply even if the Party is advised of the possibility of these damages.
- (c) Except for the obligations to make or adjust payments or pay penalties expressly provided in Section 2.5 (Termination Fee), Section 7.4 (Planned Capital Items), Section 7.5 (Unplanned Repairs), Section 7.6 (Unplanned Capital Items), Section 7.8 (Upgrades of Generating Units), Article 8 (Rates and Charges) and Article 9 (Statements and Payments), of this Agreement, either Party's maximum aggregate liability for any and all claims arising out of or relating to performance or breach of this Agreement during the Contract Year, whether based upon contract, tort (regardless of degree of fault or negligence), strict liability, warranty, or otherwise, including any liability for Owner's failure to ~~D~~deliver Requested Energy, MWh or Requested Ancillary Services, Voltage Support, Black Start, or other reliability services available under this Agreement, shall not exceed \$20 million.

11.3 Injunctive Relief

In addition to any other remedy to which a Party may be entitled by reason of the other Party's breach of this Agreement, the Party not in default shall be entitled to seek temporary, preliminary and permanent injunctive relief from any court of competent jurisdiction restraining the other Party from committing or continuing any breach of this Agreement.

11.4 Termination For Default

- (a) If either Party shall fail to perform any material obligation imposed on it by this Agreement and that obligation has not been suspended pursuant to Section 10, the other Party, at its option, may terminate this Agreement by giving the Party in default notice setting out specifically the circumstances constituting the default and declaring its intention to terminate this Agreement. If the Party receiving the notice disputes the notice, it shall notify the other Party within 14 days after receipt of the notice setting out specifically the grounds of such disputes. Time is of the essence in remedying a default. If the Party receiving the notice does not, within 30 days after receiving the notice, remedy the default or refer the dispute to ADR, the Party not in default shall be entitled by a further notice to terminate this Agreement. The Party not in default shall have a duty to mitigate damages.
- (b) Termination of this Agreement pursuant to this Section 11.4 shall be without prejudice to the right of Owner or CAISO to collect any amounts due to it prior to the time of termination. If CAISO terminates this Agreement as to any Unit(s) due to Owner's default, Owner shall reimburse to CAISO the amount, if any, by which costs incurred by CAISO as a direct result of the termination through the end of the then current Contract Year exceed the costs which CAISO would have incurred absent such termination.

11.5 Cumulative and Nonexclusive

Except as provided in Section 5.4(b), each remedy provided for in this Agreement shall be cumulative and not exclusive.

11.6 Beneficiaries

Except as is specifically set forth in this Agreement, nothing in this Agreement, whether express or implied, confers any rights or remedies under, or by reason of, this Agreement on any persons other than the Parties and their respective successors and assigns, nor is anything in this Agreement intended to

relieve or discharge the obligations or liability of any third party, nor give any third person any rights of subrogation or action against any Party. The owner of title to a Unit that is leased to Owner is an intended beneficiary of Section 2.2(e).

ARTICLE 12

COVENANTS OF THE PARTIES

12.1 Insurance [Parties may negotiate custom terms]

- ~~(a) The CAISO shall maintain (i) an errors and omissions insurance policy and (ii) director and officer insurance, with combined aggregate coverage of at least \$150 million under the two policies and an operating reserve of at least \$15 million. The CAISO may reduce the level of insurance coverage, but may not do so unless it provides Owner at least 90 days notice of its intent to reduce the insurance coverage. At Owner's request, CAISO shall provide Owner with evidence of the insurance coverage it has in place. This Section 12.1 shall not be construed to require CAISO to maintain any level of coverage for any period after termination of the Agreement.~~
- ~~(b) Owner and CAISO will secure and maintain in effect during the term of this Agreement the insurance required by Schedule I. Self insurance may be utilized by mutual agreement. Owner shall name CAISO as an additional insured on its general commercial liability insurance policies. CAISO shall name Owner as an additional insured on its errors and omissions insurance policies. Owner and CAISO will each certify or cause its respective insurance agent to certify that it is insured under a major risk management program, including self-insured retentions, and except for policies covered by Section 12.1 (a), such insurance will remain in effect in amounts meeting the requirements of Schedule I.~~

12.2 Books And Records

- (a) For a period of 36 months from creation of the records, Owner shall maintain and make available for audit by CAISO complete operations records for each Unit. Such records shall include:
- (i) information for each Daily Settlement Period on the Availability of the Units, Delivered MWh and Delivered Energy, Ancillary Services, Voltage Support, Black Start, and other reliability services available under this Agreement,
 - (ii) outages,
 - (iii) Facility licenses and permits,
 - (iv) copies of operating and maintenance agreements for the Unit,
 - (v) a list of citations filed against the Unit by any environmental, air quality, health and safety, or other regulatory agency in the last 36 months,
 - (vi) a list of any resolved and unresolved WSECC log items from the last 36 months pertaining to the Unit,
 - (vii) maintenance, overhauls and inspections performed, and
 - (viii) books, accounts and all documents required to support Owner's statements, invoices, charges and computations made pursuant to this Agreement.

CAISO may audit Owner's books, accounts and documents relating to invoices, statements, charges and computations no more frequently than once each Contract Year, and only one time following expiration or termination of this Agreement.

- ~~(b) — The Responsible Utility shall have the right to participate jointly with CAISO in auditing books, accounts, documents and operating records of the Facilities to the extent required to verify the accuracy and correctness of all Owner's statements, invoices, and computations underlying all Owner charges passed through by CAISO to the Responsible Utility in connection with services rendered by Owner under this Agreement.~~
- (eb) For a period of 36 months from the creation of the records, CAISO shall maintain and make available for audit by Owner all operations records required to permit Owner to verify that CAISO has complied with its obligations to Owner under this Agreement.
- (ec) In addition to the audit rights under Section 12.2 (a) ~~and (b)~~, if Owner's rates are determined pursuant to the formula contained in Schedule F, representatives of CAISO ~~and the Responsible Utility~~ shall have the right ~~jointly~~ to audit the records, accounts and supporting documents of Owner to verify (i) the accuracy of any arithmetic calculation and (ii) application of the formula.
- (ed) If Owner's rates are determined pursuant to the formula contained in Schedule F, the ~~California Agency CPUC~~ shall have the right to audit the records, accounts and supporting documents of Owner or CAISO to verify the accuracy of any arithmetic calculation and application of the formula, including the accuracy of allocation to accounts under the FERC Uniform System of Accounts, 18 C.F.R. Part 101. ~~If there is more than one California Agency, only one audit shall be conducted by the California Agencies and such audit shall be binding on all the California Agencies.~~
- (fe) Any entity exercising its right to audit under this Section 12.2 shall give the audited entity not less than 30 days prior written notice of the audit. Books or records requested in any audit shall be available for inspection by the auditing entity at the offices of the entity being audited between 9:00 A.M. and 5:00 P.M. on Business Days. Any audit under this Section 12.2 shall be completed not more than 36 months after the records were created. Any audit right herein shall be limited to the books and accounts of Owner or CAISO and shall not extend to the books and accounts of the parent or any other affiliate of Owner or CAISO. The expense of any audit shall be borne solely by the auditing Party or entity.
- (ef) No adjustments to payments shall be required as a result of an audit unless, and then only to the extent that, CAISO, Owner, or another entity making such an audit under this Section 12.2 takes written exception to the books and accounts and makes a claim upon Owner or CAISO for any discrepancies disclosed by such audit within 60 days following issuance of the final audit report.
- (hg) All information provided during the course of an audit shall be treated as Confidential Information in accordance with Section 12.5.
- (ih) Nothing in this Agreement shall override any obligation Owner or CAISO may have under applicable law to maintain books and records for periods longer than 36 months nor shall this Agreement override any obligation Owner or CAISO may have to make books and records available for audit by FERC or any other entity. Nothing in this Agreement is intended to limit in any manner (i) the authority of FERC to audit the books and records of Owner or CAISO or the manner in which such audit is noticed or conducted or (ii) CAISO's right to audit market participants (including Owner) under the CAISO Tariff.

12.3 Representations And Warranties

- (a) CAISO represents and warrants to Owner as follows:

- (i) CAISO is a validly existing corporation with full authority to enter into this Agreement.
 - (ii) CAISO has taken all necessary measures to have the execution and delivery of this Agreement authorized, and upon the execution and delivery of this Agreement shall be a legally binding obligation of CAISO.
- (b) Owner represents and warrants to CAISO as follows:
- (i) Owner is a validly existing [limited liability company][corporation] [municipal corporation] with full authority to enter into this Agreement.
 - (ii) Owner has taken all necessary measures to have the execution and delivery of this Agreement authorized, and upon the execution and delivery this Agreement shall be a legally binding obligation of Owner.

12.4 Responsibilities

Each Party shall be responsible for protecting its facilities from possible damage by reason of electrical disturbances or faults caused by the operation, faulty operation, or non-operation of the other Party's facilities. The other Party shall not be liable for any damages so caused.

12.5 Confidentiality

- (a) Except as may otherwise be required by applicable law, all information and data provided by the Parties to one another pursuant to this Agreement and marked "Confidential" or otherwise identified with specificity in writing as confidential at the time of disclosure ("Confidential Information") shall be treated as confidential and proprietary material of the providing Party and will be kept confidential by the receiving Party and used solely for purposes of this Agreement. Confidential Information will not include information that is or becomes available to the public through no breach of this Agreement, information that was previously known by the receiving Party without any obligation to hold it in confidence, information that the receiving Party receives from a third party who may disclose that information without breach of law or agreement, information that the receiving Party develops independently without using the Confidential Information, and information that the disclosing Party approves for release in writing. The receiving Party shall keep such information confidential and shall limit the disclosure of any such Confidential Information to only those personnel within its organization with responsibility for using such information in connection with this Agreement. The receiving Party shall assure that personnel within its organization read and comply with the provisions of this Section 12.5 and any Confidentiality Agreement implementing this Section 12.5. The Parties shall use all reasonable efforts to maintain the confidentiality of the Confidential Information in any litigation, shall promptly notify the providing Party of any attempt by a third party to obtain the Confidential Information through legal process or otherwise. A Party or third party beneficiary under Article 9 which has received Confidential Information may use that information in litigation or regulatory proceedings related to this Agreement but only after notice to the other Party and affording the other Party an opportunity to obtain a protective order or other relief to prevent or limit disclosure of the Confidential Information.
- (b) The Parties may provide any Confidential Information (i) ~~to the Responsible Utility pursuant to provisions of this Agreement under which information is to be provided to that Responsible Utility and as required for settlement and billing;~~ (ii) to any entity with audit rights under Section 12.2 or review rights specified in other provisions of this Agreement, (iii) on a need-to-know basis, to Owner's Scheduling Coordinator, financial institutions, agents, lessors of the Unit and potential purchasers of interests in a Unit; and, (iii) as

required for settlement and billing, to Scheduling Coordinators responsible for paying for services provided under this Agreement. As a condition to receiving any Confidential Information under this Section 12.5, the recipient shall execute a Confidentiality Agreement in the applicable form contained in Schedule N and thereby agree to be subject to the non-disclosure and other obligations contained in this Section 12.5.

- (c) The obligation to provide confidential treatment to Confidential Information shall not be affected by the inadvertent disclosure of Confidential Information by either Party.

12.6 Indemnity

Subject to the limitations in Section 11.2 (b), each Party shall indemnify, defend and hold harmless the other Party and its officers, directors, employees, agents, contractors and sub-contractors, from and against all third party claims, judgments, losses, liabilities, costs, expenses (including reasonable attorneys' fees) and damages for personal injury, death or property damage, caused by the negligence or willful misconduct related to this Agreement or breach of this Agreement of the indemnifying Party, its officers, directors, agents, employees, contractors or sub-contractors, provided that this indemnification shall be only to the extent such personal injury, death or property damage is not attributable to the negligence or willful misconduct related to this Agreement or breach of this Agreement of the Party seeking indemnification, its officers, directors, agents, employees, contractors or sub-contractors. This indemnification shall not include or cover any claim covered by any workers' compensation law. This indemnification shall be for an amount not exceeding the deductible of the indemnifying Party's commercial general liability insurance in the case of Owner and errors and omission insurance in the case of CAISO, if applicable. The indemnified Party shall give the other Party prompt notice of any such claim. The indemnifying Party shall have the right to choose competent counsel, control the conduct of any litigation or other proceeding, and settle any claim. The indemnified Party shall provide all documents and assistance reasonably requested by the indemnifying Party. Section 14 of the CAISO Tariff shall not apply to this Agreement.

12.7 Owner Financial Requirements

- (a) Through the term of the Agreement, Owner shall maintain an investment grade rating by Moody's or Standard and Poor's or provide documentation from a financial institution or corporate owner acceptable to the CAISO that there is an equity position described below. The CAISO shall not unreasonably withhold acceptance of the documentation.
 - (i) An equity to debt ratio of at least 30%, or
 - (ii) An equity to total asset ratio of at least 30% or
 - (iii) Demonstrate to the CAISO's reasonable satisfaction that other factors, including, without limitations, commercial financing arrangements, and working capital positions, mitigate the risk of Owner failing to meet the performance requirements under this Agreement.
- (b) If the Owner does not possess and maintain an investment grade rating, an equity position or make other arrangements as described in Section 12.7 (a), then it must provide one of the following:
 - (i) Proof of insurance to cover the financial exposure to the CAISO for one year of Capital Items, Repairs, fuel and any other operating expenses; or
 - (ii) Security to cover the financial exposure to the CAISO for one year of Capital Items, Repairs, fuel and any other operating expenses in one of the following forms:

- (A) standby letter of credit;
- (B) corporate guarantee;
- (C) cash deposit; ~~or~~
- (D) security bond; or
- (E) other form of assurance reasonably acceptable to CAISO.

ARTICLE 13

ASSIGNMENT

13.1 Assignment Rights and Procedures

Neither Party shall assign its rights or delegate its duties under this Agreement without the prior written consent of the other Party, which shall not be unreasonably withheld. CAISO shall be entitled to deny consent to a proposed assignment by Owner only if the assignee does not meet the financial criteria set out in Section 13.2 (a) or the technical criteria set out in Section 13.2 (b). Notwithstanding the foregoing, if FERC approves an assignment, then the non-assigning Party shall be deemed to have consented to the assignment, subject to the non-assigning Party's right to seek judicial review of a FERC decision. Each Party shall give the other Party prompt notice of any proposed assignment or delegation, together with such information as the other Party may reasonably request with respect to the proposed assignment or assignee. Each Party shall be deemed to consent to the assignment or delegation unless it submits a written objection to the assignment or delegation within 14 days of receiving the notice and all financial and technical information as required in Sections 13.2(a) and 13.2(b). In the event of an assignment of this Agreement pursuant to a Financing Agreement, CAISO will execute for the benefit of the bank, financial institution or other entity with an interest in the Financing Agreement, a consent to such assignment reasonably acceptable to CAISO and Owner. An assignment of this Agreement by Owner in connection with the sale of a Unit shall terminate Owner's rights and obligations under this Agreement prospectively from the effective date of the assignment.

13.2 Limitation on Right to Withhold Consent

- (a) CAISO shall not withhold consent to assignment of this Agreement on financial grounds if the assignee meets the financial requirements in Section 12.7(a) or provides financial security pursuant to Section 12.7(b).
- (b) CAISO shall not withhold consent to an assignment on grounds that the assignee is not technically qualified if the assignee was previously an Owner of a Reliability Must-Run Unit ~~as of May 1, 1999~~ or the assignee submits appropriate documentation to the CAISO to establish that it has sufficient resources and expertise to be able to:
 - (i) Secure the necessary fuel and transportation for the fuel for the Facility;
 - (ii) Secure all necessary support services, including water supply, communications, waste disposal, etc. for the Facility;
 - (iii) Provide service from the Facility in compliance with the terms of this Agreement;
 - (iv) Provide the engineering and other technical services required to support operation and maintenance of the Facility;
 - (v) Obtain as necessary, and comply with all permits or licenses required to operate or maintain the Facility; and

- (vi) Provide environmental services required for the operation and maintenance of the Facility.
- (c) The proposed assignee shall provide the last two years' annual audited financial statements and quarterly financial statements (unaudited) prior to the proposed date of purchase. If the proposed assignee is a new company and there are no historical financial statements, then a financial institution or corporate owner must provide pro forma financial statements in a form acceptable to the CAISO.

13.3 Intentionally left blank. ~~Transfer of Conditions Following Assignment~~

~~If this Agreement is assigned to a new Owner pursuant to Section 13.1, the new Owner may transfer one or more Units to a different Condition by giving CAISO at least seven days prior notice provided that such notice is given not later than 30 days after the effective date of the assignment. The transfer shall become effective on the first day of month following the later of (i) seven days after the effective date of the assignment or (ii) seven days after the date CAISO receives the new Owner's transfer notice. This section shall not apply to assignment to a new Owner which is an affiliate of Owner as defined in 18 C.F.R. Section 161.2.~~

ARTICLE 14

MISCELLANEOUS PROVISIONS

14.1 Notices

Except as otherwise expressly provided in this Agreement or required by law, all notices, consents, requests, demands, approvals, authorizations and other communications provided for in this Agreement shall be in writing and shall be sent by electronic mail with receipt confirmed, personal delivery, certified mail, return receipt requested, facsimile transmission or by recognized overnight courier service, to the intended Party at such Party's address set forth in Schedule J. Any notices which may be given orally and are given orally shall be confirmed in writing. All such notices shall be deemed to have been duly given and to have become effective: (a) upon receipt if delivered in person or by facsimile; (b) two days after having been delivered to an air courier for overnight delivery; (c) seven days after having been deposited in the United States mail as certified or registered mail, return receipt requested, all fees pre-paid; or if by electronic mail, upon receipt confirmation, addressed to the applicable address(es) set forth in Schedule J.

14.2 Effect of Invalidation

Each covenant, condition, restriction and other term of this Agreement is intended to be, and shall be construed as, independent and severable from each other covenant, condition, restriction and other term. If any covenant, condition, restriction or other term of this Agreement is held to be invalid by any court or regulatory body having jurisdiction, the invalidity of such covenant, condition, restriction or other term shall not affect the validity of the remaining covenants, conditions, restrictions or other terms hereof unless the invalidity has a material impact upon the rights and obligations of the Parties. If an invalidity has a material impact on the rights and obligations of the Parties, the Parties shall make a good faith effort to renegotiate and restore the benefits and burdens of this Agreement as they existed prior to the determination of an invalidity.

14.3 Amendments

- (a) Any amendments or modifications of this Agreement shall be made only in writing and, except for changes authorized by the FERC under Sections 205 or 206 of the Federal Power Act, shall be duly executed by both Parties. To the extent that any amendments or modifications are subject to FERC approval, such amendments or modifications shall

become effective when permitted to be effective by FERC. ~~For purposes of this Agreement, transfer of any Unit from one condition to the other condition or termination of the Agreement as to less than all Units shall not constitute a modification or amendment to this Agreement.~~

- (b) Where Owner's rates are not subject to FERC jurisdiction, either CAISO or Owner may, not later than 90 days prior to the end of each Contract Year, serve a notice on the other Party ~~and the Responsible Utility~~ stating that it requires a review of the terms of this Agreement, including any rates, prices and charges contained therein ("Review Notice").
- (i) The Review Notice shall, as a minimum requirement, set forth the following:
- (A) the precise nature of the proposed revisions (indicating, where possible, the relevant Article, Section and Schedule); and
 - (B) justification for each proposed revision.
- (ii) The Party in receipt of the Review Notice shall respond to such notice within 30 days of its receipt by issuing a notice in response ("Response Notice"). The Response Notice shall, as a minimum requirement, set forth the following:
- (A) those revisions set forth in the Review Notice that are accepted as proposed;
 - (B) those revisions set out in the Review Notice that are not accepted;
 - (C) alternative proposals (if any) to the proposed revisions set out in the Review Notice;
 - (D) any revisions required by the responding party not covered by (A) through (C) above; and
 - (E) its justification for any of the matters raised under Sections 14.3 (b) (ii) (B) (C) or (D).
- (iii) Any Party failing to respond to a Review Notice shall be deemed to have accepted the revisions set out in the Review Notice.
- (iv) Following receipt of the Response Notice the duly authorized representatives of the Parties shall meet to negotiate in good faith any revisions to this Agreement.
- (v) In the event that the Parties are unable to reach agreement on the revisions to be made to this Agreement within 60 days of the date of the Review Notice, either Party may refer the matter for resolution through ADR. The arbitrator shall determine the revisions, if any, to the Agreement on the basis that:
- (A) the purpose of the Agreement is to maintain the reliability of CAISO Controlled Grid; and
 - (B) costs and charges payable by CAISO should reflect the costs of providing services to the CAISO.
- (vi) In the event that the Parties agree to the revisions, or such matters are determined through ADR, or a Party fails to respond to a Review Notice, the agreed, determined or deemed accepted revisions shall take effect and the rights and obligations of the Parties shall be amended as from the beginning of the

ensuing Contract Year or from such other date and time agreed between the Parties or determined through ADR, and following such time the Parties shall act in accordance with the terms and conditions of this Agreement as amended.

14.4 Filings Under Sections 205 or 206 of the Federal Power Act

Nothing contained in this Agreement shall be construed as affecting the right of Owner unilaterally to make application to FERC for a change in rates, terms and conditions under Section 205 of the Federal Power Act and pursuant to FERC rules and regulations promulgated thereunder. CAISO may challenge such application or may submit complaints concerning Owner's rates, terms and conditions under Section 206 of the Federal Power Act and pursuant to FERC rules and regulations promulgated thereunder.

14.5 Construction

The language in all parts of this Agreement shall in all cases be construed as a whole and in accordance with its fair meaning, and shall not be construed strictly for or against either of the Parties.

14.6 Governing Law

This Agreement shall be interpreted and construed under and pursuant to the laws of the State of California, without regard to conflicts of laws principles.

14.7 Parties' Representatives

Both Parties shall ensure that throughout the term of this Agreement, a duly appointed Representative is available for communications between the Parties. The Representatives shall have full authority to deal with all day-to-day matters arising under this Agreement. If a Party's Representative becomes unavailable, the Party shall promptly appoint another Representative. Acts and omissions of Representatives shall be deemed to be acts and omissions of the Party. Owner and CAISO shall be entitled to assume that the Representative of the other Party is at all times acting within the limits of the authority given by the Representative's Party. Owner's Representatives and CAISO's Representatives shall be identified on Schedule J.

14.8 Merger

This Agreement ~~and the Stipulation and Agreements filed April 2, 1999 and August 14, 2000 in Docket Nos. ER98-441-000 et al.~~ constitutes the sole and entire agreement of the Parties with respect to the subject matter hereto and supersedes all prior and contemporaneous understanding and agreements, ~~whether both~~ written ~~or and~~ oral, with respect to such subject matter.

14.9 Independent Contractors

Nothing contained in this Agreement shall create any joint venture, partnership or principal/agent relationship between the Parties. Neither Party shall have any right, power or authority to enter into any agreement or commitment, act on behalf of, or otherwise bind the other Party in any way.

14.10 Conflict with CAISO Tariff

The CAISO Tariff shall govern matters relating to the subject matter of this Agreement which are not set forth in this Agreement. In all other circumstances, this Agreement shall govern. In the event of a conflict between the terms and conditions of this Agreement and any terms and conditions set forth in the CAISO Tariff the terms and conditions of this Agreement shall prevail.

14.11 Waiver

The failure to exercise any remedy or to enforce any right provided in this Agreement shall not constitute

a waiver of such remedy or right or of any other remedy or right provided herein. A Party shall be considered to have waived any remedies or rights hereunder only if such waiver is in writing.

14.12 Assistance

During the term of this Agreement, each Party shall provide such reasonable assistance and cooperation as the other Party may require in connection with performance of the duties and obligations of each Party under this Agreement, including, but not limited to, assistance in securing any necessary regulatory approvals and in facilitating necessary financing.

14.13 Headings

Article and section headings used in this Agreement are inserted for convenience only and are not intended to be a part hereof or in any way to define, limit, describe or to otherwise be used in interpreting the scope and intent of the particular provisions to which they refer.

IN WITNESS WHEREOF, this Agreement has been executed as of the date first above written.

[OWNER]

By: _____

Name: _____

Title: _____

The California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

FERC

RELIABILITY MUST-RUN SCHEDULES

- Schedule A Unit Characteristics, ~~and~~ Limitations ~~and Owner Commitments~~
- Schedule B ~~Monthly Option-Daily RMR Capacity~~ Payment
- Schedule C ~~Invoicing for Costs Payable under this Agreement but not Recoverable in CAISO Market Revenues (RMR Invoices) Variable Cost Payment~~
 - ~~Part 1 for Thermal Units~~
 - ~~Part 2 for Geothermal Units~~
 - ~~Part 3 for Conventional Hydro Units~~
 - ~~Part 4 for Pumped Storage Hydro Units~~
 - ~~Part 5 for Biomass Generation Units~~
- Schedule D ~~Not Used~~ Start-up Payment
 - ~~Part 1 for Condition 1 Units~~
 - ~~Part 2 for Condition 2 Units~~
- Schedule E ~~Not Used~~ Ancillary Services Payment
 - ~~Part 1 for Condition 1~~
 - ~~Part 2 for Condition 2~~
 - ~~Part 3 for Black Start Services~~
- Schedule F Determination of Annual Revenue Requirements of Must-Run Generating Units
- Schedule G ~~Not Used~~ Charges for Service in Excess of Contract Service Limits
- Schedule H ~~Not Used~~ Fuel Oil Service
- Schedule I Insurance Requirements
- Schedule J Notices
- Schedule K Dispute Resolution
- Schedule L-1 Request for Approval of Capital Items or Repairs
- Schedule L-2 Capital Item and Repair Progress Reports
- Schedule M ~~Not Used~~ Mandatory Market Bid for Condition 2 Units When Dispatched by the CAISO
- Schedule N-1 ~~Not Used~~ Non-Disclosure and Confidentiality Agreement for Responsible Utilities
- Schedule N-2 Non-Disclosure and Confidentiality Agreement for Entities Other than Responsible Utilities
- Schedule O ~~Not Used~~ Owner's Invoice Process
- Schedule P ~~Not Used~~ Reserved Energy for Air Emissions Limitations

Schedule A

Unit Characteristics, and Limitations and Owner Commitments

1. Description of Facility

Provide the following information for all units at the Facility, regardless of their RMR designation status. Information regarding units not designated as Reliability Must-Run Units is required only if and to the extent that the information is used to allocate Facility costs between Reliability Must-Run Units and other units.

| Unit | RMR (Y/N) | Maximum Net Dependable RMR Contract Capacity (includes CAISO-paid Upgrade capacity)* | Fuel Type |
|------|-----------|---|-----------|
| | | | |

For this Facility, the Owner will use _____ [insert either MW, MWhs, or service hours] in Schedule B to allocate Annual Fixed Revenue Requirements to and among Units. This election shall be applicable to all Facilities containing Reliability Must Run Units subject to any “RMR contract” as defined in the CAISO Tariff executed by Owner or any of its affiliates as defined in 18 CFR § 161.2.

~~Ambient temperature derates and rerates shall be managed by Owner in accordance with Section 9 of the CAISO Tariff and through CAISO’s outage management system.~~

~~* Maximum Net Dependable Capacity shall reflect any transformer or line loss to the Delivery Point.~~

2. Description of RMR Units

Provide the address(es) of the Units at the Facility and the following tabular information:

| | Unit |
|---|------|
| Type (fossil, combustion turbine, etc.) | |
| Synchronous Condenser Capability (Y/N) | |
| Power Factor Range (lead to lag) | |
| Maximum Reactive Power Leading, MVar | |
| Maximum Reactive Power Lagging, MVar | |
| Load at Maximum MVar Lagging, MW | |
| Load at Maximum MVar Leading, MW | |
| Black Start Capable (Y/N) | |
| Automatic Start or Ramp (Y/N)* | |
| Upgrade Capacity Paid by CAISO, MW | |

* If “Y”, describe the conditions under which the Unit will start or ramp automatically.

3. Operational and Regulatory Limitations of RMR Units:

Air Emissions Limitations

List applicable NO_x, CO, SO₂, particulate, and other appropriate emissions limits; note the name and address of the lead agency; the agency's applicable rule number(s); and note those pollutants for which an emissions cap applies. For Units that are use-limited, Owner shall follow the use-limit process as described in Section 6.1(b) of this Agreement.

~~Monthly Reserved MWh for Air Emission Limitations~~

~~Operating Limits related to Ambient Temperatures~~

~~Ambient Temperature Correction Factors for Availability Test~~

~~Provide a curve or table showing the Ambient Temperature Correction Factors for each Unit (the relationship between Ambient Temperature and Maximum Net Dependable Capability).
FERC License Conditions (hydroelectric Units)~~

~~Other Limits (e.g., cooling water discharge)~~

4. Delivery Point

| Unit | Transmission Node (Station Name) | <u>Delivery Point *</u> | Voltage |
|------|----------------------------------|-------------------------|---------|
| | | | |

* Delivery Point should be the Point of Delivery (POS) of the Unit as provided in the Master File.

5. Metering and Related Arrangements

| Unit | Meter Location | Meter (Manufacturer & Model No.) | <u>Meter ID*</u> |
|------|----------------|----------------------------------|------------------|
| | | | |

* As reflected in the Meter Services Agreement.

6. Unit Performance Characteristics~~Start-up Lead Times~~

All performance characteristics of the Unit will be reflected in CAISO systems including the Master File. Any changes to the Unit proposed by Owner shall be reviewed and approved by CAISO to ensure service under this Agreement is maintained.

Non-hydroelectric Units

| Unit | Start-up Segment Number | Generating Unit Down Time (Minutes) | Generating Unit Start-up Time (Minutes) |
|------|-------------------------|-------------------------------------|---|
| | 1 | | |
| | 2 | | |
| | n | | |

"X_{max}" used in Schedules C and D shall be equal to or less than the hours in the heading of this column. The Start-up Lead Time shall be the Startup time as defined and submitted by the Owner through the process outlined in the CAISO Tariff Schedules and Bids Protocol Section 6.6 or its successor.

Hydroelectric Start-up Lead Times

| Unit | Time from notification to Minimum Load—Normal work hours | Time from notification to Minimum Load—Outside Normal Work hours |
|------|--|--|
| | | |

7. Ramping Constraint

Describe any constraints the Unit incurs between Minimum Load and PMax.

8. Ramp Rate

| Unit | Ramp Rate Segment Number | Output of Point Range (MW) | Minimum Ramp Rate (MW/Minute) | Maximum Ramp Rate (MW/Minute) |
|------|--------------------------|----------------------------|-------------------------------|-------------------------------|
| | 1 | | | |
| | 2 | | | |
| | n | | | |

Separate Ramp Rates will be shown for each load range and will describe any special restrictions affecting Ramp Rates at various load points, e.g., feed pump operation, heat soaks, etc.

The Ramp Rate shall be the Operational Ramp Rate submitted by the Owner through the process described in the CAISO Tariff. On the Effective Date, the values in the CAISO Master File shall be set equal to the values shown in the table above.

9. Minimum Load

| Unit | Manual (MW) | AGC (MW) |
|------|-------------|----------|
| | | |

10. Minimum Run Time

| Unit | Hours |
|------|-------|
| | |

11. Minimum Off Time

| Unit | Hours |
|------|-------|
| | |

12. Contract Service Limits

| Unit | Maximum Annual MWh | Maximum Annual Service Hrs | Maximum Annual Start-ups |
|------|--------------------|----------------------------|--------------------------|
| | | | |

~~Maximum Monthly MWh (Hydroelectric Units only)~~

MWh

| Unit | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | | | | | | |

913. Owner's Repair Cost Obligation

Owner's Repair Cost Obligation for the current Contract Year is \${ }.

~~14. Existing Contractual Limitations and Other Contract Restrictions on Market Transactions~~

~~15. Applicable UDC Tariff(s)~~

~~[List each Tariff and schedule to which it applies]~~

Schedule B

Daily RMR Capacity Monthly Option Payment

The formulas and values used to compute the Monthly Option Payment in accordance with Section 8.1 and Section 8.2 for each Unit for each Month are set forth in Equation B-1 below:

Equation B-1

$$\frac{\text{Monthly Option Daily RMR Capacity Payment}}{\text{RMR Capacity Payment}} = \frac{\text{Monthly Daily Availability Payment}}{\text{Availability Payment}} + \frac{\text{Monthly Daily Surcharge Payment}}{\text{Surcharge Payment}} - \frac{\text{Monthly Nonperformance Penalty}}{\text{Nonperformance Penalty}}$$

The ~~Monthly Daily Option RMR Capacity~~ Payment can never be less than zero.

1. ~~The Monthly Availability Payment is calculated in accordance with Equation B-2 below:~~

Equation B-2

$$\text{Monthly Availability Payment (\$)} = \text{lesser of Current Monthly Availability Payment (\$)} \text{ or } 100\% \text{ of AFRR minus Cumulative Monthly Availability Payments Excluding Current Monthly Availability Payment (\$)}$$

Equation B-2

$$\frac{\text{Daily Availability Payment (\$/MW-day)}}{\text{Daily Availability Payment (\$/MW-day)}} = \frac{(\text{AFRR (\$)}) / (\text{RMR Contract Capacity (MW)} * \text{days in Contract Year})}{(\text{AFRR (\$)}) / (\text{RMR Contract Capacity (MW)} * \text{days in Contract Year})}$$

2. ~~The Current Monthly Availability Payment is calculated in accordance with Equation B-3 below:~~

Equation B-3

$$\text{Current Monthly Availability Payment (\$)} = \text{Sum for all hours} \left[\frac{\text{Hourly Availability Charge (\$/hr)} * \text{Unit Availability Limit (MW)}}{\text{Maximum Net Dependable Capacity (MW)}} \right]$$

Where:

A. ~~Hourly Availability Charge is calculated in accordance with Equation B-4 below:~~

Equation B-4

$$\text{Hourly Availability Charge} = \text{Hourly Availability Rate} * \text{Fixed Option Payment Factor}$$

Where:

• ~~Hourly Availability Rate is calculated in accordance with Equation B-5 below:~~

Equation B-5

$$\text{Hourly Availability Rate} = \frac{\text{Annual Fixed Revenue Requirement Target}}{\text{Available Hours}}$$

Annual Fixed Revenue Requirement is set forth in Section 7 below.

Target Available Hours are set forth in Section 6 below.

- For Units under Condition 1, the Fixed Option Payment Factor is set forth in Table B-0 below:

| Table B-0 | |
|-----------|-----------------------------|
| Unit | Fixed Option Payment Factor |
| | |

For Units under Condition 2, the Fixed Option Payment Factor is 1.

The Hourly Availability Charges for the Contract Year are set forth in Table B-1 below:

| Table B-1 | | |
|-----------|-------------|-------------|
| | Condition 1 | Condition 2 |
| Unit 1 | | |

B. Unit Availability Limit is defined in Article 1 of the Agreement.

C. Maximum Net Dependable Capacity is shown in Section 1 of Schedule A.

- The Monthly Surcharge Payment is calculated in accordance with Equation B-6 below:

$$\text{Equation B-6}$$

$$\text{Monthly Surcharge Payment (\$)} = \text{lesser of } \left[\begin{array}{l} \text{Current Monthly Surcharge Payment (\$)} \\ \text{or } 100\% \text{ of Sum of all Annual Capital Item Costs minus Cumulative Monthly Surcharge Payments Excluding Current Monthly Surcharge Payment (\$)} \end{array} \right]$$

RMR Contract Capacity is shown in Section 1 of Schedule A.

The Daily Surcharge payment is calculated in accordance with Equation B-3 below:

$$\text{Equation B-3}$$

$$\text{Daily Surcharge Payment (\$/MW-day)} = \frac{\text{Sum or ((Annual Capital Item Cost (\$)) / (RMR Contract Capacity (MW) * days in Contract Year))}}{1}$$

- The Current Monthly Surcharge Payment is calculated in accordance with Equation B-7 below:

$$\text{Equation B-7}$$

$$\text{Current Monthly Surcharge Payment (\$)} = \text{Sum for all hours} \left[\begin{array}{l} \text{Sum of all Hourly Capital Item Charges (\$/hr)} \\ \text{Unit Availability Limit (MW)} \\ \text{Maximum Net Dependable} \end{array} \right]$$

Capacity (MW)

Where:

A. ~~The Hourly Capital Item Charge for each Capital Item approved pursuant to Sections 7.4 or 7.6 is calculated in accordance with Equation B-8 below:~~

Equation B-8

~~Hourly Capital Item Charge = Hourly Capital Item Rate \times Surcharge Payment Factor~~

Where:

~~Hourly Capital Item Rate is calculated in accordance with Equation B-9 below:~~

~~Equation B-9
Hourly Capital Item Rate = Annual Capital Item Cost \div Target Available Hours~~

- ~~Annual Capital Item Cost is the amount recoverable by Owner under this Agreement in a Contract Year for each Capital Item approved pursuant to Section 7.4 or Section 7.6.~~
- ~~Target Available Hours are shown in Section 6 below.~~
- ~~For Units under Condition 1, the Surcharge Payment Factor for all Capital Items covered by the Small Project Budget shall be the Fixed Option Payment Factor. For all other Capital Items, the Surcharge Payment Factor shall be as agreed to by Owner and CAISO. If the Owner and CAISO do not agree on the Surcharge Payment Factor, the Surcharge Payment Factor shall equal the Fixed Option Payment Factor, unless the Owner demonstrates in ADR that it would not have installed the proposed Capital Item in accordance with Good Industry Practice but for its obligations to the CAISO under this Agreement, in which case the Surcharge Payment Factor shall be as determined in ADR.~~
- ~~For Units under Condition 2, the Surcharge Payment Factor is 1.~~

The ~~Hourly Annual~~ Capital Item ~~Charges~~ Costs for the Contract Year are set forth in Table B-~~12~~ below:

| Table B- 12 | | | |
|------------------------|--------------------------|--------------------------|---|
| Unit | Capital Item Project No. | Annual Capital Item Cost | Condition 1 Surcharge Payment Factor |
| | | | |
| | | | |

~~B. Unit Availability Limit is defined in Article 1 of the Agreement.~~

~~C. Maximum Net Dependable Capacity is shown in Section 1 of Schedule A.~~

~~5. The Monthly Nonperformance Penalty is calculated pursuant to Section 8.5 using the following variables:~~

~~A. Hourly Penalty Rate~~

~~A Unit's Hourly Penalty Rate for each Contract Year is the lesser of (a) the Unit's Hourly Availability Rate for the Contract Year (calculated pursuant to Item 2.A above), or (b) three times the Unit's Hourly Availability Charge for the Contract Year (as shown in Table B-1 above).~~

~~The Hourly Penalty Rates for the Contract Year are set forth in Table B-3 below:~~

| Table B-3 | | |
|-----------|-------------|-------------|
| Unit | Condition 1 | Condition 2 |
| | | |

| | | |
|--------|--|--|
| Unit 1 | | |
|--------|--|--|

~~B. Hourly Surcharge Penalty Rate~~

~~A Unit's Hourly Surcharge Penalty Rate for each Capital Item for each Contract Year is the lesser of (a) the corresponding Hourly Capital Item Rate for the Contract Year (calculated pursuant to Item 4.A above), or (b) three times the applicable Hourly Capital Item Charge for the Contract Year (as shown in Table B-2 above). The Hourly Surcharge Penalty Rates for the Contract Year are set forth in Table B-4 below:~~

| Unit | Capital Item Project No. | Hourly Capital Item Rate | Condition 1 Hourly Surcharge Penalty Rate | Condition 2 Hourly Surcharge Penalty Rate |
|------|--------------------------|--------------------------|---|---|
| | | | | |

~~6. Target Available Hours~~

~~A Unit's Target Available Hours for each Contract Year are calculated in accordance with the Equation B-10 below:~~

~~Equation B-10~~

$$\text{Target Available Hours (TAH)} = \text{Hours in the Calendar Year} - (\text{Average Other Outage Hours} + \text{Long Term Planned Outage Hours})$$

~~Average Other Outage Hours means the average annual Other Outage Hours for the Unit during the 60-month period ending June 30 of the previous calendar year.~~

~~Long-term Planned Outage Hours means the Long-term Planned Outage Hours for the Contract Year scheduled with CAISO pursuant to Section 7.2(a). For periods prior to December 31, 1998, Other Outage Hours shall exclude a planned interruption, in whole or in part, in the electrical output of a Unit to permit Owner to perform a major equipment overhaul or inspection or for new construction work, but only if the outage lasted 21 or more consecutive days.~~

~~Long-term Planned Outage Hours scheduled for a Contract Year shall be subject to the Long-term Scheduled Outage Adjustment pursuant to Section 8.6 of the Agreement.~~

~~The Average Other Outage Hours, Long-term Planned Outage Hours and Target Available Hours for each Unit for the Contract Year are shown in Table B-5 below:~~

| Unit | Average Other Outage Hours | Long-term Planned Outage Hours | TAH |
|------|----------------------------|--------------------------------|-----|
| | | | |

~~For the purposes of calculating Target Available Hours for the Contract Year ending December 31, 1999, (a) Average Other Outage Hours shall be calculated using the average annual Other Outage Hours for the Unit during the 60-month period ending December 31, 1998, and (b) Long-term Planned Outage Hours shall be calculated using the hours scheduled for performing Long-term Planned Outages as if the Agreement had become effective on January 1, 1999.~~

~~7. Annual Fixed Revenue Requirement (AFRR)~~

~~The Annual Fixed Revenue Requirement for each Unit is set forth in Table B-6 below. For any Contract Year commencing on or after January 1, 2002, the Annual Fixed Revenue Requirement shall be determined by the Formula Rate set forth in Schedule F, unless Owner files a superseding rate schedule under Section 205 of the Federal Power Act.~~

| Table B-26 | |
|------------|----------------------------------|
| Unit | Annual Fixed Revenue Requirement |
| | |

8. Limited Section 205 Filing for an Extension of Contract Term

If CAISO has extended the term of this Agreement pursuant to Section 2.1(b), then not later than October 31 of the expiring Contract Year, Owner shall make a filing with FERC under Section 205 of the Federal Power Act containing the values in Tables B-1 through B-26 for the ensuing Contract Year.

~~In the event that a Long-term Planned Outage that is scheduled for the last quarter of the expiring Contract Year is postponed or rescheduled after October 31 of such year to the ensuing Contract Year, Owner shall make an additional Section 205 filing to revise the values in Tables B-1 through B-5 to reflect such rescheduled Long-term Planned Outage Hours.~~

Schedule C

Invoicing for Variable Costs under this Agreement but Payment not Recoverable in CAISO Market Revenues (RMR Invoice)

Part 1 for Thermal Units Variable Cost Payment

No more frequently than once a month, Owner may invoice CAISO for variable costs or other costs, Termination Fee, and CAISO's Repair Share (RMR Invoice), that CAISO is obligated to pay and not otherwise recoverable through the CAISO Tariff. For payment of Termination Fee the RMR Invoice shall be called the Termination Fee Invoice.

The payment of the RMR Invoice shall be subject to review and approval of CAISO in accordance with the CAISO Tariff and applicable CAISO Business Practice Manuals.

| <u>Cost Category</u> | <u>Cost unit</u> | <u>Frequency of invoice</u> |
|----------------------|------------------|-----------------------------|
| | | |

RMR Invoice Costs

Voltage Support and Black Start Services

Voltage Support (including synchronous condenser operation)
Black Start

If the Unit is otherwise generating, the Owner shall be required to operate the Unit within the Power Factor range of the Unit specified in Schedule A to provide Ancillary Services or Voltage Support without additional compensation.

Certain Units (hydroelectric and synchronous condensers) can provide Ancillary Services without generating Energy. Under this Condition, Owner will be compensated for Motoring Charges if the Unit is providing Ancillary Services or Voltage Support while synchronized without generating Energy.

Motoring Charge

When Units are operated as synchronous condensers (i.e., motored using electric power) to provide Ancillary Services, or Voltage Support, if applicable, the payment for that service is given by the following formula:

$$\text{Motoring Charge} = \frac{\text{(Power consumption rate (MWh/hr))}}{\text{(hours operated)}} \times \text{(Energy Price)}$$

Where the Power consumption rate is given by the following table:

| <u>Unit</u> | <u>Power consumption rate (MWh/hour)</u> |
|-------------|--|
| | |

The Energy Price shall be equal to the total power costs charged to the Facility by its supplier of end-use Energy under the Applicable UDC Tariff for the billing cycle in which the Motoring Charge was incurred divided by the total power consumed at the Facility under such tariff during such billing cycle.

Applicable UDC Tariff

Black Start Services

For those Units with Black Start capability, the cost of maintaining such capability is included in this

Agreement and no additional costs shall be charged to the CAISO for maintaining such capability. The CAISO will pay for Black Start service, including for a Black Start Test Dispatch Notice, at the rates and prices in this Agreement for Start-Ups and Delivery of Energy in connection with the Black Start service. Owner shall maintain the Black Start capability of the Unit and the Facility and provide Black Starts in accordance with the CAISO Ancillary Services Requirements Protocol and the CAISO Dispatch Protocol, which shall be deemed incorporated by reference into this Agreement.

When the CAISO first gives written notice to the Owner that it has obtained adequate Black Start service through an auction or a separate agreement with Owner or other Generators and Black Start service under this Agreement is no longer required, the CAISO shall not be entitled to call upon this Unit to provide Black Start service. Once the CAISO has given this notice, the Owner may remove Black Start service from this Agreement by filing unilaterally a change in rate schedule with FERC. Such filing shall not be required to include any reduction in rate or revenue solely because Black Start service is removed. The CAISO shall not oppose the absence of any rate or revenue reduction that results solely from removing such service.

The Variable Cost Payment for each Unit for the Billing Month shall be the amount calculated in accordance with the following formula:

$$\begin{aligned}
 \text{Variable Cost Payment} = & \text{A. CAISO Unit Monthly Billed Fuel Cost} + \\
 & \text{B. CAISO Unit Monthly Fuel Imbalance} \\
 & \text{C. Charge} + \text{CAISO Monthly Other Fuel} \\
 & \text{D. Related Cost} + \text{CAISO Monthly Emissions} \\
 & \text{E. Cost} + \text{CAISO Monthly Variable O\&M Cost} \\
 & \text{F.} + \text{CAISO Scheduling Coordinator Charge} + \\
 & \text{G. CAISO ACA Charge}
 \end{aligned}$$

Each component of the Variable Cost Payment for thermal Units will be calculated as described below:

A. CAISO Unit Monthly Billed Fuel Cost

The CAISO Unit Monthly Billed Fuel Cost is calculated in accordance with Equation C1-0.

~~Equation C1-0~~

$$\begin{aligned}
 \text{CAISO Unit Monthly Billed Fuel Cost (\$)} & = \frac{\text{Monthly sum of the CAISO Unit Hourly Cap Heat Input for this Unit (MMBtu)}}{\text{Monthly sum of the CAISO Unit Hourly Cap Heat Input for all Units at the Facility (MMBtu)}} \times \text{CAISO Facility Monthly Billed Fuel Cost}
 \end{aligned}$$

Where:

- ~~CAISO Unit Hourly Cap Heat Input for each Unit is calculated in accordance with Equation C1-6;~~
- ~~The CAISO Facility Monthly Billed Fuel Cost is calculated in accordance with Equation C1-1.~~

1. The CAISO Facility Monthly Billed Fuel Cost

~~The CAISO Facility Monthly Billed Fuel Cost is calculated in accordance with Equation C1-1.~~

~~Equation C1-1~~

$$\begin{array}{l} \text{CAISO} \\ \text{Facility} \\ \text{Monthly} \\ \text{Billed Fuel} \\ \text{Cost (\$)} \end{array} = \text{Lesser of} \begin{array}{l} \text{CAISO} \\ \text{Facility} \\ \text{Cumulative} \\ \text{Actual Fuel} \\ \text{Cost (\$)} \end{array} \text{ or } \begin{array}{l} \text{CAISO} \\ \text{Facility} \\ \text{Cumulative} \\ \text{Cap Fuel} \\ \text{Cost (\$)} \end{array} - \begin{array}{l} \text{CAISO Facility} \\ \text{Cumulative} \\ \text{Billed Fuel} \\ \text{Cost (\$)} \end{array}$$

Where:

- ~~The CAISO Facility Cumulative Actual Fuel Cost is the sum of all CAISO Unit Monthly Actual Fuel Costs for all Units at the Facility since the start of the Contract Year, including the current Month. CAISO Unit Monthly Actual Fuel Costs for each Unit is calculated in accordance with Equation C1-2.~~
- ~~The CAISO Facility Cumulative Cap Fuel Cost is the sum of all CAISO Unit Monthly Cap Fuel Costs for all Units at the Facility since the start of the Contract Year, including the current Month. CAISO Unit Monthly Cap Fuel Costs is the sum of the CAISO Unit Hourly Cap Fuel Cost (calculated pursuant to Equation C1-5) for each hour of the Month for each Unit.~~
- ~~The CAISO Facility Cumulative Billed Fuel Cost is the sum of all CAISO Unit Monthly Billed Fuel Costs for all Units at the Facility since the start of the Contract Year, excluding the current Month. CAISO Unit Monthly Billed Fuel Cost for each Unit is calculated in accordance with Equation C1-0.~~

2. ~~CAISO Unit Monthly Actual Fuel Cost~~

~~The CAISO Unit Monthly Actual Fuel Cost is calculated in accordance with Equation C1-2.~~

~~Equation C1-2~~

$$\begin{array}{l} \text{CAISO} \\ \text{Unit} \\ \text{Monthly} \\ \text{Actual} \\ \text{Fuel Cost} \\ \text{(\$)} \end{array} = \text{Monthly sum of the CAISO} \left[\begin{array}{l} \text{Monthly} \\ \text{Metered} \\ \text{Fuel} \\ \text{MMBtu} \end{array} \right] \begin{array}{l} \text{CAISO} \\ \text{Monthly} \\ \text{Fuel Price} \\ \text{(\$/MMBtu)} \end{array} - \begin{array}{l} \text{Monthly} \\ \text{Start-up} \\ \text{Fuel Cost} \\ \text{(\$)} \end{array}$$

~~Monthly sum of the Unit Hourly Cap Heat Inputs for all units at the Facility metered by the Fuel Meter (MMBtu)~~

Where:

- ~~CAISO Unit Hourly Cap Heat Input is calculated in accordance with Equation C1-6.~~
- ~~Unit Hourly Cap Heat Input is calculated in accordance with either Equation C1-7a or C1-7b.~~
- ~~Monthly Metered Fuel is the non-duplicative sum of the quantities of fuel for the Month as measured by all gas metering systems or fuel oil measuring systems, as applicable ("Fuel Meters"), for the Unit.~~
 - (a) ~~If the fuel is natural gas, the Owner may select from one of three options for the Fuel Meter:~~
 - (i) ~~the revenue meter used by the entity providing natural gas to measure gas delivered to one or more Units ("Fuel Custody Meter");~~
 - (ii) ~~a gas metering system installed at the Facility to measure gas used in one or~~

~~more Units that meets the measurement accuracy standard in the tariff of the local gas distribution company in whose service area the Facility is located and the measurement accuracy standards set forth below, and is subject to an annual accuracy test performed under the CAISO's direction, as described below; or~~
(iii) ~~a gas metering system installed at the Facility by the local gas distribution company in whose service area the Facility is located and maintained by the local gas distribution company to the same standards as revenue meters of the local gas distribution company.~~

~~For the selected Fuel Meter option, the Owner shall provide the required information for all Units, both RMR and non-RMR, connected to the specific Fuel Custody Meter.~~

~~If the Owner selects option (ii), the Owner shall assure the overall accuracy of the gas metering systems in use for the Units are within acceptable industry and regulatory standards. Gas metering systems shall be designed, installed, calibrated and maintained according to standards set forth by the American Gas Association (AGA), the American National Standards Institute (ANSI) and the California Public Utilities Commission (CPUC). An audit trail of all calibration records and measurement parameters used in volume and heating value calculations as recorded electronically by the flow computer shall be maintained and all data shall be in no longer than hourly intervals. All equations and calculations performed by the flow computer may be reviewed for accuracy and completeness, including compressibility, volumetric flow and energy flow, by the CAISO or its agent. A consistent base pressure (14.73 psi) and base temperature (60° F) shall be used at all times. If the Facility has multiple sources of fuel gas, a gas chromatograph ("GC") shall be installed which analyzes all constituents of the blended gas, with the sampling point downstream of the individual supplies such that proper mixing occurs prior to sampling. The GC speed loop shall permit analysis of the gas in "real time".~~

~~In order to ensure the accuracy of a gas metering system selected under option (ii), an initial acceptance test shall be conducted by Owner and shall be witnessed by the CAISO or its agent to assure the installation meets applicable industry standards. Such a test shall be conducted at five load points (maximum load, minimum load, and three evenly spaced load points), under steady state conditions (i.e., off Automatic Generation Control), and for a minimum of one hour at each load point. Analysis of the test results shall consist of a side-by-side comparison of volumetric flow, energy flow, gas specific gravity and mole percents, and other factors mutually agreed to by the CAISO and Owner for the Fuel Custody Meter and the meter installed at the Facility under option (ii). The gas metering system installed under option (ii) shall be deemed acceptable if the side-by-side energy flow comparison for the period shall be within +1 percent to -2 percent. The gas metering system shall meet the required accuracy throughout the entire operating range of the RMR Unit. Following CAISO acceptance, an annual routine test shall be conducted at a time chosen by the CAISO to verify and confirm the performance of Owner's gas metering system. With the exception that the test shall be conducted at one load point specified by the CAISO, such a test shall be conducted in a similar fashion to the initial acceptance test and shall include inspection of the primary flow element; instrument end-to-end calibration; confirmation of integrity of sensing lines (meaning there shall be no leaks); confirmation of proper GC operation; and proper flow computer operation and data handling. All systems and sub systems utilized during the initial acceptance test, including, but not limited to, (a) all primary devices, including the differential producing device of the gas metering system, the GC, and differential pressure ("dP") and temperature instruments; (b) all secondary devices and circuits, including dP and temperature transmitters and circuits, sensing lines, GC sampling line and secondary circuits; and (c) all electronic devices, flow computers and devices, shall be sealed with an CAISO certified seal and no maintenance work or modifications and changes, including making any changes to flow computer programming, shall be permitted without prior approval by the CAISO.~~

~~If any part of the option (ii) gas metering system requires either routine or emergency maintenance, the Owner shall notify the CAISO immediately by telephone or other means specified by the CAISO. The Owner shall inform the CAISO of the time period during which such maintenance is expected to occur. The CAISO may, at its discretion, require gas metering systems which are changed or modified during maintenance or repair to undergo re-certification, including acceptance testing. If the maintenance activity is necessary due to concerns that the gas metering system is not operating in accordance with~~

~~the required accuracy standards, such maintenance work shall be completed within 2 business days from the time when the concern was first noted.~~

~~A V-cone meter may not be used under option (ii), unless the meter was installed prior to January 1, 1997.~~

~~If, as a result of a change in the use of fuel gas from a supplier other than the local distribution company, the properties of the fuel gas change materially (Higher Heating Value (HHV) or Specific Gravity (SG) varies more than -3 percent to +3 percent due to the addition of new gas constituents) following the installation of a gas metering system under option (ii) or option (iii), Owner shall notify the CAISO within twenty-four (24) hours. Acceptance testing shall be conducted to verify the metering accuracy due to the change in fuel gas supply and to test whether Owner's gas metering system meets the technical requirements of this specification. Owner shall be obligated to install any equipment necessary to bring its gas metering system into compliance. Owner shall not enter into any third-party agreements for non-pipeline grade fuel gas without the prior approval of the CAISO. Such approval shall not be granted until the CAISO has evaluated Owner's gas metering system, including the effect of the non-pipeline grade fuel gas on metering accuracy.~~

~~If an Owner selects option (iii) and the Facility has multiple sources of fuel gas, the local gas distribution company shall install a GC which analyzes all constituents of the blended gas, with the sampling point downstream of the individual supplies such that proper mixing occurs prior to sampling. The GC speed loop should permit analysis of the gas in "real time".~~

~~(b) — If the fuel is other than natural gas, the Fuel Meter value shall be determined monthly by measuring the fuel oil consumed during the month using, at Owner's one-time election, either (i) a metering process which is acceptable to the Owner and CAISO or (ii) a calculation acceptable to the Owner and CAISO based on a tank volume measurement process performed on the day immediately prior to the beginning of the Month and the last day of the Month and fuel oil deliveries during the Month. The metering or measurement process adopted shall comply with, or be comparable to, one or more applicable American Petroleum Institute ("API") Manual of Petroleum Measurement Standards. If Owner and CAISO cannot agree on an acceptable process, it shall be determined through ADR pursuant to Schedule K to this Agreement. Owner shall be permitted to change its election between metering as described in (i) above or tank volume measurement described in (ii) above only to reflect changes in the physical circumstances of the Unit or a change in the type of fuel burned at the Unit.~~

~~During any period in which the Fuel Meter fails to accurately measure gas flow, the Owner shall provide information to the CAISO sufficient to estimate the gas flow during such failure. This information may include unit electric-generating history, accurate recorded gas flow based on another meter and heat input characteristics of all Units served by the failed meter. This information will be used to estimate the gas flow during the failure period to the mutual satisfaction of the CAISO, the Responsible Utility and the Owner.~~

~~If a Fuel Meter serves RMR Units as well as other units, the heat input characteristics of the other units will be included in Table C1-7a or C1-7b, as applicable, and the Monthly sum of the Unit Hourly Cap Heat Inputs for all units at the Facility metered by the Fuel Meter used in Equation C1-2 will include Hourly Cap Heat Inputs for such other units calculated using Equation C1-7a or C1-7b, whichever is applicable.~~

- ~~• — CAISO Monthly Fuel Price is calculated in accordance with Equation C1-3.~~
- ~~• — Monthly Start-Up Fuel Cost is the sum of the Start-Up Fuel Costs for all Start-ups (for Market and Nonmarket Transactions) in the Month for all units metered by the Fuel Meter with the Start-up Fuel Costs for each Unit calculated in accordance with Equations D-1a or D-1b in Schedule D, as applicable. If a Start-up is initiated but is not successfully completed, the Start-up Fuel Costs shall be adjusted in accordance with Equation C1-2a:~~

~~–Equation C1-2a~~

$$\begin{aligned} \text{Adjusted Start-up Fuel Cost for Canceled Starts (\$)} &= \text{Number of hours committed to the Start-up} \times \text{Start-up Fuel Costs (\$)} \\ &\quad \times \text{Applicable Start-up Lead Time in hours shown in Section 6 of Schedule A} \end{aligned}$$

Where:

- ~~The "number of hours committed to the Start-up" is the lesser of (a) time elapsed between the initiation of the Start-up and the cancellation or (b) the Applicable Start-up Lead Time as shown in Section 6 of Schedule A.~~

3. ~~CAISO Monthly Fuel Price~~

~~The CAISO Monthly Fuel Price is calculated in accordance with Equation C1-3.~~

~~–Equation C1-3~~

$$\text{CAISO Monthly Fuel Price (\$/MMBtu)} = \frac{\text{Monthly sum of CAISO Unit Hourly Cap Fuel Cost (\$)}}{\text{Monthly sum of CAISO Unit Hourly Cap Heat Input (MMBtu)}}$$

Where:

- ~~CAISO Unit Hourly Cap Fuel Cost (\\$) is calculated in accordance with Equation C1-5;~~
- ~~CAISO Unit Hourly Cap Heat Input (MMBtu) is calculated in accordance with Equation C1-6.~~

4. ~~Intentionally Omitted~~ (There is no Equation C1-4.)

5. ~~CAISO Unit Hourly Cap Fuel Cost~~

~~For each hour, the CAISO Unit Hourly Cap Fuel Cost is calculated in accordance with Equation C1-5.~~

~~–Equation C1-5~~

$$\text{CAISO Unit Hourly Cap Fuel Cost (\$)} = \text{CAISO Unit Hourly Cap Heat Input (MMBtu)} \times \text{Hourly Fuel Price (\$/MMBtu)}$$

Where:

~~The Hourly Fuel Price is calculated in accordance with Equation C1-8;~~

~~The CAISO Unit Hourly Cap Heat Input (MMBtu) is calculated in accordance with Equation C1-6.~~

6. ~~CAISO Unit Hourly Cap Heat Input~~

~~For each hour, the CAISO Unit Hourly Cap Heat Input is calculated in accordance with Equation C1-6.~~

-Equation C1-6

$$\text{CAISO Unit Hourly Cap Heat Input} = \text{Unit Hourly Cap Heat Input (MMBtu)} \times \frac{\text{Billable MWh}}{\text{Hourly Metered Total Net Generation (MWh)}}$$

-Where:

- ~~Unit Hourly Cap Heat Input is calculated in accordance with either Equation C1-7a or C1-7b.~~

7. **Unit Hourly Cap Heat Input (MMBtu)**

~~The Unit Hourly Cap Heat Input to a Unit for any load is given by the following equations and shall be determined either by a polynomial equation (C1-7a) or exponential equation (C1-7b):~~

~~**-Equation C1-7a**~~

~~$$\text{Unit Hourly Cap Heat Input} = 1.02 (AX^3 + BX^2 + CX + D) E$$~~

~~**-Equation C1-7b**~~

~~$$\text{Unit Hourly Cap Heat Input} = 1.02 (A - (B + CX + De^{FX})) E$$~~

-Where:

- ~~X is Unit's Hourly Metered Total Net Generation, MWh;~~
- ~~e is the base of natural logarithms;~~
- ~~A, B, C, D are coefficients given for Equation C1-7a in Table C1-7a and given for Equation C1-7b in Table C1-7b;~~
- ~~The coefficient E is applicable only when burning fuel oil. At all other times, it shall be set to 1.0.~~
- ~~F is a coefficient given in Table C1-7b.~~

~~**-Table C1-7a**~~

| | A | B | C | D | E |
|--|---|---|---|---|---|
| | | | | | |

~~**-Table C1-7b**~~

| | A | B | C | D | E | F |
|--|---|---|---|---|---|---|
| | | | | | | |

8. **Hourly Fuel Price**

~~The Hourly Fuel Price for Units shall be the same for each hour of a given day and is calculated in accordance with Equation C1-8.~~

~~**-Equation C1-8 (Gas)**~~

~~$$\text{Hourly Fuel Price (\$/MMBtu)} = \text{Commodity Price (\$/MMBtu)} + \text{Intrastate Transportation Rate (\$/MMBtu)}$$~~

~~–Equation C1-8 (Oil)~~

~~Hourly Fuel Price (\$/MMBtu) = Commodity Price (\$/MMBtu) + Transportation Rate (\$/MMBtu)~~

~~**Commodity Price for Natural Gas**~~

~~For the Facilities within the service area of SCE or SDG&E, the Commodity Price shall be the product of 1.02 and the simple average of the following indices:~~

- ~~Gas Daily, SoCal Gas, Large Packages index (midpoint)~~
- ~~BTU Daily Gas Wire, SoCal Border index, Topock~~
- ~~NGI Daily Gas Price Index, Southern California Border (average)~~

~~For the Facilities within the service territory of PG&E, the Commodity Price shall be the product of 1.02 and the simple average of the following indices:~~

- ~~Gas Daily, PG&E Citygate index (midpoint)~~
- ~~NGI Daily Gas Price Index, PG&E Citygate (average)~~

~~The indices to be used for each Settlement Period in a given day are shown in Table C1-8. Where more than one day's index is shown for a Trading Day, the average of the two daily indices should be used. If an applicable index for a day, which is used to compute the index's average for a Trading Day, is not published, then that index will not be used to compute the Commodity Price for that trading day. If no index for a day is published, then the average of applicable indices on the Index Publication Date preceding and the Index Publication Date following such day will be substituted for the Index Publication Date index for that day in Table C1-8. In the event that an index ceases to be published, Parties shall agree on a replacement index.~~

~~Table C1-8
Natural Gas Price Indices~~

| Trading Day | Index Publication Date* | | |
|------------------------|------------------------------------|------------------------------------|-------------------------------------|
| | Gas Daily ** | Btu Daily ** Gas Wire | NGI Daily ** Price Index |
| Tuesday | Tuesday/ Wednesday | Monday/ Tuesday | Tuesday/ Wednesday |
| Wednesday | Wednesday/ Thursday | Tuesday/ Wednesday | Wednesday/ Thursday |
| Thursday | Thursday/ Friday | Wednesday/ Thursday | Thursday/ Friday |
| Friday | Friday/ Monday | Thursday/ Friday | Friday/ Monday |
| Saturday | Monday/ Tuesday | Friday/ Monday | Monday/ Tuesday |
| Sunday | Monday/ Tuesday | Friday/ Monday | Monday/ Tuesday |
| Monday | Monday/ Tuesday | Friday/ Monday | Monday/ Tuesday |

~~*The Index Publication Date is the date of the publication which contains the prices for the applicable Trading Day.~~

~~**Where more than one day's index is shown for a Trading Day, the average of the two daily indices should be used.~~

~~Gas Daily: The "Flow Date(s)" column should match the Trading Day.~~

~~Btu Daily: The Index Publication Date should be the day prior to the Trading Date in the Table above, except for Sunday and Monday, where Friday should be used as the Index Publication Date.~~

~~NGI Daily: The Index Publication Date should be the same as the Trading Date in the tables above, except for Saturday and Sunday, where Monday should be used as the Index Publication Date.~~

Commodity Price for Distillate Fuel Oil

~~The Commodity Price for Distillate Fuel Oil shall be the simple average of the midpoint of the ranges for CARB No. 2 Diesel and for Jet as published in Platt's Oilgram United States West Coast Product Assessments (page 22). If the Unit can burn only Jet, the Commodity Price shall be the midpoint of the range for Jet.~~

~~In an event the index ceases to be published, the Parties shall agree on a replacement index.~~

~~For distillate fuel, the index will be for the last day prior to the RMR Transaction Day.~~

Commodity Price for No. 6 Residual Fuel Oil

~~The fuel price shall be the prudent actual replacement cost of the fuel consumed, or, if the fuel is consumed and not replaced, then the fuel price will be "last in first out" (LIFO) inventory price of the fuel consumed.~~

~~Where conversion from barrels of Fuel to MMBtu is required, the following conversion coefficients shall be used:~~

- ~~• _____ No. 1 Distillate Fuel Oil—5.754 MMBtu per barrel;~~
- ~~• _____ No. 2 Distillate Fuel Oil—5.796 MMBtu per barrel;~~
- ~~• _____ Jet Fuel—5.650 MMBtu per barrel;~~
- ~~• _____ No. 6 Residual Fuel Oil—6.258 MMBtu per barrel.~~

Intrastate Transportation Rate for Gas

~~The Intrastate Transportation Rate for Gas shall be the applicable intrastate transportation rate determined as follows:~~

~~Units served by SDG&E: The Southern California Gas Company intrastate transportation rate (currently GT-SD) plus the volumetric component of the SDG&E gas transportation rate for electric generation service, including the ITCS (currently GTUEG—SD), or any successor rate for electric generation service applicable to deliveries to the Facility, divided by one minus the applicable in-kind shrinkage allowance, if any.~~

~~Units served by Southern California Gas: The Southern California Gas Company intrastate transportation rate for firm electric generation service, including the ITCS (GT-F) plus the G-ITC Wheeler Ridge Interconnection Access fee, if applicable, or any successor rate for firm electric generation service applicable to deliveries to the Facility, divided by one minus the applicable in-kind shrinkage allowance, if any.~~

~~Units served by PG&E: The PG&E intrastate transportation charge stated in Rate Schedule G-EG, or any successor rate for electric generation service applicable to deliveries to the Facility, divided by one minus the applicable in-kind shrinkage allowance, if any.~~

Transportation Rate for Distillate Fuel Oil

~~The Transportation Rate for Distillate Fuel Oil shall be _____. There shall be no Transportation Rate for No.~~

6-Residual Fuel Oil.

~~B. CAISO Monthly Fuel Imbalance Charge~~

~~Levels of Responsibility~~

~~Each month, the Owner is responsible for all Nonmarket fuel imbalance charges incurred up to and including 2.25 percent of the CAISO Facility Monthly Billed Fuel Cost.~~

~~The Monthly Fuel Imbalance Charge is equal to 75% of 1st Tier Imbalance plus 100% of 2nd Tier Imbalances;~~

~~Where:~~

~~The 1st Tier Imbalances is that portion of the Monthly Sum of Daily Imbalance Charges which exceeds 2.25 percent of the CAISO Facility Monthly Billed Fuel Cost for the Month and is less than or equal to 10.0 percent of the CAISO Facility Monthly Billed Fuel Cost for the Month.~~

~~The 2nd Tier Imbalances is that portion of the Monthly Sum of Daily Imbalance Charges which is greater than 10.0 percent of the CAISO Facility Monthly Billed Fuel Cost for the Month.~~

~~The Monthly Sum of Daily Imbalance Charges is the sum for all days in the month of imbalance charges and similar fees and penalties imposed on Owner (or its fuel supplier and paid by Owner) by transportation providers delivering gas to the Units because deliveries were in excess of or less than scheduled for a given day, but only to the extent that (i) the imbalance was caused by Owner compliance with a Dispatch Notice issued after (or less than 30 minutes prior) to the Transporter's deadline for scheduling transportation, and (ii) Owner issued a notice to the CAISO as soon as possible after the Owner became aware it might incur imbalance charges advising CAISO of such possible charges.~~

~~In any month in which Owner incurs a 1st Tier or 2nd Tier Imbalance charge, Owner will provide the CAISO with a report showing the allocation of the imbalance charges between Market Transactions and Nonmarket Transactions. If CAISO or the Responsible Utility disagree on allocation, the dispute will be resolved through ADR.~~

~~To receive payment for a 2nd Tier Imbalance, Owner must document in an informational filing with FERC that the charges were appropriately allocated to Nonmarket Transactions and it was commercially reasonable to incur them. As used in this context and for purposes of calculating imbalance charges, "commercially reasonable" does not mean that Owner is required to acquire storage to avoid imbalances. If either the CAISO or Responsible Utility disagree with the imbalance charges, desires a formal review and gives such notice to the Owner within 30 days of the informational filing, the Owner must file under Section 205 of the Federal Power Act to collect any 2nd Tier Imbalance charges.~~

~~Pursuant to the above, the Monthly Fuel Imbalance Charge is calculated in accordance with Equation C1-9.~~

~~Equation C1-9~~

| | | | | | | | | |
|--|-------------------|---|--------------------|--|------------------|---|------------------|--|
| Monthly Fuel Imbalance Charge | = 0.75 | Monthly Sum of Daily Imbalance Charges | -0.0225 | CAISO Facility Monthly Billed Fuel Cost | +0.25 | Monthly Sum of Daily Imbalance Charges | -0.10 | CAISO Facility Monthly Billed Fuel Cost |
|--|-------------------|---|--------------------|--|------------------|---|------------------|--|

~~Note that if either of the two bracketed portions of the equation yields a value less than or equal to zero, then that portion of the equation is set to zero.~~

C. CAISO Monthly Other Fuel Related Cost

The CAISO Monthly Other Fuel Related Cost is calculated in accordance with Equation C1-10.

Equation C1-10

$$\text{CAISO Monthly Other Fuel Related Cost} = \frac{\text{Monthly sum of Billable MWh}}{\text{Monthly sum of Total Hourly Metered Net Generation}} \left[\text{Other Gas Tariff Charges} + \text{Applicable Taxes} \right]$$

Where:

• Other Gas Tariff Charges are those intrastate gas transportation tariff charges not included in Transportation Rate Charges set forth in Section A.8 of this Schedule listed below:

[Insert applicable charges]

• Applicable taxes and fees are:

1. [Insert applicable local utility user taxes]

2. [Insert applicable G-SUR fee]

All other fuel related taxes and fees are intended to be covered by the two percent adder in Hourly Fuel Cost and are the Owner's responsibility.

D. CAISO Monthly Emissions Cost

Part 1 for SCAQMD Jurisdictional Thermal Units

The CAISO Monthly Emissions Cost for each Unit shall be the sum, for all hours in the month, of the CAISO Hourly Emissions Cost. These costs apply to a Facility within the South Coast Air Quality Management District (SCAQMD).

The CAISO Hourly Emissions Cost shall be calculated in accordance with Equation C1-11.

Equation C1-11

$$\text{CAISO Hourly Emissions Cost (\$/hr)} = \begin{matrix} \text{a. CAISO Hourly RECLAIM Trading Credit Cost (\$/hr)} \\ \text{b. + CAISO Hourly NOx Emissions Cost (\$/hr) +} \\ \text{c. CAISO Hourly Organic Gases Emissions Cost} \\ \text{d. (\$/hr) + CAISO Hourly Sulfur Oxides Emissions} \\ \text{e. Cost (\$/hr) + CAISO Hourly Particulate Matter} \\ \text{f. Emissions Cost (\$/hr) + CAISO Hourly Carbon} \\ \text{g. Monoxide Emissions Cost (\$/hr) + CAISO Hourly} \\ \text{Sulfur Dioxides Trading Credit Costs (\$/hr)} \end{matrix}$$

a. CAISO Hourly RECLAIM Trading Credit Cost

For each hour, the CAISO Hourly RECLAIM Trading Credit ("RTC") Cost for NOx emissions required for the Unit to generate the Billable MWh is calculated in accordance with Equation C1-12.

Equation C1-12

$$\text{CAISO Hourly RECLAIM Trading Credit Cost (\$/hr)} = \text{Hourly NO}_x \text{ Emissions (lbs/hr)} \times \text{RECLAIM NO}_x \text{ Trading Credit Rate (\$/lb)} \times \text{Billable MWh Hourly Metered}$$

Total Net
Generation

Where:

- Hourly NOx Emissions is calculated in accordance with Equation C1-13.

Equation C-13

$$\text{Hourly NOx Emissions (lbs/hr)} = AX^2 + BX + C$$

Where:

- X is the Hourly Metered Total Net Generation for the hour.
- Coefficients A, B, and C are given in Table C1-13 for each Unit.

| Table C1-13 | | | |
|----------------------------|----------|----------|----------|
| Description of Unit | A | B | C |
| | | | |

The RECLAIM NOx Trading Credit Rate (\$/lb) will be equal to the 13-week sales-weighted average sales price for RTCs calculated as of the last day of the Month from sales records available from the SCAQMD for all actual sales in the SCAQMD during the thirteen preceding weeks, including the Settlement Period.

b. CAISO Hourly NOx Emissions Cost

For each hour, the CAISO Hourly NOx Emissions Cost for the Billable MWh is calculated in accordance with Equation C1-14.

Equation C1-14

$$\text{CAISO Hourly Nox Emissions Cost (\$/hr)} = (5 \cdot 10^{-4}) \cdot \text{Hourly Nox Emissions (lbs/hr)} \cdot \text{NOx Emissions Fee (\$/ton)} \cdot \text{Billable MWh}$$

Hourly Metered
Total Net
Generation

Where:

- (5 (10⁻⁴) is the conversion factor from lbs to tons.
- Hourly NOx Emissions is calculated in accordance with Equation C1-13.
- NOx Emissions Fee is obtained from Table III of SCAQMD Rule 301(e). The fee is dependent upon the Cumulative Tons of Pollutant (NOx), which is calculated in accordance with Equation C1-15. The Cumulative Tons of Pollutant is reset to zero each July 1st.

Equation C1-15

$$\text{Cumulative Tons of Pollutant (tons/hr)} = \text{Tons of Pollutant From the prior July 1st to the Previous Hour} + \text{Tons of Pollutant For Current Hour}$$

Where:

- Tons of Pollutant for Current Hour is in accordance with Equation C1-16.

~~Equation C1-16~~

$$\begin{matrix} \text{Tons of Pollutant} & = & (4.76 \cdot 10^{-7}) \cdot (AX^3 + BX^2 + CX + D) & \text{Pollutant Emissions Amount for} \\ \text{for Current Hour} & & & \text{Natural Gas} \\ \text{(tons/hr)} & & & \end{matrix}$$

Where:

- ~~_____~~ $(4.76 \cdot 10^{-7})$ is the conversion factor from lbs. to tons (1 ton/2000 lbs.) and from mmcf to MMBtu (1 mmcf/1050 MMBtu).
- ~~_____~~ X is the Hourly Metered Total Net Generation, MWh.
- ~~_____~~ Coefficients A, B, C, and D are the coefficients of the hourly heat rate curve given in Table C1-16 for each Unit.

| Table C1-16 | | | |
|---------------------|---|---|---|
| Description of Unit | A | B | C |
| | | | |

~~Pollutant Emissions Amount For Natural Gas is the applicable pollutant from SCAQMD General Instruction Book (for the latest year), Annual Emissions Reporting Program, Appendix A—Common Emission Factors For Combustion Equipment, Table 1—Common Emission Factors For Combustion Equipment for Forms B1 and B1U.~~

~~c. – f. _____ CAISO Hourly Organic Gases Emissions Cost, CAISO Hourly Sulfur Oxides Emissions Cost, CAISO Hourly Particulate Matter Emissions Cost, and CAISO Hourly Carbon Monoxide Emissions Cost~~

~~The CAISO Hourly Organic Gases (OG) Emissions Cost, CAISO Hourly Sulfur Oxides (SOx) Emissions Cost, CAISO Hourly Particulate Matter (PM) Emissions Cost, and CAISO Hourly Carbon Monoxide (CO) Emissions Cost are each calculated in accordance with Equation C1-17.~~

~~Equation C1-17~~

$$\begin{matrix} \text{CAISO Hourly} & = & (4.76 \cdot 10^{-7}) & \text{CAISO Unit Hourly} & \text{Associated} & \text{Associated} \\ \text{Applicable} & & & \text{Cap Heat Input} & \text{Emissions Factor} & \text{Emissions Fee} \\ \text{Emissions Cost} & & & \text{(MMBtu/hr)} & \text{(lbs/mmcf)} & \text{($/ton)} \\ \text{($/hr)} & & & & & \end{matrix}$$

Where:

- ~~_____~~ CAISO Hourly Applicable Emissions Cost is the CAISO Hourly OG Emissions Cost, CAISO Hourly SOx Emissions Cost, CAISO Hourly PM Emissions Cost, or CAISO Hourly CO Emissions Cost.
- ~~_____~~ $(4.76 \cdot 10^{-7})$ is the conversion factor from lbs. to tons (1 ton/2000 lbs.) and from mmcf to MMBtu (1 mmcf/1050 MMBtu).
- ~~_____~~ Associated Emissions Factor is the associated OG Emissions Factor, SOx Emissions Factor, PM Emissions Factor or CO Emissions Factor from Table 1 from General Instruction Book for the SCAQMD (for the latest year) Annual Emissions Reporting Program.
- ~~_____~~ Associated Emissions Fee is the associated OG Emissions Fee, SOx Emissions Fee, PM Emissions Fee, or CO Emissions Fee from Table III of SCAQMD Rule 301(e), and is dependent upon the Cumulative Tons of Pollutant pursuant to Equation C1-15.

~~g. _____ CAISO Hourly Sulfur Dioxides Trading Credit Costs~~

Beginning in the year 2000, certain Units will be subject to Title IV of the Federal Clean Air Act for providing SO₂ Allowances to cover related trading costs. Prior to 2000, the CAISO Hourly Sulfur Dioxides Trading Credit Cost will be zero. The Owner may make a filing under Section 205 of the Federal Power Act limited to recovering applicable CAISO Hourly Sulfur Dioxides Trading Credit Costs when such costs are incurred.

Part 2 for Ventura County Air Pollution Control District

Beginning in the year 2000, certain Units will be subject to Title IV of the Federal Clean Air Act for providing SO₂ Allowances to cover related trading costs. Prior to 2000, the CAISO Hourly Sulfur Dioxides Trading Credit Cost will be zero. The Owner may make a filing under Section 205 of the Federal Power Act limited to recovering applicable CAISO Hourly Sulfur Dioxides Trading Credit Costs when such costs are incurred.

E. CAISO Monthly Variable O&M Cost

The CAISO Monthly Variable O&M Cost for each Unit shall be the product of the Unit's Billable MWh for the Billing Month and the Unit's Variable O&M Rate. Variable O&M Rate for each Unit shall be:

| Table C1-18 | |
|-------------|----------------------------|
| Unit | Variable O&M Rate (\$/MWh) |
| | |

F. CAISO Scheduling Coordinator Charge

The CAISO Scheduling Coordinator Charge for each Unit shall be the product of \$0.31 and the Unit's Billable MWh for the Billing Month.

F. CAISO ACA Charge

The CAISO ACA Charge is the product of the Unit's Billable MWh for the Billing Month and the applicable annual charge for short-term sales under 18 CFR Section 382.201 of the FERC Regulations.

SCHEDULE C

**Variable Cost Payment for All Conditions
Part 2 for Geothermal Units**

For each Unit each Month, the Variable Cost Payment for Billable MWh from the Unit pursuant to Nonmarket Transactions during that Month shall be the amount calculated in accordance with the following formula:

$$\text{Variable Cost Payment} = \begin{matrix} \text{A. CAISO Monthly Billed Fuel Cost} & + \\ \text{B. CAISO Monthly Variable O\&M Cost} & + \\ \text{C. CAISO Scheduling Coordinator Charge} & \\ \text{D. CAISO ACA Charge} & \end{matrix}$$

Each component of the Variable Cost Payment for geothermal Units is calculated as described below:

A. CAISO Monthly Billed Fuel Cost [for Geysers Main only]

The CAISO Monthly Billed Fuel Cost is given by Equation C2-1.

Equation C2-1

$$\text{CAISO Monthly Billed Fuel Cost} = \text{Billable MWh} \times \text{Steam Price (\$/MWh)}$$

Where:

- ~~Steam Price is \$16.34/MWh.~~
- ~~For purposes of Equation C2-1, Billable MWh is all Billable MWh Delivered after cumulative Hourly Metered Total Net Generation during the Contract Year from all Units exceeds the Minimum Annual Generation given by Equation C2-2.~~

Equation C2-2

$$\text{Minimum Annual Generation} = (\text{Annual Average Field Capacity} \times 8760 \text{ hours} \times 0.4) - (A+B+C)$$

Where:

- ~~Annual Average Field Capacity is the arithmetic average of the two Field Capacities in MW for each Contract Year, determined as described below.~~

~~Field Capacity shall be determined for each six-month period from July 1 through December 31 of the preceding calendar year and January 1 through June 30 of the Contract Year. Field Capacity shall be the average of the five highest amounts of net generation (in MWh) simultaneously achieved by all Units during eight-hour periods within the six-month period. The capacity simultaneously achieved by all Units during each eight-hour period shall be the sum of Hourly Metered Total Net Generation for all Units during such eight-hour period, divided by eight hours. Such eight-hour periods shall not overlap or be counted more than once but may be consecutive.~~

~~Within 30 days after the end of each six-month period, Owner shall provide CAISO and the Responsible Utility with its determination of Field Capacity, including all information necessary to validate that determination.~~

- ~~A is the amount of Energy that cannot be produced (as defined below) due to the curtailment of a Unit during a test of the Facility, a Unit or the steam field agreed to by CAISO and Owner.~~
- ~~B is the amount of Energy that cannot be produced (as defined below) due to the retirement of a Unit or due to a Unit's Availability remaining at zero after a period of ten Months during which the Unit's Availability has been zero.~~
- ~~C is the amount of Energy that cannot be produced (as defined below) because a Force Majeure Event reduces a Unit's Availability to zero for at least thirty (30) days or because a Force Majeure Event reduces a Unit's Availability for at least one hundred eighty (180) days to a level below the Unit Availability Limit immediately prior to the Force Majeure Event.~~
- ~~The amount of Energy that cannot be produced is the sum, for each Settlement Period during which the condition applicable to A, B or C above exists, of the difference between the Unit Availability Limit immediately prior to the condition and the Unit Availability Limit during the condition.~~

A. CAISO Monthly Billed Fuel Cost [for Geysers Units 13 & 16 only]

The CAISO Monthly Billed Fuel Cost is given by Equation C2-1.

Equation C2-1

$$\text{CAISO Monthly Billed Fuel Cost} = \text{Billable MWh} \times \text{Steam Price (\$/MWh)}$$

Where:

- Steam Price is \$11.25/MWh, which includes the cost of steam condensate re-injection.

B. CAISO Monthly Variable O&M Cost

The CAISO Monthly Variable O&M Cost for each Unit is given by Equation C2-3 and is the product of the sum of Billable MWh for the Billing Month and the Unit's Variable O&M Rate. Variable O&M Rate for each Unit is shown in Table C2-1:

$$\text{Equation C2-3} \\ \text{CAISO Monthly Variable O\&M Cost} = \text{Monthly sum of Billable MWh} \times \text{Variable O\&M Rate}$$

| Table C2-1 | |
|------------|----------------------------|
| Unit | Variable O&M Rate (\$/MWh) |
| | |

C. CAISO Scheduling Coordinator Charge

The CAISO Scheduling Coordinator Charge for each Unit shall be the product of \$0.31 and the Unit's of Billable MWh for the Billing Month.

D. CAISO ACA Charge

The CAISO ACA Charge is the product of the Unit's Billable MWh for the Billing Month and the applicable annual charge for short term sales under 18 CFR Section 382.201 of the FERC Regulations, to the extent payable by Owner for Billable MWh.

SCHEDULE C

**Variable Cost Payment for All Conditions
Part 3 for Conventional Hydro Units**

For each month and each Unit, the Variable Cost Payment for Billable MWh from the Unit pursuant to Nonmarket Transactions during that Month shall be the amount calculated in accordance with the following formula:

| | | |
|-------------------------|----|---|
| Variable Cost Payment = | A. | CAISO Scheduling Coordinator Charge + CAISO ACA Charge |
|-------------------------|----|---|

A. CAISO Scheduling Coordinator Charge

The CAISO Scheduling Coordinator Charge for each Unit shall be the product of \$0.31 and the Unit's Billable MWh for the Billing Month.

B. CAISO ACA Charge

The CAISO ACA Charge is the product of the Unit's Billable MWh for the Billing Month and the applicable annual charge for short term sales under 18 CFR Section 382.201 of the FERC Regulations.

SCHEDULE C

Variable Cost Payment for All Conditions

Part 4 for Pumped Storage Hydro Units

For each month and each Unit, the Variable Cost Payment for Billable MWh from the Unit pursuant to Nonmarket Transactions during that Month shall be the amount calculated in accordance with the following formula:

| | | |
|-------------------------|----|----------------------------------|
| Variable Cost Payment = | A. | CAISO Monthly Billed Fuel Cost + |
| | B. | CAISO Scheduling Coordinator |
| | C. | Charge + CAISO ACA Charge |

A. CAISO Monthly Billed Fuel Cost

The CAISO Monthly Billed Fuel Cost is given by Equation C4-1:

Equation C4-1

CAISO Monthly Billed Fuel Cost = Year to Date CAISO Fuel Cost – Sum of Previous Months’ CAISO Monthly Billed Fuel Cost in the Contract Year

Where:

- Year to Date CAISO Fuel Cost is given by Equation C4-2.
- Sum of Previous Months’ CAISO Monthly Billed Fuel Cost in the Contract Year shall be the sum of the CAISO Monthly billed Fuel Cost for each Month from January 1 of the Contract Year through the end of the Month in the Contract Year before the Billing Month.

Equation C4-2

Year to Date CAISO Fuel Cost = (YTD Pumping Cost/YTD Energy Produced) Variable O&M Rate

Where:

- YTD Pumping Cost = Total cost of Energy purchased by Owner for pumping, including transmission charges, from January 1 of the Contract Year through the end of the Billing Month.
- YTD Energy Produced = Total Energy produced by the Facility for Market and Nonmarket Transactions from January 1 of the Contract Year through the end of the Billing Month.
- YTD Billable MWh = Total Billable MWh from January 1 of the Contract Year through the end of the Billing Month.

B. CAISO Scheduling Coordinator Charge

The CAISO Scheduling Coordinator Charge for each Unit shall be the product of \$0.31 and the Unit’s Billable MWh for the Billing Month.

C. CAISO ACA Charge

The CAISO ACA Charge is the product of the Unit’s Billable MWh for the Billing Month and the applicable annual charge for short-term sales under 18 CFR Section 382.201 of the FERC Regulations.

Schedule C

**Variable Cost Payment for All Conditions
Part 5 for Biomass Generation Units**

For each month and each Unit, the Variable Cost Payment for Billable MWh from the Unit pursuant to

Nonmarket Transaction during that Month shall be the amount calculated in accordance with the following formula:

| | | |
|-------------------------|----|----------------------------------|
| Variable Cost Payment = | A. | CAISO Monthly Billed Fuel Cost + |
| | B. | CAISO Variable O&M Cost + CAISO |
| | C. | Scheduling Coordinator Charge |

A. CAISO Monthly Billed Fuel Cost

The CAISO Monthly Billed Fuel Cost is given by Equation C5-1:

Equation C4-1

$$\text{CAISO Monthly Billed Fuel Cost} = \text{Billable MWh} * \text{Monthly Average Fuel Cost (\$/MWh)}$$

Where:

- Monthly Average Fuel Cost (\$ / MWh) = Negotiated Cost Based Amount.

B. CAISO Monthly Variable O&M Cost

The CAISO ACA Charge is the product of the Unit's Billable MWh for the Billing Month and the applicable annual charge for short term sales under 18 CFR Section 382.201 of the FERC Regulations.

Equation C5-2

$$\text{CAISO Monthly Variable O\&M Cost} = \text{Monthly Sum of billable MWh} * \text{Variable O\&M Rate}$$

| | |
|------------|--------------------------------|
| Table C5-1 | |
| Unit | Variable O&M Rate (\\$/MWh) |
| | |

C. CAISO Scheduling Coordinator Charge

The CAISO Scheduling Coordinator Charge for each Unit shall be the product of \$0.31 and the Unit's Billable MWh for the Billing Month.

Appendix D

Not Used Part 1

Start-up Payment for Condition 1 Units

1. Prepaid Start-up Charge

~~Prepaid Start-up Charge for each Unit operating under Condition 1 for each Contract Year will be calculated as the Prepaid Start-up Cost times the number of Prepaid Start-ups. The number of Prepaid Start-up equals the Maximum Annual Start-ups per Unit. The Prepaid Start-up Cost will be calculated in accordance with Equation D-1 for Start-up Cost with the following assumptions:~~

- ~~a. Hourly Fuel Price: For the initial Contract Year the Hourly Fuel Price shall be the simple average of the applicable index prices from Table C1-8 of Schedule C for the period beginning on the later of the initial publication date of such indices or January 1, 1998 and ending December 31, 1998, plus the applicable Transportation Rate under Equation C1-8 as in effect on April 1, 1999. For each subsequent Contract Year, the Hourly Fuel Price shall be agreed upon by CAISO and Owner; if there is no agreement, the Hourly Fuel Price shall be the simple average of the Hourly Fuel Prices for the twelve months ending the prior June 30 as calculated in accordance with Equation C1-8 of Schedule C;~~
- ~~b. Energy Price shall be based on the [insert Applicable UDC Tariff rate], including applicable demand charges, provided that the Applicable UDC Tariff rate shall only be the energy charge rate at those Facilities where Units have the capability to use Energy from other units at the same Facility to effect Start-ups or where generation from other units is otherwise permitted under the CAISO Tariff to be netted against auxiliary power needed to effect Start-up of the Unit. For the initial Contract Year, the Energy Price shall be calculated as the total auxiliary power (including Energy for Start-ups) costs charged to the Facility by its supplier of end-use Energy for the six-month period ending December 31, 1998 divided by the auxiliary power (including Energy for Start-ups) consumed at the Facility for that same time period. For Facilities that have not been charged for auxiliary power for the six-month period ending December 31, 1998, the Energy Price for the Initial Contract Year shall be the simple average of the prices for Energy for varying times of day shown in the Applicable UDC Tariff. For each subsequent Contract Year, the Energy Price shall be calculated as the total auxiliary power (including Energy for Start-ups) costs charged to the Facility by its supplier of end-use Energy for the twelve months ending the prior June 30 divided by the auxiliary power (including Energy for Start-ups) consumed at the Facility for that same twelve-month period;~~
- ~~e) All Start-ups are assumed to be from maximum time off line as shown by value XMax in Table D-1, and~~
- ~~d) Other Start-up Costs shall be zero (\$0) for non-hydroelectric Units; for hydroelectric Units, other Start-up costs shall be the cost shown in Table D-2 for Normal Work Hours. The Prepaid Start-up Cost and Prepaid Start-up Charge for the current Contract Year are set forth in Table D-0:~~

| Table D-0 | | | |
|-----------|-----------------------------|-----------------------|-------------------------|
| Unit | Number of Prepaid Start-ups | Prepaid Start-up Cost | Prepaid Start-up Charge |
| Unit | | | |

2. Start-up Cost

The cost for a Start-up shall be calculated in accordance with Equation D-1:

Equation D-1

$$\text{Start-up Cost (\$)} = \text{Start-up Fuel Cost (\$)} + \text{Start-up Power Cost (\$)} + \text{Other Start-up Costs (\$)} + \text{Shutdown Power Cost (\$)}$$

Each component of the Start-up Cost in Equation D-1 is set forth below.

a. Start-up Fuel Costs

The Start-up Fuel Cost shall be calculated in accordance with Equation D-1a:

Equation D-1a

$$\text{Start-up Fuel Cost (\$)} = \left[\frac{A}{(\text{MMBtu/hr})} \times x \right] (\text{hrs}) + B \text{ (MMBtu)} \times \text{Hourly Fuel Price (\$/MMBtu)}$$

Where:

- "x" equals the number of hours since the Unit ceased operation and cannot exceed "x_{Max}".
- The Hourly Fuel Price is calculated pursuant to Schedule C Equation C1-8 for the hour in which the Start-up began.
- The values A, B and x_{Max} for each Unit are given in Table D-1 below.

b. Start-up Power Costs

The Start-up Power Cost shall be calculated in accordance with Equation D-1b:

Equation D-1b

$$\text{Start-up Power Cost (\$)} = \left(\frac{C}{(\text{hrs})} \times x \right) (\text{MWh/hr}) + D \text{ (MWh)} \times \text{Energy Price (\$/MWh)}$$

Where:

- "x" is equal to the hours since the Unit ceased operation and cannot exceed "x_{Max}".
- The Energy Price shall be equal to the total auxiliary power (including Energy for Start-ups) costs charged to the Facility by its supplier of end-use Energy for the billing cycle in which the Start-up was initiated divided by the total auxiliary power (including Energy for Start-ups) consumed at the Facility during such billing cycle.
- The values C, D and x_{Max} are given in Table D-1 below.

c. Shutdown Power Costs

The Shutdown Power Cost shall be calculated in accordance with Equation D-1c:

Equation D-1c

$$\text{Shutdown Power Cost (\$)} = \text{Shutdown Power Requirement (MWh)} \times \text{Energy Price (\$/MWh)}$$

The Energy Price shall be equal to the total auxiliary power (including Energy for Shutdowns) costs charged to the Facility by its supplier of end-use Energy for the billing cycle in which the Shutdown was initiated divided by the total auxiliary power (including Energy for Shutdowns) consumed at the Facility during such billing cycle. The Shutdown Power Requirement is given in Table D-1 below.

d. Other Start-up Costs for Hydroelectric Only

Other Start-up Costs are the cost of labor to start hydroelectric Units that require an operator to manually parallel, and reflect the labor costs to travel to the site. If the Start-up of a hydroelectric Unit occurs outside normal work hours, the Start-up Costs include the minimum work hours and labor rates as set by the applicable collective bargaining agreement(s).

The Other Start-up Costs shall be calculated in accordance with Equation D1-d. The values for E are provided in Table D-2 for normal work-hour and outside-of normal work-hour situations.

Equation D-1d

$$\text{Other Start-up Costs (\$)} = E$$

Once a Unit has been given a Dispatch Notice to Start-up, other Start-up Costs are incurred.

| Table D-1, Start-Up Costs | | | | | | |
|----------------------------------|------------------|------------|----------------|----------|-------|----------------------------|
| | X _{Max} | A | B ¹ | C | D | Shutdown Power Requirement |
| Unit | (Hrs) | (mmBtu)/hr | (mmBtu) | (MWh)/hr | (MWh) | (MWh) |
| | | | | | | |

[Footnote 1: Includes fuel consumed from the time Unit reaches Synchronization to the time Unit reaches Minimum Load.]

| Table D-2, Other Start-Up Costs – Hydroelectric Units | | |
|--|----------------------------|------------------------------------|
| Unit | E (Normal Work Hours) (\$) | E (Outside Normal Work Hours) (\$) |
| | | |
| | | |

3. Monthly Start-up Adjustment

For each Start-up successfully completed in compliance with a Dispatch Notice during the Billing Month, and each Start-up initiated in compliance with a Dispatch Notice but not successfully completed because it is canceled or rescinded by CAISO, until the total Counted Start-ups for the Contract Year equals the number of Prepaid Start-ups for the Contract Year, the Monthly Start-up Adjustment, which shall be a credit or payment, is the sum of Prepaid Start-up Adjustments, and

Prepaid Start-up Adjustments for Canceled Start-ups calculated in accordance with Equations D-2 and D-3:

Equation D2

Prepaid Start-up Adjustment = Prepaid Start-up Cost calculated in accordance with Section 1 minus the actual Start-up Cost calculated in accordance with Equation D-1.

Equation D-3

Prepaid Start-up Adjustment for Canceled Start-up = Number of hours committed to the Start-up applicable Start-up Lead Time (hrs) as shown in Schedule A, Section 6 Prepaid Start-up Adjustment calculated in accordance with Equation D-2

Where:

- The “number of hours committed to the Start-up” is the lesser of (a) time elapsed between the initiation of the Start-up and the cancellation and (b) the applicable Start-up Lead Time.

SCHEDULE D

Part 2

Start-up Payment for Condition 2 Units

1. Start-up Payment

The Start-up Payment for each Start-up successfully completed for each Unit operating under Condition 2 equals the Start-up Cost calculated using Equation D-1.

2. Payment for Canceled Start-up

If Start-up is initiated under a Dispatch Notice but is not successfully completed because it is canceled or rescinded by the CAISO, the Start-up Payment is calculated in accordance with Equation D-4:

Equation D-4

Start-up Payment for Canceled Start-up (\$) = Number of hours committed to the Start-up applicable Start-up Lead Time (hrs) as shown in Schedule A, Section 6 Start-up Cost calculated in accordance with Equation D-1 (\$)

The “number of hours committed to the Start-up” is the lesser of (a) time elapsed between the initiation of the Start-up and the cancellation or (b) the applicable Start-up Lead Time.

Schedule E
Not Used Ancillary Services
Part 1 for Condition 1

The CAISO may call upon the Unit to provide the following Ancillary Services as defined in the CAISO Tariff:

Regulation
Spinning Reserve
Nonspinning Reserve
Replacement Reserve
Voltage Support (including synchronous condenser operation)
Black Start

If the Unit is otherwise generating, the Owner shall be required to operate the Unit within the Power Factor range of the Unit specified in Schedule A to provide Ancillary Services without additional compensation.

Certain Units (hydroelectric and synchronous condensers) can provide Ancillary Services without generating Energy. Under this Condition, Owner will be compensated for Motoring Charges if the Unit is providing Ancillary Services while synchronized without generating Energy.

Motoring Charge

When Units are operated as synchronous condensers (i.e., motored using electric power) to provide Ancillary Services, if applicable, the payment for that service is given by the following formula:

$$\text{Motoring Charge} = \frac{\text{(Power consumption rate (MWh/hr))}}{\text{(hours operated)}} \times \text{(Energy Price)}$$

Where the Power consumption rate is given by the following table:

| Unit | Power consumption rate (MWh/hour) |
|------|-----------------------------------|
|------|-----------------------------------|

The Energy Price shall be equal to the total power costs charged to the Facility by its supplier of end use Energy under the Applicable UDC Tariff for the billing cycle in which the Motoring Charge was incurred divided by the total power consumed at the Facility under such tariff during such billing cycle.

Pre-empted Dispatch Payment

If the CAISO issues a Dispatch Notice to:

- (i) decrease a Unit's scheduled output of Energy in a Market Transaction to provide Ancillary Services;
- (ii) decrease a Unit's scheduled provision of Ancillary Services capacity in a Market Transaction in order to provide Regulation, Spinning Reserve, Nonspinning Reserve, or Replacement Reserve pursuant to a Dispatch Notice;
- (iii) decrease a Unit's scheduled provision of Ancillary Service capacity in a Market Transaction in order to provide Energy pursuant to a Dispatch Notice, the CAISO shall pay the appropriate Pre-empted Dispatch Payment described below. The Pre-empted Dispatch Payments are intended to make an Owner whole with respect to the original Market Transaction.

A. For Pre-empted Energy Market Transactions:

~~Pre-empted Dispatch Payment = Imbalance Energy Charge – Cost Savings~~

- ~~Imbalance Energy Charge = $(X_o - X_n) \times$ Penalty Price~~
- ~~Penalty Price = Unrestricted Imbalance Energy Price + additional penalties (per MWh) imposed by the CAISO for failure to comply with Market Schedules due to compliance with Dispatch Notice.~~
- ~~Cost Savings = Fuel Cost Savings + Emissions Savings + Other Savings~~

Where:

- ~~X_o = Original Total Schedule in Market and Nonmarket Transactions;~~
- ~~X_n = New Total Schedule in Market and Nonmarket Transactions;~~

For fossil fuel Units, the Fuel Cost Savings is calculated as follows:

- ~~Fuel Cost Savings = Fuel Savings x Hourly Fuel Price~~
 - ~~Fuel Savings = $((AX_o^3 + BX_o^2 + CX_o + D) - (AX_n^3 + BX_n^2 + CX_n + D)) \div E$~~
- or
- ~~Fuel Savings = $[(A (B + CX_o + De^{FX_o})) - (A * (B + CX_n + De^{FX_n}))] \div E$~~
 - ~~A, B, C, D, E and F are the coefficients from Table C1-7a or C1-7b, as applicable;~~
 - ~~Hourly Fuel Price is calculated in Equation C1-8.~~

For geothermal Units, the Fuel Cost Savings is calculated by the following formula:

$$\text{Fuel Cost Savings} = (X_o - X_n) \text{ Hourly Fuel Price}$$

Where:

- ~~Hourly Fuel Price is the Steam Price identified in Equation C2-1 in Schedule C. However, for purposes of this Pre-empted Dispatch Payment calculation, the value for the Steam Price will be set to zero for Geysers Main Units until the cumulative Hourly Metered Total Net Generation for the Contract Year from all Units exceeds the Minimum Annual Generation given in Equation C2-2.~~

For pumped storage hydroelectric Units, the Fuel Cost Savings is calculated by the following formula:

$$\text{Fuel Cost Savings} = (X_o - X_n) \text{ Hourly Fuel Price}$$

Where:

- ~~Hourly Fuel Price is YTD Pumping Cost / YTD Energy Produced; and YTD Pumping Cost and YTD Energy Produced are as defined in Equation C4-2.~~

~~For conventional hydroelectric Units, the Fuel Cost Savings is zero.~~

~~Other Savings = $((X_o - X_n) \times (\text{Variable O\&M Rate} + \text{applicable annual charge for short-term sales under 18 CFR 382.201 of the FERC Regulations}))$~~

~~Emissions Savings = RECLAIM Savings + NOx Emissions Fee Savings + Organic Gases Fee Savings + Sulfur Oxides Fee Savings + Particulate Matter Savings + Carbon Monoxide Fee Savings~~

~~RECLAIM Savings = $((AX_o^2 + BX_o + C) - (AX_n^2 + BX_n + C)) \times \text{RECLAIM NOx Trading Credit Rate}$~~

Where:

- ~~• A, B and C are the coefficients from Table C1-13;~~
- ~~• X_o = Original Total Schedule in Market and Nonmarket Transactions;~~
- ~~• X_n = New Total Schedule in Market and Nonmarket Transactions;~~

~~NOx Emissions Fee Savings = $\frac{((AX_o^2 + BX_o + C) - (AX_n^2 + BX_n + C)) \times \text{NOx Emissions Fee}}{2000}$~~

Where:

- ~~• A, B and C are the coefficients from Table C1-13;~~
- ~~• X_o = Original Total Schedule in Market and Nonmarket Transactions;~~
- ~~• X_n = New Total Schedule in Market and Nonmarket Transactions;~~

~~Organic Gases Fee Savings =~~

~~$4.76 \times 10^{-7} \times \text{Gas Fuel Savings} \times \text{Associated Emission Factor for Organic Gases} \times \text{Associated Emissions Fee for Organic Gases}$~~

~~Sulfur Oxides Fee Savings =~~

~~$4.76 \times 10^{-7} \times \text{Gas Fuel Savings} \times \text{Associated Emission Factor for Sulfur Oxides} \times \text{Associated Emissions Fee for Sulfur Oxides}$~~

~~Particulate Matter Oxides Fee Savings =~~

~~$4.76 \times 10^{-7} \times \text{Gas Fuel Savings} \times \text{Associated Emission Factor for Particulate Matter} \times \text{Associated Emission Fee for Particulate Matter}$~~

~~Carbon Monoxide Fee Savings =~~

~~$4.76 \times 10^{-7} \times \text{Gas Fuel Savings} \times \text{Associated Emission Factor for Carbon Monoxide} \times \text{Associated Emission Fee for Carbon Monoxide}$~~

~~All Emissions Fees and Emission Factors are determined in accordance with Schedule G.~~

~~[If applicable, insert emission cost savings formula for fuel other than natural gas.]~~

~~The Owner will be entitled to retain all payments received from the Owner's Scheduling~~

Coordinator for the Unit's scheduled output.

B. ~~For Pre-empted Ancillary Services Market Transactions:~~

~~CAISO shall pay Owner the product of (i) the difference between the MW of the Ancillary Service Owner had scheduled to provide in a Market Transaction and the MW of Ancillary Services Owner is able to provide after complying with the Dispatch Notice and (ii) the Market Clearing Price the Owner pays to buy back its commitment to deliver the preempted MW of Ancillary Services (if the Owner actually incurs such a cost), or the penalty the Owner pays for failure to deliver the preempted MW of Ancillary Services (if the Owner actually incurs such a cost) for the applicable Ancillary Service, market, and hour. In addition, if compliance with the Dispatch Notice causes reduction of a market regulation transaction, the CAISO shall also pay the Owner the product of the Regulation Energy Payment Adjustment (REPA) amount, if applicable, and the MW of Regulation which Owner had scheduled but is unable to provide because of its compliance with the Dispatch Notice.~~

Schedule E

**Ancillary Services
Part 2 for Condition 2**

~~The CAISO may call upon the Unit to provide the following Ancillary Services as defined in the CAISO Tariff:~~

- ~~Regulation~~
- ~~Spinning Reserve~~
- ~~Nonspinning Reserve~~
- ~~Replacement Reserve~~
- ~~Voltage Support (including synchronous condenser operation)~~
- ~~Black Start~~

~~The Owner shall be required to operate the Unit within the Power Factor range of the Unit specified in Schedule A to provide Voltage Support without additional compensation. The Owner shall receive no payment for any Ancillary Services Capacity provided. However, operation of a Unit in synchronous condenser mode will be compensated as shown below.~~

Motoring Charge

~~When Units are operated as synchronous condensers (i.e., motored using electric power) to provide Ancillary Services, if applicable, the payment for that service is given by the following formula:~~

$$\text{Motoring Charge} = (\text{Power consumption rate (MWh/hr)}) \times (\text{hours operated}) \times (\text{Energy Price})$$

~~Where the Power consumption rate is given by the following table:~~

| Unit | Power consumption rate (MWh/hour) |
|-----------------|--|
| | |

~~The Energy Price shall be equal to the total power costs charged to the Facility by its supplier of end-use Energy under the Applicable UDC Tariff for the billing cycle in which the Motoring Charge was incurred divided by the total power consumed at the Facility under such tariff during such billing cycle.~~

**Schedule E
Ancillary Services
Part 3 for Black Start Services**

~~For those Units with Black Start capability, the cost of maintaining such capability is included in this Agreement and no additional costs shall be charged to the CAISO for maintaining such capability. The CAISO will pay for Black Start service, including for a Black Start Test Dispatch Notice, at the rates and prices in this Agreement for Start-Ups and Delivery of Energy in connection with the Black Start service. Owner shall maintain the Black Start capability of the Unit and the Facility and provide Black Starts in accordance with the CAISO Ancillary Services Requirements Protocol and the CAISO Dispatch Protocol, which shall be deemed incorporated by reference into this Agreement.~~

~~When the CAISO first gives written notice to the Owner that it has obtained adequate Black Start service through an auction or a separate agreement with Owner or other Generators and Black Start service under this Agreement is no longer required, the CAISO shall not be entitled to call upon this Unit to provide Black Start service. Once the CAISO has given this notice, the Owner may remove Black Start service from this Agreement by filing unilaterally a change in rate schedule with FERC. Such filing shall not be required to include any reduction in rate or revenue solely because Black Start service is removed. The CAISO shall not oppose the absence of any rate or revenue reduction that results solely from removing such service.~~

Schedule F Annual Revenue Requirements of Must-Run Units

Determination of Annual Revenue Requirements of Must-Run Generating Units

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Exhibit A - Initial Variable O&M Rates

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Exhibit C - 1998 Cost Information

Article I. Purpose and General Procedures

Part A. Determination of Rates and Charges

This Schedule F establishes the procedures and methodology for determining the Annual Fixed Revenue Requirements (in dollars) and Variable O&M Rates (in \$/MWh) for facilities designated for must-run service for purposes of calculating certain charges for such service under the RMR Contract.

The Annual Fixed Revenue Requirements and the Variable O&M Rate for each designated must-run generating facility shall be determined annually. The Annual Fixed Revenue Requirements and the Variable O&M Rate for each such facility that shall be used for calculating charges to the CAISO during each calendar year shall be determined by application of the Formula set forth in Article II hereof to the Owner's costs incurred during the twelve-month period ended on June 30 of the prior calendar year. Each twelve-month period ending on June 30 of each year is hereinafter referred to as the "Cost Year" relating to the rates and charges that are effective during the succeeding calendar year.

Part B. Informational Filings

In connection with the determination of rates and charges for each calendar year, reflecting costs incurred during the June 30 Cost Year as described in the foregoing Part A of this Article I, the Owner shall provide to the CAISO an Information Package detailing and supporting all calculations involved in such determination. A single Information Package may contain all such informational materials pertaining to all of the Owner's designated must-run facilities. On or before October 1, 2001, the Owner shall provide to the CAISO the Information Package relating to the rates and charges to become effective on January 1, 2002. Thereafter, on November 1 of each year, the Owner shall provide to the CAISO the Information Package relating to the rates and charges to be effective during the calendar year beginning on the following January 1.

Each such Information Package shall be in a clear and readable format and shall contain:

1. detailed workpapers showing the derivation of costs under the Formula for the relevant Cost Year along with supporting schedules showing the data used in applying the formula, presented in a format consistent with the presentation of information in the FERC Form No. 1;
2. a clear identification of the depreciation rates reflected in claimed costs for the Cost Year and the rate of return and every other stated item (i.e., any item which appears as a numerical value in the Formula and which only may be changed by a filing with the FERC);
3. a comparison of the major components of the resulting revenue requirements for the relevant Cost Year with the corresponding components of the revenue requirements that result from the application of the Formula using costs from the Owner's FERC Form No. 1 relating to the preceding calendar year;

4. such additional documentation as to specific items of costs required by the Formula. The Owner shall provide each Information Package to the CAISO in printed form and a suitable electronic format. The CAISO shall post the Information Package on its website. A suitable electronic format shall be any format that the FERC permits for electronic filings.

Coincident with providing each such Information Package to the CAISO, the Owner shall also submit the Information Package to the FERC in an informational filing so as to allow for review of the related rates and charges by the FERC staff and affected parties. As to the informational filing relating to rates and charges to be effective during calendar year 2002, (i) discovery requests by the FERC staff and affected parties shall be made within 45 days of the filing, with responses by the Owner due within 60 days of the filing, and (ii) protests, if any, by affected parties shall be filed with the FERC within 75 days of the filing. As to each subsequent informational filing, (i) discovery requests by the FERC staff and affected parties shall be made within 20 days of the filing, with responses by the Owner due within 35 days of the filing, and (ii) protests, if any, by affected parties shall be filed with the FERC within 45 days of the filing. In the event that the need arises during the discovery process for the nondisclosure or confidentiality of information, the Owner and affected parties, other than FERC Staff and state regulatory agencies, shall utilize the procedures contained in Schedules N-1 and N-2 of the RMR Contract. If the Owner seeks the confidentiality or nondisclosure of information provided to FERC or state regulatory agencies, it shall follow the applicable rules, regulations and statutory provisions of those agencies.

Protests to the Information Package challenging arithmetic calculations or conformity to the Rate Formula, not resolved by summary disposition of the FERC, shall be resolved by the use of the Alternative Dispute Resolution procedures in Schedule K of the RMR Contract. In such a proceeding, the Owner will bear the burden of proof as in a proceeding under Section 205 of the Federal Power Act (FPA). If it is found that an erroneous calculation or non-conforming formula element has been used, refunds shall be ordered. The amount of refunds shall restore the parties to the positions they would have occupied had the erroneous calculations or non-conforming formula elements not been used, with interest calculated pursuant to Section 35.19a of the Commission's regulations, 18 C.F.R. Section 35.19a.

If a matter is set for hearing, additional discovery shall be permitted in accordance with the Commission's Rules of Practice and Procedure. Under hearings established pursuant to this provision, refund rights will be as in a proceeding under Section 205 of the FPA. Any refunds due as the result of a final Commission order will be credited or paid to the CAISO with interest in accordance with 18 C.F.R. 35.19a.

In addition to the discovery provided above, affected parties shall have the ability to audit the Owner's books and records as provided in Section 12.2 of the RMR Contract. To the extent that an audit discloses that the formula was not correctly applied for a particular year, the affected prior billings shall be corrected, and appropriate refunds or credits shall be provided to the CAISO, with interest determined in accordance with 18 C.F.R. 35.19a.

Notwithstanding the above procedures, all parties retain full rights to make filings at any time under Sections 205 and 206 of the FPA, as appropriate.

Article II. Formula for Determination of Annual Revenue Requirements

Part A. Purpose and Overview

The purpose of this Formula For Determination of Annual Revenue Requirements ("Formula") is to specify the method for determining the Annual Revenue Requirements, and certain components thereof, of particular must-run generating units for each Cost Year.

Part B of this Formula contains the specifications for the components of costs that may be included in the Annual Revenue Requirements of individual designated must-run generating units (*i.e.*, for each "Subject Resource").

Part C of this Formula sets forth (i) general instructions for the use and application of the Formula, and (ii)

certain general definitions of terms used herein.

Part B. Determination of Annual Revenue Requirements

Section 1. Annual Fixed Revenue Requirements and Variable O&M Rate

(A) Annual Fixed Revenue Requirements

The "Annual Fixed Revenue Requirements" for the Subject Resource is the amount determined as the following difference:

1. Total Annual Revenue Requirements, as defined below; less
2. Total Annual Variable Costs, as defined below.

(B) Variable O&M Rate

The "Variable O&M Rate" for the Subject Resource is the rate (in \$/MWh) determined as the follows:

$$\text{Variable O\&M Rate} = [\text{Annual Variable O\&M Expenses}]/[\text{Annual Net Generation}]$$

where "Annual Variable O&M Expenses" is defined hereinbelow, and "Annual Net Generation" is the net generation (in MWh) of the Subject Resource during the Cost Year.

Notwithstanding the foregoing, whenever the Annual Net Generation of the Subject Resource is zero or negative, the Variable O&M Rate shall be deemed to be zero.

(C) Total Annual Revenue Requirements

The "Total Annual Revenue Requirements" for the Subject Resource is the amount that is the sum of the following amounts:

1. Operating Expenses, determined pursuant to Section 2 below; and
2. Return and Income Tax Allowance, determined pursuant to Section 3 below.

Section 2. Operating Expenses

"Operating Expenses" for the Subject Resource is the quantity that is the sum of the following amounts:

1. Total O&M Expenses, as defined below;
2. Depreciation Expenses, as defined below;
3. Taxes Other Than Income Taxes, as defined below; and
4. Revenue Credits, as defined below.

(A) Total O&M Expenses

"Total O&M Expenses" is the amount of expenses arising from the operation and maintenance of the Subject Resource, including Production O&M Expenses, Transmission O&M Expenses, Distribution O&M Expenses, and Administrative & General Expenses, all as defined below.

- (1) **Production O&M Expenses:** Expenses incurred directly in operating and maintaining the Subject Resource:
 - (a) **Steam Production O&M:** For steam units only, amounts properly recorded in Accounts 500-515.
 - (b) **Hydro Production O&M:** For hydro units only, amounts properly recorded in Accounts 535-545.
 - (c) **Other Power Generation O&M:** For other types of units, amounts properly recorded in Accounts 546-554.
 - (d) **Other Power Supply Expenses:** Amounts properly recorded in Accounts 555-557, if any, that are reasonably assignable or allocable to the Subject Resource.
- (2) **Transmission O&M Expenses:** Expenses incurred directly in operating and maintaining the transmission facilities associated with the Subject Resource, as properly recorded in Accounts 560-573 and reasonably assignable or allocable to the Subject Resource.
- (3) **Distribution O&M Expenses:** Expenses incurred directly in operating and maintaining the distribution facilities associated with the Subject Resource, as properly recorded in Accounts 580-598 and reasonably assignable or allocable to the Subject Resource.
- (4) **Administrative and General (A&G) Expenses:** Those portions, if any, of administrative and general expenses, as properly recorded in Accounts 920-935, that are reasonably related to the operation of the Subject Resource, determined from appropriate direct assignment or reasonable allocation. Such expenses shall exclude (i) franchise fees related solely to the Owner's retail sales, (ii) retail regulatory expenses, (iii) assessments under 18 CFR Section 382.201 of the FERC Regulations, (iv) association dues, and (v) general advertising expenses.

~~Notwithstanding the foregoing, O&M Expenses hereunder shall exclude all Scheduling Coordinator Charges as charged under the CAISO Tariff, irrespective of in which Account or Accounts such charges are included.~~

(B) Depreciation Expenses

"Depreciation Expenses" are provisions for depreciation and amortization for the Subject Resource, as properly recorded in Accounts 403, 404, 405, 406, and 407, including only:

- (1) **Production Plant Depreciation:** Depreciation and amortization, if any, of investment in the Subject Resource;
- (2) **Transmission Plant Depreciation:** Depreciation and amortization, if any, of investment in the transmission facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;

- (3) **Distribution Plant Depreciation:** Depreciation and amortization, if any, of investment in the distribution facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;
- (4) **General and Intangible Plant Depreciation:** Depreciation and amortization, if any, of general and intangible plant investments that are reasonably assignable or allocable to the Subject Resource.

Notwithstanding the foregoing, costs recorded in Accounts 405, 406 and 407 shall be included hereunder only if, and to the extent that, FERC shall have permitted the inclusion of such costs for ratemaking purposes for the Owner under the RMR Contract.

(C) Taxes Other Than Income Taxes

"Taxes Other Than Income Taxes" are taxes other than income and revenue taxes, as properly recorded in Account 408.1, that are reasonably assignable and allocable to the Subject Resource, including for example:

- 1. Property and Property-Related Taxes;
- 2. Payroll and Labor-Related Taxes;
- 3. Other Taxes, if any, identifiable as reasonably assignable or allocable to the Subject Resource.

Taxes Other Than Income Taxes assignable and allocable to the Subject Resource shall not include any taxes related solely to, or arising solely from, the Owner's retail sales.

(D) Revenue Credits

"Revenue Credits" are those revenues, if any, that are (i) properly recorded in Account 451 (Miscellaneous Service Revenues), Account 453 (Sales of Water and Water Power), Account 454 (Rent From Electric Property), Account 455 (Interdepartmental Sales), and Account 456 (Other Electric Revenues), and (ii) directly related to, or reasonably allocable to, the Subject Resource. Such Revenue Credits shall be treated as negative values hereunder.

(E) Treatment of Capital Leases

The foregoing components of Operating Expenses may include expenses associated with capital leases as approved by the Commission, as set forth more fully under Article II, Part B, Section 4(A) of this Formula.

Section 3. Return and Income Tax Allowance

"Return and Income Tax Allowance" is the quantity that is the sum of:

- 1. the product of:
 - a. Allowable Pre-Tax Rate of Return, and
 - b. Net Investment,
- as both such quantities are hereinafter defined; and

2. the quantity equal to:

$$[ITC Amortization]/(1-t)$$

where:

- a. "t" is the effective, combined state and federal income tax rate.
- b. "ITC Amortization," is amortization, if any, of investment tax credits, as properly recorded in Account 411.4, that are reasonably assignable or allocable to the Subject Resource and to those portions of general and intangible plant investments that are reasonably assignable or allocable to the Subject Resource. Notwithstanding the foregoing, this term shall include only those amounts of amortization of investment tax credits which the Owner shall have elected to receive under Section 46(f)(1) of the Internal Revenue Code. ITC Amortization amounts that reduce net income shall be treated as negative values hereunder, while ITC Amortization amounts, if any, that increase net income shall be treated as positive values hereunder.

Section 4. Net Investment

"Net Investment" is the quantity that is determined as follows:

$$\text{Net Investment} = \text{Gross Plant Investment} - \text{Depreciation Reserve} + \text{CWIP} + \text{PHFU} - \text{ADIT} + \text{Working Capital}$$

where the quantities appearing in the foregoing equation are defined hereinafter below.

In determining Net Investment hereunder, each component thereof, other than Cash Allowance, shall be determined as the end-of-year balances in the Accounts specified for the relevant Cost Year.

(A) Gross Plant Investment

"Gross Plant Investment" is gross original cost plant investment as properly recorded in Accounts 101, 102, 106, and 114, including only the following amounts:

- (1) Production Plant Investment:** investment in the generating unit itself and in common facilities associated with the unit, as recorded in Accounts 310-316, 330-336, or 340-346, 106 and 114;
- (2) Transmission Plant Investment:** investment in transmission facilities associated with the Subject Resource, as properly recorded in Accounts 350-359, 106, and 114, and reasonably assignable or allocable to the Subject Resource;
- (3) Distribution Plant Investment:** investment in distribution facilities associated with the Subject Resource, as properly recorded in Accounts 360-373, 106, and 114, and reasonably assignable or allocable to the Subject Resource; and
- (4) General and Intangible Plant Investment:** reasonably assignable and allocable portions, if any, of general and intangible plant investment, recorded in Accounts 389-399 and 301-303, 106 and 114.

Subject to the limitations detailed in this paragraph, when the Owner has a capital lease in lieu of gross plant investment, it may include Account 101.1 hereunder. A lease may be capitalized and the costs included for ratemaking purposes if the Owner demonstrates

that the lease qualifies as a capital lease under 18 C.F.R. Part 101, General Instruction No. 19 (1998), and the Owner has obtained, prior to the informational filing, approval to include such costs for ratemaking purposes from the FERC under the FPA. Capital leases shall be accounted for in accordance with 18 C.F.R. Part 101, General Instruction No. 20 (1998).

(B) Depreciation Reserve

"Depreciation Reserve" is accumulated provision for depreciation and amortization, as properly recorded in Accounts 108, 111, and 115, related to the Subject Resource, including the following amounts:

- (1) Production Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in the unit itself and in common facilities associated with the unit;
- (2) Transmission Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in transmission facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;
- (3) Distribution Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in distribution facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;
- (4) General and Intangible Plant Reserve:** amounts of Depreciation Reserve for the portions, if any, of general and intangible plant investments reasonably assignable and allocable to the Subject Resource.

Credit balances in the aforementioned accounts shall be treated as positive values hereunder, and debit balances in such accounts shall be treated as negative values.

(C) CWIP

"CWIP" is the amount of construction work in progress, as properly recorded in Account 107 for construction projects associated with the Subject Resource related solely and directly to pollution control for the Subject Resource.

(D) PHFU

"PHFU" is the cost of plant held for future use, as properly recorded in Account 105 that is reasonably assignable or allocable to the Subject Resource.

(E) ADIT

"ADIT" is accumulated provision for deferred income taxes, as properly recorded in Accounts 190, 281, 282, 283, and 255, that are reasonably assignable or allocable to the investment in, or operation of, the Subject Resource, including the following amounts:

- (1) Production Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, the Subject Resource itself and common facilities associated with the Subject Resource;
- (2) Transmission Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, the transmission facilities, if any, associated with the Subject Resource;
- (3) Distribution Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, distribution facilities, if any, associated with the Subject

Resource; and

- (4) **General and Intangible Plant ADIT:** amounts of ADIT arising from the portions, if any, of general and intangible plant investments reasonably assignable and allocable to the Subject Resource.

For purposes of this Formula, ADIT means accumulated provision for deferred income taxes, as properly recorded in the aforementioned Accounts, *including* amounts previously recorded in such accounts and reclassified as a result of the adoption of SFAS No. 109, but *excluding* amounts recorded in such accounts as a result of the adoption of SFAS No. 109, such that the required adoption of SFAS No. 109 will have no effect on the costs determined hereunder.

Notwithstanding the foregoing, as to Account 255, ADIT hereunder shall include only those amounts, if any, related to investment tax credits which the Owner shall have elected to receive under Section 46(f)(2) of the Internal Revenue Code.

ADIT balances that are credit balances shall be treated as positive values hereunder, while ADIT balances that are debit balances shall be treated as negative values hereunder.

Owner shall support all amounts of ADIT included and not included hereunder in the manner described in sections 35.13(h)(6) and (7) of the Commission's regulations (Statements AF and AG, respectively), except that the time period for the relevant data for the informational package will be consistent with the requirements of this formula, rather than the "Periods" referenced in those regulations.

(F) Working Capital

"Working Capital" is the sum of the portions, if any, of the following items that are reasonably assignable or allocable to the Subject Resource:

- (1) **Fuel Stocks**, which is the amount of fossil fuel stock, if any, maintained for the Subject Resource, as properly recorded in Account 151;
- (2) **Plant Materials and Supplies**, consisting of the value of plant materials and supplies reasonably assignable or allocable to the Subject Resource, as properly recorded in Accounts 154 and 163;
- (3) **Prepayments**, consisting of the amount, if any, of prepayments reasonably assignable or allocable to the Subject Resource, as properly recorded in Account 165;
- (4) **Working Cash Allowance**, which is one-eighth of O&M Expenses (as defined herein), less (a) Total Annual Fuel Costs (as defined herein below), and (b) all amounts or portions, if any, of Account 555 (Purchased Power) that may be included in such O&M Expenses; and

Unamortized Deferred Costs, which shall be that portion, if any, of Account 186 directly related to, or reasonably allocable to, the Subject Resource.

Section 5. Allowable Pre-Tax Rate of Return

The Allowable Pre-Tax Rate of Return shall be ~~the sum of:~~

- ~~(a) 12.25%, and~~

~~(b) 30% of the amount, if any, by which (a) the latest available 6-month average of yields on 10-year U.S. Treasury Bonds, as of the date of the first Informational Filing, exceeds (b) the latest available 6-month average of yields on 10-year U.S. Treasury Bonds as of [the effective date of the settlement].~~

~~Notwithstanding the foregoing, the Owner may make application to the FERC, prior to or in conjunction with the first Informational Filing, in a limited proceeding to seek to establish a different Allowable Pre-Tax Rate of Return under Section 205 of the Federal Power Act.~~

Section 6. Additional Quantities

(A) Annual Variable O&M Expenses

"Annual Variable O&M Expenses" is the sum of the following quantities:

- (1) **Variable Production O&M Expenses:** those portions of Production O&M Expenses, as defined above, other than fuel expenses, that are reasonably determined to be variable expenses, in the sense that they are incurred as a result of, or otherwise are reasonably associated with, the production of energy by the Subject Resource.
- (2) **Variable A&G Expenses:** that portion of A&G Expenses that is related or allocable to the foregoing Variable Production O&M Expenses.

Notwithstanding the foregoing, starting with the first information filing hereunder and continuing until the Owner elects to use a different method to determine its Annual Variable O&M Expenses, the Owner may compute Annual Variable O&M Expenses as the amount equal to the product of (a) the Initial Variable O&M Rate, in \$/MWh, for the Subject Resource, as set forth in Exhibit A hereto (Exhibit A can be found in Appendix B to the Stipulation and Agreement), times (b) the Net Generation of the Subject Resource (as defined hereinabove). Whenever the Owner does not compute Annual Variable O&M Expenses based on the Initial Variable O&M Rate in the foregoing manner, the Owner shall include in each of Informational Package a detailed explanation of the method or methods used to classify O&M expenses as between fixed (*i.e.*, capacity-related) expenses and variable (*i.e.*, energy-related) expenses and the reason(s) such method results in just and reasonable rates.

(B) Annual Fixed O&M Expenses

"Annual Fixed O&M Expenses" is the quantity that is equal to the following:

- (1) Total O&M Expenses, as defined hereinabove, less
- (2) the sum of:
 - a. Annual Variable O&M Expenses, as defined hereinabove, and
 - b. Annual Variable Fuel Costs, as defined herein~~_below~~,
 - c. Annual Emissions Costs, as defined herein~~_below~~, and
 - d. Annual Non-Fuel Start-Up Costs, as defined herein~~_below~~.

(C) Fuel Expenses

(1) Total Annual Fuel Costs

"Total Annual Fuel Costs" is the total fuel expense for the Subject Resource for the Cost Year properly recorded in Account 501 or Account 547, as appropriate depending on the nature of the Subject Resource.

(2) Annual Fixed Fuel Costs

"Annual Fixed Fuel Costs" is that portion, if any, of Total Annual Fuel Costs related to fuel handling and administration of fuel planning, procurement and transportation which do not vary with the amount of fuel purchased.

(3) Annual Variable Fuel Costs

"Annual Variable Fuel Costs" is the quantity that is the following difference:

1. Total Annual Fuel Costs, less
2. Annual Fixed Fuel Costs.

(D) Annual Emissions Costs

"Annual Emissions Costs" is the total emissions costs that are related to the operation of the Subject Resource during the Cost Year.

(E) Annual Non-Fuel Start-Up Costs

"Annual Non-Fuel Start-Up Costs" is the aggregate sum of costs, other than fuel costs, attributable to start-ups of the Subject Resource during the Cost Year, consisting of start-up power costs, shut-down power costs, and other non-fuel start-up costs, all as determined pursuant to the applicable sections of Schedule D of the RMR Contract, as applied to all start-ups of the Subject Resource during the Cost Year.

(F) Total Annual Variable Costs

"Total Annual Variable Costs" is the sum of:

1. Annual Variable O&M Expenses,
2. Annual Variable Fuel Costs, and
3. Annual Emissions Costs.

Part C. General Instructions and Explanatory Notes

Section 1. General Instructions

In applying this Formula to a Subject Resource, the following instructions and explanations shall be followed:

(A) No Duplicative Charges

The costs determined and referenced by this Formula shall exclude costs that are recoverable, or that are actually recovered, elsewhere under the applicable contract or

agreement between the Owner and the CAISO. There shall be no double counting of costs hereunder.

(B) Determination of Depreciation Expenses

Depreciation Expenses, Depreciation Reserve, and Deferred Income Taxes reflected in the revenue requirements determined pursuant to this Formula shall be computed using either fixed depreciation rates or depreciation rates determined annually from fixed mortality characteristics (i.e., service lives, net salvage ratios, etc.). Such depreciation rates and/or mortality characteristics, which may differ for particular assets or groups of assets comprising, or related to, the Subject Resource, are set forth on Exhibit B, which is attached hereto and made a part hereof. Such depreciation rates and/or mortality characteristics may not be changed except pursuant to Section 205 or Section 206 of the FPA. Nothing herein shall be construed as affecting any requirements of the FERC regarding the use by the Owner of depreciation rates for financial reporting purposes.

(C) Costs in Excess of Original Cost

The components of rate base and the costs reflected under the Formula shall not include an acquisition adjustment or costs associated with an acquisition adjustment unless the Owner shall have obtained approval from the FERC to include under the Formula such an adjustment or such costs for ratemaking purposes under the FPA. The effective date for the inclusion of such costs shall be as set forth in the FERC order.

(D) Use of FERC Accounting

The costs determined and referenced by this Formula shall reflect only FERC-basis accounting, and shall not reflect any accounting for costs approved by any state regulatory commission or other body if not approved or accepted by the FERC for use in connection with the RMR Contract. Except as otherwise provided herein, the accounting for costs for purposes of applying this Formula shall be consistent with the requirements of the Uniform System of Accounts.

(E) Accounting Methods

The costs determined and referenced by this Formula shall reflect only such accounting methods prescribed by such authorities as AICPA and FASB that shall have been approved or accepted by the FERC for use in connection with the RMR Contract. The Owner shall be required to seek and gain such approval or acceptance from the FERC prior to reflecting any changed accounting methods in the determination of costs in connection with this Formula.

The Owner shall carry the burden of demonstrating that its accounting methods and entries reflected in the costs determined and referenced by this Formula produce just, reasonable, and nondiscriminatory rates for its customers.

(F) Out-of-Period Adjustments

The costs determined and referenced by this Formula shall not reflect any accounting entries the purpose of which is to adjust or correct for accounting entries in years other than the Cost Year if such adjusting or correcting entries would have an unjust, unreasonable, or discriminatory effect on the CAISO.

(G) Extraordinary Costs

Extraordinary costs included in the costs determined and referenced by this Formula shall be subject to amortization over a reasonable period of time. In determining how

costs should be amortized, the parties shall also determine how the costs being amortized should be recovered in the event that the plant closes and does not reopen.

As used herein, "extraordinary costs" mean costs arising from events and transactions that are of an unusual nature and infrequent occurrence, the effects of which are abnormal and significantly different from the ordinary and typical activities of the Owner, and would not reasonably be expected to recur in the foreseeable future. In determining significance, items should be considered individually and not in the aggregate. However, the effects of a series of related transactions arising from a single specific and identifiable event or plan of action should be considered in the aggregate. An item can be extraordinary even if it is less than five (5) percent of income computed before the extraordinary item. In its annual Information Package, the Owner shall identify and provide explanations for all extraordinary costs which it seeks to include in the rates and charges determined pursuant to this Formula, and the Owner shall bear the burden of proof, as in a proceeding under Section 205 of the FPA, that its proposed treatment of extraordinary costs is just and reasonable.

(H) Imprudently Incurred Costs

The costs determined and referenced by this Formula shall not include any costs which have been determined by the FERC in a proceeding under Section 206 of the FPA to have been imprudently incurred by the Owner.

(I) Transmission Cost Assignments and Allocations

Costs of transmission facilities assigned and/or allocated to the Subject Resource hereunder are intended to include only those costs, if any, related to the step-up substation facilities and other transmission facilities directly connected to the Subject Resource and used to deliver the output of the Subject Resource to the transmission grid. In each annual Informational Package, the Owner shall clearly identify and fully describe all transmission facilities which it claims satisfy the foregoing criteria.

(J) Distribution Cost Assignments and Allocations

Costs of distribution facilities assigned and/or allocated to the Subject Resource hereunder are intended to include only those costs, if any, related to the step-up substation facilities and other distribution facilities directly connected to the Subject Resource and used to deliver the output of the Subject Resource to the transmission or distribution system. In each annual Informational Package, the Owner shall clearly identify and fully describe all distribution facilities which it claims satisfy the foregoing criteria.

(K) Inclusion of Certain Costs

The Owner shall include in its annual Informational Package detailed workpapers and explanations supporting the reasonableness of including in the revenue requirements determined pursuant to this formula any amounts recorded in Accounts 501, 547, 555, 561, 927, 105, and 186. The Owner shall bear the burden of proof, as in a proceeding under Section 205 of the FPA, to affirmatively demonstrate that all such included amounts are directly related to the provisions of service under the RMR Contract and are reasonably assignable or allocable to the Subject Resource. As to Account 105, the requirement for a definitive plan required by the description of Account 105 in the Uniform System of Accounts, and the affirmative demonstration required by this paragraph, shall be deemed to be met upon a showing that the CAISO has approved, in accordance with the provisions of Section 7.4 of the RMR Contract, a plan for the future use of the property.

(L) Direct Assignments and Allocations

Where Part B of this Formula provides for the identification and/or assignment of costs incurred directly in connection with a particular facility or facilities (including a Subject Resource), or directly related to such a facility or facilities, the Owner shall bear the burden of demonstrating the reasonableness of each such identification and/or assignment, and each failure to make such an identification and/or assignment. Notwithstanding the foregoing, where this Formula provides for such a direct identification or assignment of costs, the Owner may use an allocation method to apportion such costs among particular facilities; provided, however, that (i) the Owner shall in its Informational Package clearly identify and describe such allocation method and the basis for it, and (ii) the Owner shall bear the burden of demonstrating the reasonableness of the method. It is recognized that such allocation methods may, for example, be appropriate for apportioning certain types of costs between individual generating units at a multi-unit generating station. Such allocations of costs between individual generating units at a plant site shall be consistent with the requirements for such allocations, if any, provided in the RMR Contract.

(M) No Adverse Distinction

In applying this Formula and in maintaining its books and records insofar as they affect the results of applying this Formula, the Owner shall not make an adverse distinction between the Subject Resource and any other facility or facilities owned or operated by the Owner; *e.g.*, the Owner shall assign certain costs directly to the Subject Resource only if, and to the extent that, the Owner directly assigns such costs to other, similar facilities.

Section 2. General Definitions

Except as may be expressly stated otherwise, the following terms have the followings meanings as used herein:

(A) Account

"Account" refers to a particular account for "major" utilities as prescribed by the Uniform System of Accounts.

(B) FERC

"FERC" means the Federal Energy Regulatory Commission or its successor.

(C) Uniform System of Accounts

"Uniform System of Accounts" means the FERC's "Uniform System of Accounts Prescribed For Public Utilities and Licensees Subject to the Provisions of the Federal Power Act," as such uniform system of accounts was in effect as of the first effective date of the RMR Contract.

(D) RMR Contract

"RMR Contract" means the contract to which this Formula is attached and made a part thereof.

(E) Subject Resource

"Subject Resource" means any particular generating unit to which this Formula is applied for purposes of determining the annual costs thereof.

(F) Cost Year

"Cost Year" means the twelve-month period ended June 30 to which this Formula is applied to determine the Annual Fixed Revenue Requirements and Variable O&M Rate for a Subject Resource to be applicable during the next succeeding calendar year.

(G) Owner

"Owner" means the entity, other than the CAISO, that is a party to the RMR Contract.

(H) CAISO

The "CAISO" means the California Independent System Operator Corporation.

Exhibit A - Initial Variable O&M Rates¹

[Footnote 1: Exhibit A for each owner is filed in Appendix to the Stipulation and Agreement.]

| Line | RMR Facility | Unit | Initial Variable O&M Rate (\$/MWh) |
|------|--------------|------|------------------------------------|
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Exhibit B - Depreciation Rate and Mortality Characteristics^{2 3}

[Footnote 2: Exhibit B for each owner is filed in Appendix B to the Stipulation and Agreement.]

[Footnote 3: Effective as of the effective date of the Settlement.]

| Line | RMR Facility | Unit | Plant Account | Depreciation Rate (%) | Mortality Characteristics | | | |
|------|--------------|------|---------------|-----------------------|---------------------------|----------------------|-----------------------|--------------------------|
| | | | | | Retirement Date | Average Service Life | Salvage Value or Rate | Interim Retirements Rate |
| | | | | | | | | |
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Exhibit C – 1998 Cost Information

Pursuant to Article IV.E of the Stipulation and Agreement filed with the FERC on April 2, 1999, the Owner shall file with the FERC in Docket No. ER98-441-000, et. al., a superceding Exhibit C, setting forth the following information for each unit for the period ending December 31, 1998:

- (1) — Name of the facility and unit;
- (2) — Gross Plant In Service, *i.e.* the original cost plus plant additions minus retirements, by major plant function (*i.e.* production, transmission, distribution and general);
- (3) — Net Plant In Service Gross Plant, *i.e.* gross plant minus depreciation reserve, by major plant function;
- (4) — Rate Base, *i.e.* net plant and other components of Net Investment as defined in the Formula, such as working capital, Accumulated Deferred Income Taxes (ADIT), etc.

This Exhibit C shall be for informational purposes only and shall be initially filed with FERC by June 1, 1999.

Schedule G
Not Used Charge for Service in Excess of
Contract Service Limits

~~Payment for service in excess of the Maximum Annual MWh, Maximum Annual Service Hours or Maximum Annual Start-ups shall be determined in accordance with Option A or Option B. Payment for service from hydroelectric Units in excess of the Maximum Monthly MWh shall be determined in accordance with Option A only. Owner shall make a one-time election between Option A or Option B. Owner must choose Option A for both Billable MWh and Start-ups or Option B for both Billable MWh and Start-ups. This election shall be applicable to all of the Owner's Units under this Agreement and all other Reliability Must Run Units subject to a "reliability must run contract" as defined in the CAISO Tariff with Owner or any of its affiliates as defined in 18 C.F.R. Section 161.2.~~

~~1. **Option A**~~

~~A. For all Billable MWh Delivered after the Counted MWh for the Contract Year equals the Maximum Annual MWh, the Counted Service Hours equals the Maximum Annual Service Hours or, for hydroelectric Units, the Counted MWh for the Month equals the Maximum Monthly MWh ("Schedule G Billable MWh"):~~

~~Fossil Fuel Units~~

~~In addition to the Variable Cost Payment computed in accordance with Schedule C, the CAISO shall pay the Option A Variable Cost Payment, which shall be calculated in accordance with Equation G-1:~~

~~**Equation G-1**~~

$$\begin{array}{l} \text{Option A Variable} \\ \text{Cost Payment} \end{array} = 0.5 \frac{\text{(Variable Cost Payment for the Billing Month)}}{\text{Billable MWh for the Billing Month}} \times \text{Schedule G} \\ \text{Billable MWh}$$

~~Pumped Storage Hydroelectric Facilities~~

~~In addition to the Variable Cost Payment computed in accordance with Schedule C, CAISO shall pay the product of (a) the Schedule G Billable MWh, (b) 0.5, and (c) YTD Pumping Costs divided by YTD Energy Produced as computed in accordance with Equation C4-2 in Schedule C.~~

~~Conventional Hydroelectric Facilities~~

~~In addition to the Variable Cost Payment computed in accordance with Schedule C, CAISO shall pay the sum of the products for each hour in the Billing Month of (a) the Hourly Fuel Price for natural gas for the hour calculated in accordance with Equation C1-8 of Schedule C, (b) 12,000 Btu/kWh, (c) the Schedule G Billable MWh for that hour, and (d) 0.5.~~

~~B. For all Service Hours provided after the Counted Service Hours for the Contract Year equals the Maximum Annual Service Hours.~~

Synchronous Condensers

In addition to the ~~Motoring Charge~~ computed in accordance with Schedule E, CAISO shall pay the product of (a) the ~~Motoring Charges~~ calculated in accordance with Schedule E, and (b) 0.5.

- C. ~~For all Start-ups required to comply with a Dispatch Notice after the Counted Start-ups for the Unit equals the Maximum Annual Start-ups (“Schedule G Start-ups”), the CAISO shall pay:~~

Fossil Fuel Units and Geothermal Units

~~Two times (a) the Start-up Payment computed in accordance with Equation D-1 in Schedule D, or (b) if the Schedule G Start-up is initiated under a Dispatch Notice but is not successfully completed because it is canceled or rescinded by the CAISO, the Start-up Payment for Canceled Start-up is computed in accordance with Equation D-4 in Schedule D.~~

Conventional Hydroelectric Facilities and Units Capable Only of Synchronous Condenser Operation

~~The Start-up Payment computed in accordance with Schedule D, plus (a) (0.00338) the Unit’s Annual Fixed Revenue Requirement stated in Section 7 of Schedule B, divided by (b) the Unit’s Maximum Annual Start-ups.~~

Pumped Storage Hydroelectric Facilities

~~The Start-up Payment computed in accordance with Equation D-1 in Schedule D, plus (a) 0.00167 * the Unit’s Annual Fixed Revenue Requirement stated in Section 7 of Schedule B, divided by (b) the Unit’s Maximum Annual Start-ups.~~

2. ~~Option B~~

- A. ~~For all Schedule G Billable MWh Delivered in the Billing Month, the CAISO shall pay the Variable Cost Payment computed in accordance with Schedule C. Since Schedule G Billable MWh are included in calculating the Variable Cost Payment for Billable MWh for the Billing Month under Schedule C, there is no additional payment for Schedule G Billable MWh under Option B.~~
- B. ~~For all Service Hours provided after the Counted Service Hours for the Contract Year equals the Maximum Annual Service Hours:~~

Synchronous Condensers

~~In addition to the ~~Motoring Charge~~ computed in accordance with Schedule E, CAISO shall pay the product of (a) the ~~Motoring Charges~~ calculated in accordance with Schedule E, and (b) 0.5.~~

- C. ~~For all Schedule G Start-ups in the Billing Month, the CAISO pay:~~

Units Capable Only of Synchronous Condenser Operation

~~The Start-up Payment computed in accordance with Schedule D, plus (a) (0.00338) the Unit’s Annual Fixed Revenue Requirement stated in Section 7 of Schedule B, divided by (b) the Unit’s Maximum Annual Start-ups.~~

Fossil Fuel Units and Geothermal Units

~~Three times (a) the Start-up Payment computed in accordance with Equation D-1 in Schedule D, or (b) if the Schedule G Start-up is initiated under a Dispatch Notice but is not successfully completed because it is canceled or rescinded by the CAISO, the Start-up Payment for Canceled Start-up is computed in accordance with Equation D-4 in Schedule D.~~

3. ~~Owner's Election~~

Option A

Option B

Schedule H
Not Used Fuel Oil Service

The following is a description of existing capability of the Facility to burn fuel oil in lieu of or addition to natural gas:

Schedule I

Insurance Requirements

Owner - Obtained Insurance [subject to negotiation]

Commercial General Liability

~~Commercial general liability insurance covering personal injury and property damage to third parties in connection with the activities at the Facility. The coverage will have a limit of not less than \$— per occurrence, and will include coverage for sudden and accidental pollution losses. The CAISO will be added as an additional insured under the terms of this coverage to the per occurrence limit above.~~

Property

~~Property insurance for direct physical loss or damage to the Facility, in an amount not less than the probable maximum loss at the Facility.~~

CAISO - Obtained Insurance [subject to negotiation]

Errors and Omissions Insurance and Directors & Officers Insurance

~~Errors and omissions insurance and directors and officers insurance coverage will have a combined limit of not less than \$150 million for the shorter of (i) until the termination of this Agreement or (ii) until January 1, 2002.~~

Schedule J

Notices

Notice to Owner:

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

With a copy to: Owner's Representative:

Notice to CAISO:

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

~~Nancy Traweek
Director, Operations Support
California ISO Corporation
250 Outcropping Way
Folsom, CA 95630
Telephone: (916) 351-2113
Facsimile: (916) 351-2267
Email: ntraweek@caiso.com <mailto:ntraweek@caiso.com>~~

With a copiesy to:

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

~~Sidney Mannheim Davies
Assistant General Counsel
Tariff and Tariff Compliance
California ISO Corporation
250 Outcropping Way
Folsom, CA 95630
Telephone: (916) 608-7144
Facsimile: (916) 608-7222
Email: sdavies@caiso.com <mailto:sdavies@caiso.com>~~

**Schedule K
Dispute Resolution
DISPUTE RESOLUTION**

Applicability

1.1 General Applicability.

Except as limited below or otherwise as limited by law (including the rights of any party to file a complaint with FERC under the relevant provisions of the Federal Power Act (FPA)), these ADR Procedures shall apply to ~~(a) all disputes between parties which arise under this Agreement, and (b) disputes between CAISO and a Responsible Utility relating to a Responsible Utility Invoice, "Final Estimated RMR Invoice, Final Adjusted RMR Invoice" as defined in the CAISO Tariff, or RMR Charge or RMR Refund as defined in Section 11.13 in the CAISO Tariff.~~ The foregoing shall not impair the applicability of the CAISO Tariff ADR procedures to other disputes between the parties that do not arise under this Agreement. All alternative dispute resolution proceedings hereunder shall be administered by the American Arbitration Association ("AAA"). The Owner, ~~Responsible Utility~~ and ~~the~~ CAISO shall enter into such arrangements with the AAA as are necessary to provide for AAA administration of this Schedule K.

1.1.1 This Schedule K shall not apply to disputes as to whether rates and charges under the Agreement are just and reasonable under the Federal Power Act except as provided in Schedule F. Nothing herein shall limit the right of the FERC to initiate or adjudicate complaints or other proceedings in accordance with applicable statutes or regulations or to compel FERC to exceed its statutory authority as defined by any applicable federal statutes, regulations or orders lawfully promulgated thereunder.

1.2 Disputes Involving Government Agencies.

If a party to a dispute is a government agency the procedures herein which provide for the resolution of claims and arbitration of disputes are subject to any limitations imposed on the agency by law, including but not limited to the authority of the agency to effect a remedy. If the governmental agency is a federal entity, the procedures herein shall not apply to disputes involving issues arising under the United States Constitution.

1.3 Injunctive and Declaratory Relief.

Where the court having jurisdiction so determines, use of the ADR Procedures shall not be a condition precedent to a court action for injunctive relief nor shall the provisions of California Code of Civil Procedure sections 1281 *et seq.* apply to such court actions.

1.4 Negotiation and Mediation.

1.4.1 Negotiation.

CAISO, ~~Responsible Utility~~ and Owner ("Parties") shall make good-faith efforts to negotiate and resolve any dispute between them arising under this Agreement prior to invoking the ADR Procedures herein. Each Party shall designate an individual with authority to negotiate the matter in dispute to participate in such negotiations. ~~The Responsible Utility may participate in the ADR proceedings arising under this Agreement to the extent the dispute involves billing or payment obligations, in which case CAISO or the Responsible Utility, but not both shall be the disputing party. In addition, to the extent Article 7 or other provisions of this Agreement provide the Responsible Utility third party beneficiary rights, the Responsible Utility may also participate in the ADR as a Party. The Owner may participate in the ADR proceedings relating to a Responsible Utility Invoice, "Final Estimated RMR Invoice, Final Adjusted RMR Invoice" as defined in the CAISO Tariff or RMR Charge or RMR Refund as defined in Section 11.13, in which case,~~

~~CAISO or the Owner, but not both, shall be the disputing party. In addition, to the extent the CAISO Tariff provides the Owner third-party beneficiary rights, the Owner may also participate in the ADR as a Party.~~

1.4.2 Statement of Claim.

In the event a dispute is not resolved through such good-faith negotiations, any party may submit a statement of claim, in writing, to each other disputing party, which submission shall commence the ADR Procedures. The statement of claim shall set forth in reasonable detail (i) each claim, (ii) the relief sought, including the proposed award, if applicable, (iii) a summary of the grounds for such relief and the basis for each claim, (iv) the parties to the dispute, and (v) the individuals having knowledge of each claim. The other parties to the dispute shall similarly submit their respective statements of claim within 14 days of the date of the initial statement of claim or such longer period as the AAA may permit following an application by the responding party. If any responding party wishes to submit a counterclaim in response to the statement of claim, it shall be included in such party's responsive statement of claim. No party shall be considered as having received notice of a claim decided or relief granted by a decision made under these procedures unless the statement of claim includes such claim or relief.

1.4.3 Selection of Mediator.

After submission of the statements of claim, the parties may request mediation, if the disputing parties so agree. If the parties agree to mediate, the AAA shall distribute to the parties by facsimile or other electronic means a list containing the names of at least seven prospective mediators with mediation experience, or with technical or business experience in the electric power industry, or both, as he or she shall deem appropriate to the dispute. The parties shall either agree upon a mediator from the list provided or from any alternative source, or alternate in striking names from the list with the last name on the list becoming the mediator. The first party to strike off a name from the list shall be determined by lot. The parties shall have seven days from the date of receipt of the AAA's list of prospective mediators to complete the mediator selection process and appoint the mediator, unless the time is extended by mutual agreement. The mediator shall comply with the requirements of Section 1.5.2.

1.4.4 Mediation.

The mediator and representatives of the disputing parties, with authority to settle the dispute, shall within 14 days after the mediator's date of appointment schedule a date to mediate the dispute. Matters discussed during the mediation shall be confidential and shall not be referred to in any subsequent proceeding. With the consent of all disputing parties, a resolution may include referring the dispute directly to a technical body (such as a WSECC technical advisory panel) for resolution or an advisory opinion, or referring the dispute directly to FERC.

1.4.5 Demand for Arbitration.

If the disputing parties have not succeeded in negotiating a resolution of the dispute within 30 days of the initial statement of claim or, if within that period the parties agreed to mediate, within 30 days of the parties' first meeting with the mediator, such parties shall be deemed to be at impasse and any such disputing party may then commence the arbitration process, unless the parties by mutual agreement agree to extend the time. A party seeking arbitration shall provide notice of its demand for arbitration to the other disputing parties.

1.5 Arbitration.

1.5.1 Selection of Arbitrator.

1.5.1.1 Disputes Under \$1,000,000. Where the total amount of claims and counterclaims in controversy is less than \$1,000,000 (exclusive of costs and interest), the disputing parties shall select an arbitrator from a list containing the names of at least 10 qualified individuals supplied by AAA, within 14 days following submission of the demand for arbitration. If the disputing parties cannot agree upon an arbitrator within the stated time, they shall take turns striking names from the list of proposed arbitrators. The first party to strike off a name shall be determined by lot. This process shall be repeated until one name remains on the list, and that individual shall be the designated arbitrator.

1.5.1.2 Disputes of \$1,000,000 or Over. Where the total amount of claims and counterclaims in controversy is \$1,000,000 or more (exclusive of interest and costs), the disputing parties may agree on any person to serve as a single arbitrator, or shall endeavor in good faith to agree on a single arbitrator from a list of ten qualified individuals provided by the AAA, 14 days following submission of the demand for arbitration. If the disputing parties are unable to agree on a single arbitrator within the stated time, the party or parties demanding arbitration, and the party or parties responding to the demand for arbitration, shall each designate an arbitrator. Each designation shall be from the AAA list of arbitrators, as applicable, no later than the tenth day thereafter. The two arbitrators so chosen shall then choose a third arbitrator.

1.5.2 Disclosures Required of Arbitrators.

The designated arbitrator(s) shall be required to disclose to the parties any circumstances that might preclude him or her from rendering an objective and impartial determination. Each designated arbitrator shall disclose:

1.5.2.1 Any direct financial or personal interest in the outcome of the arbitration;

1.5.2.2 Any information required to be disclosed by California Code of Civil Procedure Section 1281.9.; and

1.5.2.3 Any existing or past financial, business, professional, or personal interest that are likely to affect impartiality or might reasonably create an appearance of partiality or bias. The designated arbitrator shall disclose any such relationships that he or she personally has with any party or its counsel, or with any individual whom they have been told will be a witness. They should also disclose any such relationship involving members of their families or their current employers, partners, or business associates. All designated arbitrators shall make a reasonable effort to inform themselves of any interests or relationships described above. The obligation to disclose interests, relationships, or circumstances that might preclude an arbitrator from rendering an objective and impartial determination is a continuing duty that requires the arbitrator to disclose, at any stage of the arbitration, any such interests, relationships, or circumstances that arise, or are recalled or discovered.

1.5.2.4 If, as a result of the continuing disclosure duty, an arbitrator makes a disclosure which is likely to affect his or her impartiality, or might reasonably create an appearance of partiality or bias or if a party independently discovers the existence of such circumstances, a party wishing to object to the continuing use of the arbitrator must provide written notice of its objection to the other parties within ten days of receipt of the arbitrator's disclosure or the date of a party's discovery of the circumstances giving rise to that party's objection. Failure to provide such notice shall be deemed a waiver of such objection. If a party timely provides a notice of objection to the continuing use of the

arbitrator the parties shall attempt to agree whether the arbitrator should be dismissed and replaced in the manner described in Section 1.5.1. If within ten days of a party's objection notice the parties have not agreed how to proceed the matter shall be referred to the AAA for resolution.

1.5.3 Arbitration Procedures.

The AAA shall compile and make available to the arbitrator and the parties standard procedures for the arbitration of disputes, which procedures (i) shall conform to the requirements specified herein, and (ii) may be modified or adopted for use in a particular proceeding as the arbitrator deems appropriate, in accordance with Section 1.5.4. The procedures shall be based on the latest edition of the American Arbitration Association Commercial Arbitration Rules, to the extent such rules are not inconsistent with this Schedule K. Except as provided herein, all parties shall be bound by such procedures.

1.5.4 Modification of Arbitration Procedures.

In determining whether to modify the standard procedures for use in the pending matter, the arbitrator shall consider (i) the complexity of the dispute, (ii) the extent to which facts are disputed, (iii) the extent to which the credibility of witnesses is relevant to a resolution, (iv) the amount in controversy, and (v) any representations made by the parties. Alternatively, the parties may, by mutual agreement, modify the standard procedures. In the event of a disagreement between the arbitrator and the agreement of the parties regarding arbitration procedures to be utilized, the parties' agreement shall prevail.

1.5.5 Remedies.

1.5.5.1 Arbitrator's Discretion. The arbitrator shall have the discretion to grant the relief sought by a party, or determine such other remedy as is appropriate, unless the parties agree to conduct the arbitration "baseball" style. Unless otherwise expressly limited herein, the arbitrator shall have the authority to award any remedy or relief available from FERC, or any court of competent jurisdiction. Where this Agreement leaves any matter to be agreed between the parties at some future time and provides that in default of agreement the matter shall be referred to the ADR, the arbitrator shall have authority to decide upon the terms of the agreement which, in the arbitrator's opinion, it is reasonable that the parties should reach, having regard to the other terms this Agreement concerned and the arbitrator's opinion as to what is fair and reasonable in all the circumstances.

1.5.5.2 "Baseball" Arbitration. If the parties agree to conduct the arbitration "baseball" style, the parties shall submit to the arbitrator and exchange with each other their last best offers in the form of the award they consider the arbitrator should make, not less than seven days in advance of the date fixed for the hearing, or such later date as the arbitrator may decide. If a party fails to submit its last best offer in accordance with this Section, that party shall be deemed to have accepted the offer proposed by the other party. The arbitrator shall be limited to awarding only one of the proposed offers, and may not determine an alternative or compromise remedy.

1.5.6 Summary Disposition.

The procedures for arbitration of a dispute shall provide a means for summary disposition of a demand for arbitration, or a response to a demand for arbitration, that in the reasoned opinion of the arbitrator does not have a good faith basis in either law or fact. If the arbitrator determines that a demand for arbitration or response to a demand for arbitration does not have a good faith basis in either law or fact, the arbitrator shall have discretion to award the costs of the time, expenses, and other charges of the arbitrator to

the prevailing party. A determination made under this Section is subject to appeal pursuant to Section 1.6.

1.5.7 Discovery Procedures.

The procedures for the arbitration of a dispute shall include adequate provision for the discovery of relevant facts, including the taking of testimony under oath, production of documents and other things, the presentation of evidence, the taking of samples, conducting of tests, and inspection of land and tangible items. The nature and extent of such discovery shall be determined as provided herein and shall take into account (i) the complexity of the dispute, (ii) the extent to which facts are disputed, (iii) the extent to which the credibility of witnesses is relevant to a resolution, and (iv) the amount in controversy. The forms and methods for taking such discovery shall be as described in the Federal Rules of Civil Procedure, except as modified pursuant to Section 1.5.4.

1.5.8 Evidentiary Hearing.

The arbitration procedures shall provide for an evidentiary hearing, with provision for the cross-examination of witnesses, unless all parties consent to the resolution of the matter on the basis of a written record. The forms and methods for taking evidence shall be determined by the arbitrator(s) and modified pursuant to Section 1.5.4. The arbitrator may require such written or other submissions from the parties as he or she may deem appropriate, including submission of direct and rebuttal testimony of witnesses in written form. The arbitrator may exclude any evidence that is irrelevant, immaterial, unduly repetitious or prejudicial, or privileged. The arbitrator shall compile a complete evidentiary record of the arbitration that shall be available to the parties on its completion upon request.

1.5.9 Confidentiality.

Subject to the other provisions of this Agreement, any party may claim that information contained in a document otherwise subject to discovery is "Confidential" if such information would be so characterized under the Federal Rules of Evidence or the provisions of the Agreement. The party making such claim shall provide to the arbitrator in writing the basis for its assertion. If the claim of confidentiality is confirmed by the arbitrator, he or she shall establish requirements for the protection of such documents or other information designated as "Confidential" as may be reasonable and necessary to protect the confidentiality and commercial value of such information. Any party disclosing information in violation of these provisions or requirements established by the arbitrator, unless such disclosure is required by federal or state law or by a court order, shall thereby waive any right to introduce or otherwise use such information in any judicial, regulatory, or other legal or dispute resolution proceeding, including the proceeding in which the information was obtained.

1.5.10 Timetable.

Promptly after the appointment of the arbitrator, the arbitrator shall set a date for the issuance of the arbitration decision, which shall be no later than six months (or such earlier date as the parties and the arbitrator may agree) from the date of the appointment of the arbitrator, with other dates, including the dates for an evidentiary hearing or other final submissions of evidence, set in light of this date. The date for the evidentiary hearing or other final submission of evidence shall not be changed, absent extraordinary circumstances. The arbitrator shall have the power to impose sanctions, including dismissal of the proceeding, for dilatory tactics or undue delay in completing the arbitration proceedings.

1.5.11 Decision.

1.5.11.1 Except as provided below with respect to "baseball" style arbitration, the arbitrator shall issue a written decision granting the relief requested by one of the parties, or such other remedy as is appropriate, if any, and shall include findings of fact and law. The arbitration decision shall be based on (i) the evidence in the record, (ii) the terms of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, (iii) applicable United States federal law, including the Federal Power Act and any applicable FERC regulations and decisions, and international treaties or agreements as applicable, and (iv) applicable state law. Additionally, the arbitrator may consider relevant decisions in previous arbitration proceedings involving this Agreement. To the extent it may do so without violating confidentiality requirements, a summary of the disputed matter and the arbitrator's decision may be published in a CAISO newsletter on CAISO Website.

1.5.11.2 In arbitration conducted "baseball" style, the arbitrator shall issue a written decision adopting one of the awards proposed by the parties, and shall include findings of fact and law. The arbitration decision shall be based on (i) the evidence in the record, (ii) the terms of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, (iii) applicable United States federal law, including the Federal Power Act and any applicable FERC regulations and decisions, and international treaties or agreements as applicable, and (iv) applicable state law. If the arbitrator concludes that no proposed award is consistent with the factors enumerated in (i) through (iv) above, or addresses all of the issues in dispute, the arbitrator shall specify how each proposed award is deficient and direct that the parties submit new proposed awards that cure the identified deficiencies. To the extent it may do so without violating confidentiality requirements, a summary of the disputed matter and the arbitrator's decision may be published in a CAISO newsletter on CAISO Website.

1.5.11.3 Where a panel of arbitrators is appointed pursuant to Section 1.5.1.2, a majority of the arbitrators must agree on the decision. An award shall not be deemed to be precedent except in so far as a future dispute between the parties involves the same issue.

1.5.12 Compliance.

Unless the arbitrator's decision is appealed under Section 1.6, the disputing parties shall, upon receipt of the decision, immediately take whatever action is required to comply with the award to the extent the award does not require regulatory action. An award that is not appealed shall be deemed to have the same force and effect as an order entered by FERC or any court of competent jurisdiction.

1.5.13 Enforcement.

Following the expiration of the time for appeal of an award pursuant to Section 1.6.3, any party may apply to FERC or any court of competent jurisdiction for entry and enforcement of judgment based on the award.

1.5.14 Costs.

The costs of the time, expenses, and other charges of the arbitrator shall be borne by the parties to the dispute, with each side on an arbitrated issue bearing its pro-rata share of such costs, and each party to an arbitration proceeding bearing its own costs and fees. If the arbitrator determines that a demand for arbitration or response to a demand for arbitration was made in bad faith, the arbitrator shall have discretion to award the costs of the time, expenses, and other charges of the arbitrator to the prevailing party.

1.6 Appeal of Award.

1.6.1 Basis for Appeal.

A party may apply to the FERC or any court of competent jurisdiction to hear an appeal of an arbitration decision only upon the grounds that the decision is contrary to or beyond the scope of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, United States federal law, including, without limitation, the Federal Power Act, and any applicable FERC regulations and decisions, or state law. Appeals shall, unless otherwise ordered by FERC or the court of competent jurisdiction, conform to the procedural limitations set forth in this Section 1.6.

1.6.2 Appellate Record.

The parties intend that FERC or a court of competent jurisdiction should afford substantial deference to the factual findings of the arbitrator. No party shall seek to expand the record before FERC or a court of competent jurisdiction beyond that assembled by the arbitrator, except (i) by making reference to legal authority which did not exist at the time of the arbitrator's decision, or (ii) if such party contends the decision was based upon or affected by fraud, collusion, corruption, misconduct or misrepresentation.

1.6.3 Procedures for Appeals.

1.6.3.1 If a party to an arbitration desires to appeal a decision, it shall provide a notice of appeal to all parties and the arbitrator(s) within 14 days following the date of the decision. Within ten days of the filing of the notice of appeal, the appealing party must file an appropriate application, petition or motion with FERC for review under the Federal Power Act or with a court of competent jurisdiction. Such filing shall state that the subject matter has been the subject of an arbitration pursuant to this Agreement and, to the extent relevant, the CAISO Tariff and protocols.

1.6.3.2 Within 30 days of filing the notice of appeal (or such period as FERC or the court of competent jurisdiction may specify) the appellant shall file the complete evidentiary record of the arbitration and a copy of the decision with FERC or with the court. The appellant shall serve on all parties to the arbitration copies of a description of all materials included in the submitted evidentiary record.

1.6.4 Award Implementation.

Implementation of the decision shall be deemed stayed pending an appeal unless and until, at the request of a party, FERC or the court of competent jurisdiction with which an appeal has been filed, issues an order dissolving, shortening, or extending such stay.

A summary of each appeal shall be published in a CAISO newsletter on the CAISO Website.

1.6.5 Judicial Review of FERC Orders.

FERC orders resulting from appeals shall be subject to judicial review pursuant to the Federal Power Act.

Schedule L-1

Request for Approval of Capital Items or Repairs

REQUEST FOR APPROVAL OF CAPITAL ITEMS OR REPAIRS

This form should be used to request CAISO approval of Planned Capital Items, Unplanned Repairs or Unplanned Capital Items pursuant to Sections 7.4, 7.5 or 7.6 of the Agreement.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR
 RELIABILITY MUST-RUN UNIT
 CAPITAL ITEM AND REPAIR PROJECT REQUEST

Date: _____ **CAISO Project Number:** _____
Facility: _____ **Unit:** _____
Owner: _____ **Location:** _____

This request covers:

- () Capital Items for the next Contract Year (preliminary)
- () Capital Items for the next Contract Year (final)
- () Remaining Start-ups, Run-hours and MWhs prior to the need to invest in the next Capital Item
- () Unplanned Repairs
- () Unplanned Capital Items

If this request covers Capital Items for the next Contract Year, provide:

Small Project Estimate (reliability)

Small Project Estimate (other)

Identify separately each Capital Item included in a small project estimate projected to cost more than \$50,000.

If this request covers Unplanned Repairs, or Capital Items projected to cost more than \$500,000, provide the information in the remainder of this form for each project.

Project Description: (describe the project and its major scope items – materials, new systems, modifications to existing systems, etc.)

If the project is required because of loss or damage to a Unit, describe the cause and nature of the loss or damage and all repairs performed or required for all Units during the year:

Project Budget:

| Year | Labor | Material | Contract | Int Svc | Other | Material | Over head AEGE | Total Cost | AD VAL TAX | Total Expenditu res | Total Financi al Costs |
|------|-------|----------|----------|---------|-------|----------|-------------------|---------------|---------------|---------------------------|------------------------------|
| | | | | | | | | | | | |

Describe any work or repairs performed relating to this project in the last five years:

As applicable, state the proposed depreciation life, Annual Capital Item Cost, Surcharge Payment

Factor or Repair Payment Factor (percentage owed by CAISO) of the Capital Item or Repair:

Describe why this project is required (justification):

Is this project required to comply with any laws, regulations or permits? If so, please list them and explain requirement.

Provide a cost/benefit analysis summary for this project:

Include all assumptions including changes to unit performance [efficiency, aux. power loads, etc.], impact on ~~Maximum Net Dependable RMR Contract~~ Capacity, grid interconnection/metering impacts, etc.

Describe the impacts on the Unit's ability to perform its obligations under this Agreement if this project is not approved:

Describe alternatives to this project that were evaluated and the projected costs of those alternatives:

Describe alternatives along with their major scope items. Also, compare the projected cost of these alternatives with the selected alternative, and compare the unit performance impacts (efficiency, auxiliary power demands, ~~Maximum Net Dependable RMR Contract~~ Capacity effects, etc.) of these alternatives against the chosen alternative.

List any proceeds received or expected to be received by Owner from insurers or other third parties pursuant to applicable insurance, warranties and other contracts in connection with the project.

Provide the schedule for implementing this project:

| Event | Begin | Complete |
|-------|-------|----------|
| | | |

Describe any outages required to implement this project:

Other comments:

Remaining Start-ups, Run hours, MWs prior to Need for Capital Item:

For any Capital Item required to extend operational capability of the RMR Unit, the Owner must provide the CAISO with the remaining Unit start-ups, run hours, MWs and any other factor that may trigger or affect the timing or the need for such Capital Items. The Owner and CAISO will utilize this information to consider whether the Unit can be safely and reliably operated in the current Contract Year, prior to the need for such Capital Item. If so, these limits will be considered as eligible limits for development of appropriate opportunity costs in accordance with Article 6.1 of this Agreement.

| <u>Unit</u> | <u>Capital Item description</u> | <u>Remaining Start-ups</u> | <u>Remaining Run hours</u> | <u>Remaining MWs</u> | <u>Other Factor Relevant as to Timing of Capital Items</u> |
|-------------|---------------------------------|----------------------------|----------------------------|----------------------|--|
| | | | | | |

* Update more columns0 for description as needed.

Schedule L-2

Capital Item and Repair Progress Report

CAPITAL ITEM AND REPAIR PROGRESS REPORT

CALIFORNIA INDEPENDENT SYSTEM OPERATOR
RELIABILITY MUST-RUN UNIT
CAPITAL ITEM AND REPAIR PROGRESS REPORT

| | |
|----------------------------------|---------------------------------|
| Date: | CAISO Project Number: |
| Facility: | Unit: |
| Owner: | Location: |
| Capital Item or Repair: | |
| Original In-Service Date: | Current In-Service Date: |

If Current In-Service Date has changed, describe the reason why:

Describe any additional costs or savings resulting from the change in the Current In-Service Date:

Describe what portion of any additional costs Owner is requesting CAISO to pay, and why Owner believes that CAISO should be obligated to pay those additional costs:

Schedule M

Not Used Mandatory Market Bid for Condition 2 Units

When Dispatched by the CAISO

Energy Bid

The bid the Owner of a Condition 2 Fossil Fuel Unit must submit into Energy markets when dispatched by the CAISO is given in Equation M-1a (for Units with input/output data in polynomial form) or Equation M-1b (for Units with input/output data in exponential form):

Equation M-1a

$$\text{Energy Bid (\$/MWh)} = \frac{(AX^3 + BX^2 + CX + D)}{X} \quad P \quad E$$

+ [Variable O&M Rate + Emissions Rates + Scheduling Coordinator Charge + ACA Charge]

Equation M-1b

$$\text{Energy Bid (\$/MWh)} = \frac{A \square (B + CX + De^{FX})}{X} \quad P \quad E$$

+ [Variable O&M Rate + Emissions Rate + Scheduling Coordinator Charge + ACA Charge]

Where:

- ~~_____ for Equation M-1a, A, B, C, D and E are the coefficients given in Table C1-7a;~~
- ~~_____ for Equation M-1b, A, B, C, D, E and F are the coefficients given in Table C1-7b;~~
- ~~_____ X is the Unit Availability Limit, MW;~~
- ~~_____ P is the Hourly Fuel Price as calculated by Equation C1-8 in Schedule C using the Commodity Prices most recently published before the day the bid is submitted.~~
- ~~_____ Scheduling Coordinator Charge (\\$/MWh): \$0.31.~~
- ~~_____ ACA Charge (\\$/MWh): The applicable annual charge for short term sales under 18 CFR Section 382.201 of the FERC Regulations.~~
- ~~_____ Variable O&M Rate (\\$/MWh): as shown on Table C1-18~~

For Units in the SCAQMD only

~~Emissions Rate (\\$/MWh) = Emissions Cost / Unit Availability Limit~~

~~Emissions Cost = (a) RECLAIM Cost + (b) NOx Emissions Cost + (c) Organic Gases Cost + (d) Sulfur Oxides Cost + (e) Particulate Matter Cost + (f) Carbon Monoxide Cost~~

~~(a) RECLAIM Cost = ((AX²+BX+C) * RECLAIM NOx Trading Credit Rate~~

$$(b) \text{ --- NOx Emissions Cost} = \frac{(AX^2+BX+C) \text{ --- NOx Emissions Fee}}{-2000}$$

Where:

A, B and C are the coefficients from Table C1-13;

X = Unit Availability Limit;

$$(c) \text{ --- Organic Gases Cost} =$$

$$4.76 \times 10^{-7} \text{ --- (Gas Fuel) Associated Emission Factor for Organic Gases --- Associated Emissions Fee for Organic Gases}$$

$$(d) \text{ --- Sulfur Oxides Cost} =$$

$$4.76 \times 10^{-7} \text{ --- (Gas Fuel) Associated Emission Factor for Sulfur Oxides --- Associated Emissions Fee for Sulfur Oxides}$$

$$(e) \text{ --- Particulate Matter Oxides Cost} =$$

$$4.76 \times 10^{-7} \text{ --- (Gas Fuel) Associated Emission Factor for Particulate Matter --- Associated Emission Fee for Particulate Matter}$$

$$(f) \text{ --- Carbon Monoxide Cost} =$$

$$4.76 \times 10^{-7} \text{ --- (Gas Fuel) Associated Emission Factor for Carbon Monoxide --- Associated Emission Fee for Carbon Monoxide}$$

Where:

Gas Fuel = $AX^3 + BX^2 + CX + D$ or $A(B + CX + De^{FX})$, depending on the form of heat input the Owner is using

- A, B, C, D are the coefficients from C1-7a or C1-7b;
- F is the coefficient from C1-7b;
- X = Unit Availability Limit;
- Factors and Associated Emission fees are determined in Schedule C, Section D.3.

The bid the Owner of a geothermal Condition 2 Unit must submit into Energy markets when dispatched by the CAISO is given in Equation M-2.

Equation M-2

$$\text{--- Energy Bid (\$/MWh)} = \text{Fuel Cost} + [\text{Variable O\&M Rate} + \text{Scheduling Coordinator Charge} + \text{ACA Charge}]$$

Where:

- The Fuel Cost is the Steam Price identified in Equation C2-1 in Schedule C. However, for purposes of this mandatory market bid, the value for the Steam Price will be zero for

~~Geysers Main Units until the cumulative Hourly Metered Total Net Generation during the Contract Year from all Units exceeds the Minimum Annual Generation given in Equation C2-2.~~

- ~~• Variable O&M Cost (\$/MWh): the cost shall be as shown on Table C2-1.~~
- ~~• Scheduling Coordinator Charge: \$0.31.~~
- ~~• ACA Charge (\$/MWh): The applicable annual charge for short-term sales under 18 C.F.R. Section 382.201 of the FERC Regulations.~~

Ancillary Services Bid

The bid the Owner of a Condition 2 Unit must submit into Ancillary Service markets when dispatched by CAISO is as follows:

$$\begin{array}{l}
 \text{Ancillary Services=} \\
 \text{Bid (\$/MW per hr)}
 \end{array}
 \left[\begin{array}{l}
 \text{Annual Fixed Revenue} \\
 \text{Requirement (\$)}
 \end{array} \right] + \left[\begin{array}{l}
 \text{Annual Fixed Revenue} \\
 \text{Requirement (\$)}
 \end{array} \right]$$

| | | | | | |
|--|----------------|----------|--|----------|----------|
| | 30 minutes x | Target | | Maximum | Target |
| | Unit's Highest | Availabl | | Net | Availabl |
| | Ramp Rate | e Hours | | Dependa | e Hours |
| | from Schedule | | | ble | |
| | A, MW/min | | | Capacity | |

2

~~Annual Fixed Revenue Requirement is shown in Schedule B.
 Target Available Hours is shown in Schedule B.
 The product of 30 minutes times the Unit's highest Ramp Rate in Schedule A shall not exceed the Unit's Maximum Net Dependable Capacity.~~

SCHEDULE N-1

**Not Used NON-DISCLOSURE and CONFIDENTIALITY AGREEMENT
FOR RESPONSIBLE UTILITY**

~~[Name of Responsible Utility] (the "Responsible Utility") acknowledges that [Name of Owner] ("Owner") and the California Independent System Operator Corporation ("CAISO") (jointly, the "Providing Parties" and severally, the "Providing Party") have agreed to provide certain information to the Responsible Utility pursuant to certain provisions of the Must-Run Service Agreement ("MRSA") between Owner and CAISO and as required for settlement and billing of charges under Article 9 of such Agreement. In order to permit the Responsible Utility to receive such Confidential Information from Owner or CAISO pursuant to the above-referenced provisions of the MRSA, the Responsible Utility and the Providing Parties hereby agree as follows:~~

- ~~(1) For purposes of this Non-Disclosure and Confidentiality Agreement, the term "Confidential Information" shall have the same meaning it has in Section 12.5 of the MRSA, a copy of which is appended;~~
- ~~(2) The Providing Parties shall provide such Confidential Information pursuant to the terms of this Non-Disclosure and Confidentiality Agreement;~~
- ~~(3) The Responsible Utility shall keep such Confidential Information confidential, shall use it only for the purposes related to the MRSA, and shall limit the disclosure of any such Confidential Information to only those personnel within its organization with responsibility for using such information in connection with the MRSA. Such personnel may not include any person whose duties include (i) the marketing or sale of electric power or natural gas or gas transportation capacity at wholesale or retail, (ii) the purchase of electric power or natural gas or gas transportation capacity at wholesale or retail, (iii) the direct supervision of any employee with such responsibilities, or (iv) the provision of electricity or natural gas marketing consulting services to any employee with such responsibilities;~~
- ~~(4) The Responsible Utility shall assure that personnel within its organization read and comply with the provisions of this Non-Disclosure and Confidentiality Agreement;~~
- ~~(5) The Responsible Utility shall use all reasonable efforts to maintain the confidentiality of the Confidential Information in any litigation, and shall promptly notify the providing Party of any attempt by a third party to obtain the Confidential Information through legal process or otherwise;~~
- ~~(6) The Responsible Utility may use Confidential Information in litigation or regulatory proceedings related to the Must-Run Service Agreement between Owner and CAISO but only after notice to the Providing Party and affording the Providing Party an opportunity to obtain a protective order or other relief to prevent or limit disclosure of the Confidential Information.~~

~~The Responsible Utility agrees to be bound by the terms of Section 12.5 of the MRSA in the same manner and to the same extent as the Providing Parties. The person signing on behalf of the Responsible Utility represents that he/she is authorized to bind the Responsible Utility to the terms of this Non-Disclosure and Confidentiality Agreement.~~

~~The undersigned signatory represents that he/she is authorized to bind the Responsible Utility, to the terms of this Non-Disclosure and Confidentiality Agreement.~~

Signature: _____
Name: _____
Title: _____
Responsible Utility: _____

Address: _____

Telephone: _____

Signature: _____

Name: _____

Title: _____

Owner: _____

Address: _____

Telephone: _____

Signature: _____

Name: _____

Title: _____

California Independent System Operator Corporation

Address: _____

Telephone: _____

**NON-DISCLOSURE and CONFIDENTIALITY AGREEMENT
FOR PERSONS OTHER THAN THE RESPONSIBLE UTILITY**

[Name of] (the "Receiving Party") acknowledges (a) that [Name of Owner] ("Owner") has agreed to provide Confidential Information to the California Agency Receiving Party pursuant to certain provisions of the Must-Run Service Agreement ("MRSA") between Owner and the California Independent System Operator Corporation ("CAISO"), in connection with discussing the possible execution of such an MRSA, and (b) that Owner and CAISO (jointly, the "Providing Parties" and severally, the "Providing Party") may provide Confidential Information on a need-to-know basis to Owner's Scheduling Coordinator, financial institutions, agents and potential purchasers of interests in a Unit; and, as required for settlement and billing, to Scheduling Coordinators responsible for paying for services provided under the MRSA between Owner and CAISO. In order to permit the Receiving Party to receive such Confidential Information from Owner or CAISO, the Receiving Party and the Providing Parties hereby agree as follows:

- (1) For purposes of this Non-Disclosure and Confidentiality Agreement, the term "Confidential Information" shall have the same meaning it has in Section 12.5 of the pro forma MRSA, except that the definition in Section 12.5 of the MRSA shall be deemed also cover comparably designated information provided in connection with discussions concerning the possible execution of an MRSA between Owner and CAISO, a copy of which is appended;
- (2) The Providing Parties shall provide such Confidential Information pursuant to the terms of this Non-Disclosure and Confidentiality Agreement;
- (3) The Receiving Party shall keep such Confidential Information confidential, shall use it only for the purposes related to the MRSA under discussion, and shall limit the disclosure of any such Confidential Information to only those personnel within its organization with responsibility for using such information in connection with the MRSA upon their execution of this Non-Disclosure and Confidentiality Agreement. Such personnel may not include any person whose duties include (i) the marketing or sale of electric power or natural gas or gas transportation capacity at wholesale or retail, (ii) the purchase of electric power or natural gas or gas transportation capacity at wholesale or retail, (iii) the direct supervision of any employee with such responsibilities, or (iv) the provision of electricity or natural gas marketing consulting services to any employee with such responsibilities;
- (4) The Receiving Party shall assure that personnel within its organization authorized to receive Confidential Information read and comply with the provisions of this Non-Disclosure and Confidentiality Agreement;
- (5) The Receiving Party shall use all reasonable efforts to maintain the confidentiality of the Confidential Information in any litigation, and shall promptly notify the providing Party of any attempt by a third party to obtain the Confidential Information through legal process or otherwise;
- (6) Retention; Destruction. All Confidential Information (including all copies) shall, at a Providing Party' request and direction, either be promptly returned to the Providing Party or destroyed at the conclusion of the term of the MRSA, except to the extent prohibited by law. Notwithstanding the foregoing, electronic copies of materials or summaries containing or reflecting Confidential Information that are generated through data backup and/or archiving systems and which are not readily accessible by the Receiving Party or its personnel, shall not be deemed to violate this Non-Disclosure and Confidentiality Agreement, provided that such Confidential Information is not disclosed in violation of the other terms of this Non-Disclosure and Confidentiality Agreement.

The Receiving Party agrees to be bound by the terms of Section 12.5 of the pro forma MRSA in the same manner and to the same extent as the Providing Parties. The person signing on behalf of the Receiving Party represents that he/she is authorized to bind the Receiving Party to the terms of this Non-Disclosure and Confidentiality Agreement.

Signature:

Name:

Company:

Title:

Receiving Party:

Address:

Telephone:

Signature:

Name:

Owner:

Title:

Address:

Telephone:

Signature:

Name:

California Independent System Operator Corporation

Title:

Address:

Telephone:

Schedule O

Not Used RMR Owner's Invoice Process

The following principles and practices shall govern the submission of invoices to the CAISO for Energy and Ancillary Services provided under this Agreement ("RMR services"):

- ~~1. Invoices submitted by Owner to the CAISO for RMR services shall be clear, understandable and complete.~~
- ~~2. The CAISO, all RMR Owners and Responsible Utilities shall agree on the RMR invoice template, which agreement shall not be unreasonably withheld, prior to its implementation. The CAISO shall publish the current version of the RMR invoice template by including it on the CAISO Website. The CAISO will specifically tell each Owner and Responsible Utility where on the CAISO Website this RMR invoice template can be found. Each Owner shall use the then current RMR invoice template for invoicing RMR services for each Facility. The RMR invoice template may change from time to time. The CAISO shall notify the California Agency, all RMR Owners and Responsible Utilities when a new agreed upon RMR invoice template has been placed on the CAISO Website.~~
- ~~3. Subject to the provisions of paragraph 4 below, a Completed RMR invoice based on the version of the RMR invoice template posted on the CAISO Website seven days prior to submission of the invoice shall be deemed to satisfy the requirements of this Agreement. As used herein, the term "Completed RMR invoice" means that: (a) all of the raw data required to calculate debits and credits have been included; (b) all calculations have been performed in accordance with the formulae in the current RMR invoice template, or in the event that Owner believes a conflict exists between one or more formula(s) in the RMR Owner's invoice and the corresponding formula in the RMR invoice template, such conflict has been identified and substitute equations have been documented and used at the appropriate location(s) in the invoice; (c) linkages between invoice levels are identified; (d) all billing and service assumptions, data inputs and formulae reasonably necessary to understand the derivation of each charge on the invoice has been included; and (e) the invoice has been provided to the CAISO and the Responsible Utility.~~
- ~~4. The Estimated RMR invoice or the Adjusted RMR invoice timeline set forth in the CAISO's RMR Payments Calendar (for the appropriate invoice) shall not commence, payments shall not be made and interest shall not begin to accrue until a Completed RMR invoice has been submitted to the CAISO and Responsible Utility.~~
- ~~5. In the event of any conflict between the RMR invoice template and this Agreement, this Agreement shall govern. The Owner or Responsible Utility detecting the conflict shall promptly give notice to the CAISO. The CAISO shall notify all RMR Owners and all Responsible Utilities as soon as practicable after a conflict has been identified.~~
- ~~6. If Owner identifies a conflict, Owner shall identify the conflict in its letter transmitting its completed Estimated or Adjusted RMR invoice to the CAISO and include therein Owner's revised formula, which will be effective until agreement has been reached among the CAISO, Owner, the other RMR Owners and the Responsible Utilities on the correct formula, or a decision has been rendered through ADR from which no further appeal is possible.~~
- ~~7. An RMR Invoice Task Force has been formed with representatives from each of the RMR Owners, the Responsible Utilities and the CAISO. When a conflict has been identified, the CAISO, Owner, the other RMR Owners and the Responsible Utility will participate in meetings of the RMR Invoice Task Force to reach agreement on a revised RMR invoice template. The RMR Invoice Task Force shall meet at least monthly until all conflicts are resolved. Once all conflicts have been resolved, the RMR Invoice Task Force will meet approximately every six months to address invoicing and payment issues.~~

- ~~8. The RMR Invoice Task Force also shall be responsible for simplifying the RMR invoices so that they are easier to process and less burdensome to prepare.~~
- ~~9. To the extent that the Owner, the CAISO and the Responsible Utility have agreed, certain columns in the Owner's RMR invoice template shall be standard for the Facility and shall not change. The Owner shall not be required to complete such columns each month on its invoice for it to be considered a Completed RMR invoice, unless the underlying information requirements change.~~
- ~~10. Owner shall supply monthly RMR Level 0-3 invoice information in accordance with the RMR invoice template for each Responsible Utility service territory as follows:
 - ~~1. Level 0: the summary invoice for Owner's total amount invoiced to the CAISO for all of Owner's Facilities;~~
 - ~~2. Level 1: the summary invoice for all RMR Units at a Facility;~~
 - ~~3. Level 2: the detailed calculated information for individual RMR Units at the Facility; and~~
 - ~~4. Level 3: the detailed hourly data for individual RMR Units at each Facility.~~~~

~~Each invoice shall contain such other information as is necessary to perform the calculations, including indicated netted meter reads, CAISO Dispatch Notice information (both day-ahead, real time, and adjustments), Owner's Availability Notice information and final market schedule information. No quantities shall be left blank. Each assumption made by the Owner to perform a calculation shall be listed and explained either in the appropriate Level 0-3 template under Notes or in a transmittal letter accompanying the invoice.~~

~~The methods described shall be used to calculate quantities such as Hourly Fuel Price, Hourly Emissions Cost and Start-up calculations used as input data in the RMR invoice template.~~

~~Owner shall indicate any data appearing on the invoice which it considers confidential. Responsible Utility may use the data in accordance with Section 12.5 and Schedule N of this Agreement.~~

Schedule P

Not Used Reserved Energy for Air Emissions Limitations

This Schedule P applies only to Units located within the San Diego Air Quality Control Basin (“Basin”).

1. ~~For purposes of this Schedule P, the term Emission Limitation means present or future limitations on the discharge of air pollutants or contaminants into the atmosphere specified by any federal, state, regional or local law (“Clean Air Law”), by any regulation, air quality implementation plan, or permit condition promulgated or imposed by any agency authorized under any such Clean Air Law or by the judgment of any court of competent jurisdiction.~~
2. ~~(a) Except as set out in Sections 2 (b) and (c), if a Facility is located in the Basin and is subject to an Emission Limitation that would limit the MWh that can be produced from the Facility during the Contract Year or part thereof (such Contract Year or part being referred to as the “Limitation Period”), Owner shall, so long as some or all of the Units at the Facility are operating under Condition 1, reserve for the Facility for each Month of the Limitation Period for dispatch under this Agreement, a quantity of MWh equal to the average monthly Requested MWh for the Facility for that Month in the 36 Months preceding the next Contract Year (the “Monthly Reserved MWh”).~~
 - ~~(b) If there are less than 36 Months of Requested MWh preceding the next Contract Year, the Monthly Reserved MWh for the Limitation Period shall be determined by agreement between CAISO and Owner. If Owner and CAISO are unable to reach agreement by October 31 preceding the next Contract Year, Owner or CAISO may refer the matter to ADR under a schedule (specified by the arbitrator if the participants cannot agree) requiring a decision within 30 days following appointment of the arbitrator.~~
 - ~~(c) (i) If the Monthly Reserved MWh has been determined in accordance with Section 2(a) and this Agreement terminates as to a Unit at the Facility, the Monthly Reserved MWh shall be adjusted downward to the average of the Requested MWh for the Units that remain subject to this Agreement for the same 36 Month period previously used to calculate the Monthly Reserved MWh.~~
 - ~~(ii) If the Monthly Reserved MWh has been determined in accordance with Section 2 (b) and the Agreement terminates as to a Unit at the Facility, the adjustment shall be determined by agreement of Owner and CAISO. If the Parties are unable to reach agreement at least 45 days before the Agreement terminates as to the Unit, Owner or CAISO may refer the matter to ADR under a schedule (specified by the arbitrator if the participants cannot agree) requiring a decision within 30 days following appointment of the arbitrator~~
3. ~~The Monthly Reserved MWh are set forth on Schedule A. No less than 15 days before the beginning of each Contract Year, Owner shall make a Section 205 filing limited to changing the terms of Schedule A to revise the Monthly Reserved MWh determined in accordance with Section 2. The revised Monthly Reserved MWh shall be effective from the first day of the Contract Year.~~
4. ~~If the sum of the Billable MWh and Hybrid MWh during a Month is less than the Monthly Reserved MWh, CAISO may:~~
 - ~~(a) carry forward into the following Months of the Limitation Period all unused Monthly Reserved MWh, provided the cumulative unused MWh that are carried forward into the following Months may not exceed 20% of the aggregate Monthly Reserved MWh for the remainder of the Limitation Period including the Monthly Reserved MWh for the Months into which unused Monthly Reserved MWh are to be carried forward, or~~
 - ~~(b) carry forward less than all unused Monthly Reserved MWh and release to Owner the~~

~~Monthly Unused Reserved MWh not carried forward.~~

~~CAISO shall notify Owner of the amount of unused Monthly Reserved MWh to be carried forward within 3 Business Days after the beginning of the next Month.~~

- ~~5. CAISO may elect to reduce the aggregate Monthly Reserved MWh for the remainder of the Limitation Period by notifying Owner not less than 5 days prior to the beginning of the Month in which the reduction is to be effective. Notwithstanding the foregoing, if CAISO or Owner forecasts that usage will approach the Emission Limitation in the last Month of the Limitation Period, CAISO and Owner shall closely coordinate to release any unused Monthly Reserved MWh as soon as possible.~~
- ~~6. If there are unused Monthly Reserved MWh for the Facility remaining at the end of the Limitation Period, CAISO shall pay the Unused Emission Reserve Payment. The Unused Emission Reserve Payment shall be the product of (a) the Unused Monthly Reserved MWh Payment Rate and (b) the lesser of (i) the unused Monthly Reserved MWh carried forward by the CAISO into the last Month of the Limitation Period and (ii) the unused Monthly Reserved MWh remaining at the end of the Limitation Period. The Unused Monthly Reserved MWh Payment Rate shall be \$10 per MWh. The Unused Emission Reserve Payment shall be included in the invoice for the last Billing Month of the Limitation Period.~~
- ~~7. If the CAISO determines that the Monthly Reserved MWh have become insufficient due to a Force Majeure Event at the Facility or at Reliability Must-Run Units at another facility or because of an outage on the CAISO Controlled Grid or the Distribution Grid due to a Force Majeure Event, CAISO may request Owner to undertake, and if so requested, Owner shall undertake all such necessary and commercially reasonable measures approved in advance by CAISO and the Responsible Utility to (a) obtain, where possible, a modification or variance from applicable Emission Limitations, or (b) procure necessary emission reduction credits or allowances sufficient to offset emissions in excess of Emission Limitations to enable Owner to provide additional MWh dispatched by the CAISO to meet reliability requirements arising by reason of such Force Majeure Event. CAISO shall reimburse Owner for all reasonable costs of procuring such emission reduction credits or allowances.~~
- ~~8. If the CAISO wishes to dispatch a Unit at a Facility that is within 5% of exceeding its Monthly Reserved MWh for the Limitation Period, the CAISO shall first dispatch Units at other Facilities that are not within 5% of the Monthly Reserved MWh during the Limitation Period if the other Unit(s), in the CAISO's sole judgment, provide equivalent reliability benefits.~~
- ~~9. If any Emission Limitation affecting the Facility materially changes, CAISO and Owner promptly shall renegotiate this Schedule P to reflect such change. If CAISO and Owner are unable to agree on revisions to this Schedule P, the Owner may file a revised Schedule P with FERC under Section 205 of the Federal Power Act for the limited purpose of taking such changes in the Emissions Limitation into account. Such filing may be with or without the concurrence of the CAISO, but CAISO reserves its right to protest any such filing.~~

Attachment C – Governing Board Memos
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation

Memorandum

To: ISO Board of Governors

From: Keith Casey, Vice President, Market & Infrastructure Development

Date: March 20, 2019

Re: **Decision on reliability must-run and capacity procurement mechanism enhancements proposal**

This memorandum requires Board action.

EXECUTIVE SUMMARY

At the November 2, 2017, Board of Governors meeting, Management committed to examine the relationship between reliability must-run (“RMR”) and capacity procurement mechanism (“CPM”) procurement and explore whether they can be better aligned or consolidated.

The California Public Utilities Commission (“CPUC”) and other local regulatory authorities have established resource adequacy (“RA”) programs designed to ensure that the ISO has sufficient resources offered into its market to maintain reliable grid operation. However, there can be circumstances where the RA capacity may not be sufficient to meet the ISO’s operational needs. In this case, the ISO uses provisions within its tariff authority to procure backstop capacity. The current provisions for backstop capacity include both the CPM and RMR. The CPM was developed in 2010 as the primary mechanism for procuring capacity in the event that load serving entities under-procured their RA requirement or when the RA capacity is insufficient to meet an unforeseen reliability need. The ISO’s RMR provisions have been in place and largely unchanged since the start of the ISO in 1998. The RMR provisions were designed to provide the ISO with the ability to procure resources needed to meet special reliability needs or to keep resources online that would otherwise be retired or taken out of service for a prolonged period (mothballed).

The addition of significant amounts of renewable resources to meet the state’s environmental goals has put many conventional resources under financial stress due to declining energy market revenues. As a result, the ISO has seen the need for increased backstop capacity procurement to ensure that critical reliability resources are available to meet the ISO’s operational needs. Stakeholders have raised

concerns that the ISO's current backstop procurement provisions are outdated and unclear as to when procurement should occur under CPM versus RMR. To address these concerns, Management proposes a comprehensive set of enhancements to its CPM and RMR backstop provisions. The proposed enhancements include:

- Clear rules for how and when RMR and CPM backstop procurement are used;
- Provisions for advance notice of upcoming resource retirements that could trigger future ISO backstop procurement;
- Simplified RMR structure with all retirement-related backstop procurement in the RMR tariff and only one compensation structure for RMR – cost of service;
- Must-offer obligation on RMR resources;
- Resource availability incentive mechanism based on methodology currently used for RA and CPM resources to ensure RMR resource bidding and availability;
- Updated rate of return for RMR resources and streamlined and automated RMR settlement leveraging existing ISO systems and processes; and
- More appropriate pricing for bids above the CPM soft-offer cap based on going-forward fixed cost compensation.

Management believes that the proposed clarifications and enhancements will result in the proper incentives for load serving entities and supply resources to contract to meet the ISO's reliability needs as the primary mechanism for securing sufficient resource capacity to meet operational needs. In the event ISO backstop capacity procurement is needed, the proposed enhancements provide effective measures to ensure that the ISO has the ability to procure resources needed to maintain a reliable grid and provide appropriate compensation for those resources.

Management proposes the following motion:

Moved, that the ISO Board of Governors approves the reliability must-run and capacity procurement mechanism enhancements proposal described in the memorandum dated March 20, 2019; and

Moved, that the ISO Board of Governors authorizes Management to make all necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposal described in the memorandum, including any filings that implement the overarching initiative policy but contain discrete revisions to incorporate Commission guidance in any ruling on the proposed tariff amendment.

BACKGROUND

Since ISO startup in 1998, the ISO has had the authority to procure essential reliability services through RMR contracts. Under RMR contracts, resources are paid their full cost of service rates in exchange for being available for dispatch by the ISO to meet grid reliability needs. There were many RMR resources in the early years of ISO operations. In 2005, the RA program was established. It required resource procurement up to a planning reserve margin. This was accompanied by new backstop tariff provisions developed by the ISO in 2006 to procure for RA deficiencies that are now under the current CPM provisions. Under CPM, the ISO has the authority to competitively procure resources based on capacity bids to ensure the reliable operation of the grid under the following situations: (1) insufficient system, local or flexible RA capacity in year-ahead and/or month-ahead RA showings; (2) a collective deficiency of local capacity resources; (3) a “significant event” occurs; (4) ISO “exceptional dispatches” non-RA capacity; or (5) a resource is at risk of retirement that is needed for reliability in a future year. The ISO has updated the CPM several times since its inception.

RA procurement by load serving entities greatly minimized the need for RMR contracted resources. Between 2010 and 2016 there were only a handful of RMR resources under contract. However, in 2018 there was an uptick in the number of RMR resources – largely because of changes that have occurred on the system and in the market that has caused gas-fired resources to face increasing retirement pressures. Recent backstop procurement has identified concerns about the ISO’s current framework for RMR and CPM procurement. Stakeholders have argued that the 20-year-old RMR construct requires a holistic review and overhaul to reflect the needs of the transforming grid and to remain a viable backstop procurement mechanism. Also, stakeholders requested additional clarity for when CPM versus RMR procurement applies. Under the current construct, resources have some ability to select which backstop procurement construct (RMR or CPM) will provide them with the greatest revenue. Many market participants have raised concerns that the ISO’s backstop procurement mechanisms, due to their different compensation structures, may be providing inefficient incentives for resources to enter into the appropriate (RA, CPM or RMR) capacity contracts.

PROPOSAL

The ISO engaged with stakeholders over the past year to help develop enhancements to the RMR and CPM procurement mechanisms. The primary focus of this initiative was (1) “modernizing” the RMR agreement, (2) combining all retirement-related backstop procurement under RMR, and (3) clarifying when the ISO would use its RMR

versus CPM backstop procurement authority. Management has determined that CPM and RMR fill distinct backstop functions. Therefore, Management proposes to retain both the RMR and CPM backstop procurement mechanisms, with the following enhancements.

General Enhancements

Rules for Use of RMR and CPM

Management proposes clear rules for when the ISO would use either the RMR or CPM mechanism to procure capacity. Under the proposal, the ISO will only use RMR procurement to retain resources that would otherwise retire but are needed to maintain reliable grid operations. CPM will be used for all other backstop capacity procurement including curing load serving entity RA-procurement deficiencies, capacity needed for significant events on the grid that caused an unforeseen reliability need, and exceptional dispatches of non-RA resources.

Early Notification of Planned Resource Retirements

Management has established a report on the ISO website that notifies stakeholders when a resource has informed the ISO that it is planning to retire or mothball, thereby making the entire resource unavailable for an extended period of time. The report includes all resource notifications, regardless of size. For resources larger than 45 MW, the ISO expressly notifies stakeholders through a market notice. This early notification, which was implemented on July 6, 2018, provides stakeholders with information on upcoming resource retirements or mothballs that may trigger future ISO backstop procurement. Load serving entities can then consider procuring that resource, or other resources that can substitute for that resource's reliability contribution, in lieu of the ISO procuring that resource through its backstop procurement authority.

RMR Enhancements

Formal Retirement/Mothball Notice for RMR Designations

As discussed above in the early notification section, a resource can inform the ISO that it is planning to retire or mothball, thereby making the entire resource unavailable for an extended period of time. Stakeholders have raised concerns that the current RMR framework enables resources that may be planning to retire or mothball to "fish" to see if their resource is needed for reliability and therefore a possible RMR designation. This may cause resources to withhold from entering into an RA contract if they believe they could receive greater revenue through an RMR agreement. To address this concern, Management proposes that a resource owner must first submit

a formal retirement notice to the ISO before the ISO will study the need for the resource. Any resource that wants to be considered for an RMR designation must submit a formal, notarized retirement or mothball affidavit to the ISO. The affidavit will require the resource owner to state if it is retiring or mothballing because it is uneconomic for the resource to remain in operation, and eligible to receive an RMR designation, or if the resource is retiring for other reasons (such as loss of license). The notice must be signed by an officer of the company attesting that the resource will not remain in service and the decision to retire or mothball is definite unless some other type of ISO procurement of the resource occurs, the resource is sold to a non-affiliated entity, the entity receives some other contracts, or the resource enters into an RA contract. In the formal retirement or mothball notice, the resource must state that it is planning to retire or mothball at a certain date, but no later than 90 days prior to the date the resource intends to stop service. If the resource subsequently wants to come out of its mothball status early, it must submit a formal notice to the ISO that states which of the four conditions have changed for the resource, *i.e.* some other type of ISO procurement of the resource occurs, the resource is sold to a non-affiliated entity, the entity receives some other contracts, or the resource enters into an RA contract. The ISO has the right to refer the resource owner to the Federal Energy Regulatory Commission (“FERC”) if it appears that false information was submitted by the resource owner.

In addition, Management proposes to add new elements to the current retirement and mothball process to make it more orderly, mitigate the impacts on the RA program, and provide a longer runway for resource owners, if they so choose, to make significant business decisions in a timely manner. If a resource is an RA resource in the current RA year and is planning to retire or mothball, and the owner wants a longer runway to make decisions, it may submit a notice by February 1 of the current RA year and the ISO will perform a study and inform stakeholders of the results of the study by May 15. However, the ISO will not start its RMR procurement process for such a resource until September 1. This delay until September 1 provides an opportunity for LSEs to procure the resource rather than the ISO through RMR. This approach is consistent with the current RMR timeline where the ISO typically seeks new RMR designations from the Board at the September Board meeting. This timeline provides the necessary time for the ISO to negotiate the RMR agreement, which must be filed by October 31 (for a January 1 effective date) to satisfy the 60-day notice requirement in the Federal Power Act. Any new RMR designations will be conditional to allow for stakeholders to procure such resources prior to the end-of-October deadline for submitting annual year-ahead RA showings. This process can provide early information to resources that have submitted retirement or mothball notices that they

are not needed for reliability and can retire or mothball, or are needed and will be procured as RMR if they do not receive an RA contract, thus allowing the resource owner time to plan for the upcoming year.

Move Risk of Retirement CPM Authority into the RMR tariff section

The ISO currently has authority through the CPM section of the tariff to procure a resource that is at risk of retirement and is not needed for reliability in the next year but is needed in the following year. In this circumstance, the ISO can procure the resource for up to 12 months of the next year to provide a bridge to the second year with the expectation that load serving entities will procure the resource through an RA contract for year two. This type of bridging CPM authority has been referred to as “risk of retirement CPM.” Management proposes to merge the existing risk of retirement procurement authority from the CPM portion into the RMR portion of the tariff so there is one procurement mechanism for all retirement-related backstop procurement. As a result, all retirement procurement authority will be solely addressed through the RMR portion of the tariff, making the lines of authority clearer and more concise. The length of this type of RMR procurement will remain a maximum of one year, as it is now under the risk of retirement CPM tariff section.

Elimination of RMR Condition 1 Option

When RMR was initially established it made sense to offer resource owners an option where the owner could be paid for some of its fixed costs and also earn market rents that it could keep, known as “Condition 1.” Alternatively, the owner could be paid for all of its fixed and variable costs (i.e., “full cost of service”) and, in return, forfeit any market rents it earned, known as “Condition 2.” Currently a resource owner that enters into an RMR agreement can choose between the Condition 1 or Condition 2 option.

Management proposes to eliminate the Condition 1 option. Management proposes to retain only the Condition 2 option to ensure resources under RMR procurement receive no more than their regulatory approved cost of service, removing the potential incentive for resources to hold out of the bilateral capacity market for RMR procurement. This change also simplifies the RMR structure.

RMR Compensation and Rate of Return

RMR designations are mandatory, not voluntary. The ISO can require a resource seeking to retire or mothball to remain in service if the resource is necessary to maintain reliability. However, FERC precedent establishes the principle that for mandatory backstop procurement designations, an ISO/RTO must compensate a resource for its full cost of service, not merely its going forward costs.¹ Going-forward fixed costs do not include any rate of return, and therefore would imply a rate of return of zero percent, which would be inconsistent with this FERC precedent. Given this, the ISO is not proposing to change the current general RMR compensation structure of paying full cost of service, which includes a rate of return and may include major capital additions for major maintenance costs. As discussed above, Management proposes to retain the Condition 2 compensation scheme whereby the ISO will pay RMR resources their annualized full cost of service minus any market rents earned above the resource's variable costs. Full cost of service includes amortized fixed costs, necessary capital additions, and variable costs that the resource accrues while operating.

The ISO is, however, proposing to update the rate of return for an RMR resource's annual revenue requirements because the rate has not been updated in many years. The current fixed 12.25 percent return was established almost 20 years ago and is no longer applicable to current capital costs. Setting a new specific rate of return in a pro forma agreement that is generally applicable is challenging, so Management proposes to remove the 12.25 percent fixed rate of return currently in the pro forma agreement and require that a resource owner specify and support a rate of return for its FERC filing following designation for RMR service. This new approach is consistent with how rate cases are handled and it is the RMR owner who is responsible for filing the RMR agreement as its own rate schedule following ISO designation for RMR service. This approach is also consistent with how resources establish rate of return in rate cases for RMR service in other ISO/RTOs.² FERC establishes rates of return that reflect current capital market conditions while considering the individual RMR owners' unique debt and equity amounts reflected on their books.

¹ For example, in the 2016 order on compliance and rehearing to the New York ISO ("NYISO"), FERC rejected "arguments in this compliance proceeding that a generator should not be eligible to request compensation up to its full cost-of-service under NYISO's proposal." In its prior order, FERC stated that compensation to an RMR generator "must at a minimum allow for the recovery of the generator's going-forward costs, with parties having the flexibility to negotiate a cost based rate up to the full cost of service."

² See, e.g., Constellation Mystic Power, LOC, 164 FERC ¶ 61,127 (2018).

Must-Offer Obligation for RMR Resources

Management proposes that RMR resources have a must-offer obligation that is similar to the must offer obligation of RA resources. Under the proposal, all RMR resources will have a 24x7 must-offer obligation to the ISO market and be required to bid at a specified marginal cost-based rate so that the market can capture the energy value of the resource. Like RA resources, RMR resources will also be subject to bid generation if they do not bid, unless it is a use-limited resource.³ RMR resources must be in the market for all hours that the resource is physically capable of submitting bids, with the market committing and dispatching the resource based on the bid cost of the resource. Because the ISO pays the RMR resource its full annual cost of service, it is appropriate to have the resource's full participation in the energy and ancillary services market at a cost-based rate. Less than full participation could lead to unnecessary over-procurement and ratepayers not receiving the full value of the RMR resource. RMR resources must bid into the market at their full marginal energy and commitment costs. This will ensure that they are optimally scheduled and dispatched by the ISO market. Bid costs must include fuel, operation and maintenance, greenhouse gas emission, and grid management charge. Bids also must include major maintenance costs, and opportunity cost adders that reflect certain operational limitations of use-limited RMR resources.

Performance Incentive Mechanism for RMR Resources

It is important that RA, CPM and RMR resources all have performance incentives so they are motivated to provide the services for which they were procured. RA and CPM resources are subject to the resource adequacy availability incentive mechanism ("RAAIM"). RMR resources are currently subject to two performance penalties: (1) an hourly financial penalty for not being in full compliance with an RMR dispatch notice, and (2) a financial adjustment made at the end of the RMR agreement year if the RMR resource has exceeded the historical long-term planned outage availability metric established for that year.

Management proposes to eliminate these two RMR performance incentive provisions because they do not provide an incentive to submit bids and they limit the ISO's ability to streamline the RMR settlement process by requiring the ISO to track and validate availability in a separate tracking system from what the ISO uses for RA and CPM. Management further proposes that all RMR resources be subject to the RAAIM

³ The ISO will not submit bids for use-limited RMR resources because they are required to bid their opportunity costs determined by the ISO, which is not covered under the ISO's bid generation functionality. Use-limited RMR resources will have a 24x7 must-offer obligation under their contractual obligations just like non-use-limited RMR resources.

mechanism, which is the same performance incentive mechanism used for RA and CPM resources. The RAAIM penalty price for RMR resources will be the RMR agreement price in \$/kW-year. Using RAAIM as the RMR performance incentive allows the ISO to leverage current systems and functionality. If the ISO modifies RAAIM in the future, it can apply such a modified mechanism to RMR.

Cost Allocation for RMR Resources

Management proposes to shift the cost allocation for RMR resources away from the participating transmission owners and directly to load serving entities who are the actual recipients of the RMR benefits.

Allocate Flexible RA Credits for RMR Resources

Management proposes to allocate flexible RA credits from RMR designations to load serving entities to the extent the resource has met the operational requirements to be a flexible RA resource. This approach is appropriate because the ISO is procuring the entire resource and all of its attributes when the resource is procured under RMR.

Streamline and Automate RMR Settlement and Banking

Management proposes to leverage the current ISO settlement system and interface to automate the RMR validation and invoicing processes. The ISO currently performs RMR settlement manually outside of the ISO settlements system, and this change will significantly improve the efficiency of the process.

Management proposes to lower banking costs associated with RMR invoicing by using the ISO's market clearing account for all payments from, and disbursements to, RMR parties. This change will simplify RMR by eliminating the current requirement that multiple bank accounts be established for each RMR resource.

Align System and Flexible RMR Authority

Management proposes to align the pro forma RMR agreement with the ISO's existing RMR tariff authority to designate for system reliability purposes. Currently the pro forma RMR agreement discusses only RMR procurement for local reliability needs. The ISO needs to update the pro forma RMR agreement to reflect RMR designations for system and flexible reliability needs.

CPM Enhancements

CPM Compensation

CPM is a capacity procurement mechanism that utilizes a competitive solicitation process where potential suppliers submit capacity offers (bids) for year-ahead, month-ahead and intra-month services. There is a “soft-offer cap” on bids, which is intended to be an estimate of the going forward fixed costs of the marginal resource needed on the system, plus 20 percent. The soft-offer cap serves as a “safe harbor” where bids submitted below the cap do not have to be cost-justified with FERC.⁴ A resource can offer a bid price above the soft-offer cap price, but must make a cost justification filing at FERC, and FERC must approve the price. Currently, cost-justification for prices above the soft-offer cap must be based on the formula for determining the annual fixed cost of service of an RMR resource.

CPM designations can be for a term of one to twelve months, depending on the reliability need. CPM designations are for the specific MW of capacity needed to meet a reliability need and are typically for less than the full capacity of a resource. The ISO procures only the amount of capacity it needs (unlike an RMR agreement where the ISO must procure the entire resource and all of its capacity). The overwhelming majority of CPM designations to date have been for one-month or two-month durations. The ISO has procured for a 12-month term only once.⁵

If a resource has voluntarily submitted a bid into the competitive solicitation process and the ISO accepts that bid, then that resource cannot decline the CPM designation. If there are no effective bids in the competitive solicitation process, the ISO can offer a resource that did not submit a bid a CPM designation at the soft-offer cap price. The resource may decline the designation because CPM procurement is voluntary and the resource did not submit a bid.

As discussed above, resources currently seeking a CPM rate above the soft-offer cap must file with FERC to obtain a resource-specific rate based on the resource’s full fixed cost of service using the formula contained in the pro forma RMR agreement. Stakeholders have raised concerns that the current CPM compensation is excessive for CPM offers above the soft-offer cap because it includes the resources’ full cost of service in addition to the retention of all energy market revenues. To address this concern, Management proposes to file two alternative proposals with

⁴ The soft-offer cap is based on a reference resource -- currently a merchant-constructed mid-cost, 550 MW combined cycle resource with duct firing. The CPM soft-offer cap is currently \$6.31/kW-month (\$75.68/kW-year).

⁵ In December 2017, the ISO procured capacity from three different resources to cure a year-ahead annual RA showing deficiency for 2018.

FERC to change the current approach. First, as its preferred approach, Management proposes to allow a resource to file at FERC based on its resource-specific going-forward fixed costs (using the same cost categories on which the CPM soft-offer cap is based) plus a 20 percent cost adder and the ability to retain all market rents. This approach aligns with current FERC-approved CPM soft-offer cap. The preferred approach reflects FERC's prior guidance that CPM compensation should provide for some fixed-cost compensation above going-forward costs since FERC previously rejected an ISO proposal to base CPM compensation on going-forward fixed costs plus a 10-percent adder. Management proposes to also file an alternative proposal that FERC can consider if it does not accept Management's preferred proposal. The alternative proposal provides that prices above the soft-offer cap would be based on a resource's going-forward costs without a 20-percent adder. The alternative proposal recognizes prior FERC orders in other parts of the country that backstop procurement mechanisms that are voluntary need only provide at a minimum for recovery of going-forward costs.

POSITIONS OF THE PARTIES

Most stakeholders support enhancements to RMR as they agree that the RMR construct needs to be updated. Also, most stakeholders support having only one mechanism for retirement-related backstop procurement. Most stakeholders agree that compensation for CPM offers above the soft-offer cap should be reviewed. However, some stakeholders advocate for far-reaching RMR and CPM changes beyond what Management is proposing and what was considered in this initiative, particularly around RMR and CPM pricing. Some parties strongly oppose specific aspects of ISO Management's proposal and these concerns are discussed below and in the stakeholder comments matrix that is provided as Attachment A. Management has had to balance many diverse stakeholder positions to arrive at this proposal.

Must-Offer Obligation

Several resource owners oppose a 24x7 must-offer obligation for RMR resources. They are concerned that requiring RMR resources to bid into the market all hours at cost-based prices will inappropriately suppress prices in the energy market and cause RMR resources to run excessively.

Management disagrees. Having RMR resources submit bids at full marginal costs will result in efficient pricing and dispatch. ISO/RTO markets are based on the premise that in a competitive wholesale electricity market a resource's efficient offer is approximately equal to its marginal costs. In the ISO's market, this includes major maintenance and opportunity costs, as applicable. Management proposes to require

RMR resources to include these costs in their bids. Thus, bids from RMR resources should not be below their marginal costs. The proposed pricing of cost-based RMR market bids is consistent with FERC's competitive pricing principles.

Some resource owners argue that a 24x7 must-offer obligation may cause some resources to run more than they have in the past. This may or may not be true, but the argument ignores that RMR resources with high marginal costs, reflecting fuel and heat rate and major maintenance costs, will have high RMR cost-based bids, and therefore will run infrequently. Further, use-limited RMR resources will be required to bid opportunity costs, if applicable, which will make their cost-based bids even higher and less likely to be dispatched. RMR resources that may have eligible use-limits will be required to establish those limits during the RMR agreement negotiation process, resulting in agreed-upon use-limits that are translated into opportunity cost adders. To the extent there are approved capital items, such costs would be reflected in the major maintenance adder component of the bids. Because RMR resources will be required to bid into the market during all hours at a specified marginal cost, it is particularly important for these resources to have opportunity costs and major maintenance adders included in bids to prevent the resource from running excessively. The RMR agreement will require the RMR resources to include these components as part of their cost-based bids.

Use of Resource Adequacy Availability Incentive Mechanism

Management proposes that RMR resources will be subject to RAAIM, similar to RA and CPM resources. Several stakeholders support this approach, but many oppose using RAAIM. They argue instead that the ISO should apply a 24x7 availability standard for each RMR resource. Some stakeholders object to RMR resources being able to avoid RAAIM by providing substitute capacity that is not electrically located at the same bus and does not have identical attributes. They argue that this will allow RMR resources to substitute capacity that does not have an equivalent RAAIM penalty price, is not required to bid at marginal cost, and may not meet the reliability need for which the ISO granted the RMR designation.

Management does not agree with stakeholder concerns. The RAAIM performance incentive and substitution rules work well in operating the grid. RA, CPM and RMR resources are all needed to meet the ISO's reliability needs. The procurement mechanism used does not necessitate a different resource availability obligation.

Some stakeholders argue that RMR resources will have no incentive to provide availability during hours outside of the RAAIM availability assessment hours. Instead, they argue that RMR resources should have a 24x7 performance obligation. The ISO

disagrees. RMR resources will have the same 24x7 must-offer obligation applicable to RA and CPM resources, and FERC has recognized that a capacity resource's failure to meet its energy market obligations (such as a must-offer obligation) may be a tariff violation. The ISO notes that RA and CPM resources can meet the same reliability needs (as can an RMR resource) and the ISO does not assess their performance on a 24x7 basis. It is not credible to suggest that RMR owners will only make their resources available to meet the RAAIM availability assessment hours and then make their resource unavailable in all the other hours of the day through declaring a forced outage. Management proposes to report RMR resources' compliance with their must-offer obligation to the ISO Department of Market Monitoring on a monthly basis.

Stakeholder concerns that RMR resources might be unavailable when needed is also effectively addressed by the ISO's outage coordination process. Operations engineers will not approve outages impacting reliable operation and will require mitigation or cancellation of other outages before approving an outage.

Some stakeholders note the ISO is considering possible alternatives to RAAIM in its ongoing RA enhancements initiative. They argue that adopting RAAIM for RMR resources is inappropriate while this initiative is ongoing. These stakeholders ignore that RA and CPM resources are currently subject to RAAIM. If the ISO adopts a different performance metric going forward, the ISO will also apply it to RMR resources to ensure consistency across RA, CPM and RMR.

CPM Compensation

Some stakeholders prefer a different formula than that proposed by the ISO for the price that can be bid above the CPM soft-offer cap price. These stakeholders argue for using either cost of service pricing with a claw back of all market rents or paying only going-forward fixed costs with perhaps some small adder (less than 20 percent) as a contribution to capital. The former is essentially RMR pricing and the type of pricing that is required for mandatory backstop procurement. Acceptance of a CPM designation is voluntary, not mandatory. FERC precedent makes clear that pricing of voluntary backstop procurement need only provide for the recovery of going-forward fixed costs.

The recommendation of going-forward fixed costs plus a small adder ignores the fact that FERC previously rejected an ISO proposal to base compensation on going-forward fixed costs plus a 10-percent adder. The current CPM soft-offer cap is based on a 20-percent adder. FERC has been clear that CPM pricing must provide for some meaningful fixed-cost contribution to permit resources to undertake necessary

upgrades and capital maintenance. Management's preferred proposal for a price that can be bid above the soft-offer cap price is consistent with FERC's specific precedent regarding CPM compensation. The ISO's alternative approach, which FERC should consider only if it rejects the preferred approach, is based on FERC findings in other proceedings that voluntary backstop procurement must, at a minimum, provide for recovery of going-forward fixed costs.

Management seeks Board approval to file both primary and alternative tariff sheets. Timely approval is critical to the timely implementation of the ISO's proposal, and the filing of alternative tariff sheets will facilitate this outcome.

Several stakeholders sought changes to the CPM soft-offer cap, different compensation for CPM designations that last for 12 months, and/or imposition of additional market power mitigation measures. Some stakeholders argue that the ISO should consider paying only cost of service or going-forward fixed costs for 12-month CPM designations. These requested changes are beyond the scope of this initiative and the tariff changes Management is proposing. Management has committed to starting a stakeholder process this year to update the CPM pricing, including considering the compensation to be paid for 12-month CPM designations. The ISO tariff requires the ISO (or the California Energy Commission) to undertake a cost of service study before the ISO can change the CPM soft-offer cap. No such study has been undertaken at this time. Further changes to CPM pricing should be undertaken in connection with this cost study so that all decisions are based on the most up-to-date cost data. Also, there are significant implementation impacts associated with pricing 12-month CPMs differently that would not allow the RMR and CPM enhancements initiative to be implemented by the end of this year.

RMR Compensation

Several stakeholders want to reduce RMR compensation from the full cost of service pricing that has been in effect since the inception of RMR at the ISO. They argue for compensation that would not cover all of the amortized fixed costs, a rate of return, necessary capital additions, and variable costs that the resource accrues while operating. Management does not agree and believes that full cost of service compensation is appropriate given that the RMR designation at the ISO is mandatory. FERC precedent requires that mandatory backstop procurement -- like RMR -- be priced based on a resource's full cost of service, not just going-forward fixed costs.

Mothball Requirements

Several stakeholders want stronger requirements to mothball a resource than those proposed due to concerns that resource owners may “fish” for an RMR designation. To address this concern, the ISO has added additional requirements to the affidavit that must be submitted to mothball a resource.

Moving between RMR Procurement and Market Participation

Some stakeholders have expressed concern that the existing RMR provisions are not adequate to deter a resource from moving between RMR procurement and market participation. The ISO believes that its existing FERC-approved compensation rules appropriately address the potential of “toggling” between being an RMR resource and a market resource.

First, the RMR agreement compensates RMR owners for the year of RMR service on a year-by-year basis. RMR resources cannot voluntarily “toggle” between RMR and the market year-by-year. If the ISO offers an RMR agreement to a resource or an extension of an existing RMR agreement, the resource owner must accept it.

Second, to prevent resources from “fishing” for an RMR contract, if the resource is found not to be needed for reliability, it will be expected to retire or mothball as indicated in its affidavit.

Third, the ISO settlements system today and in the future will ensure that the RMR services provided are compensated at their cost of service. All market rents above those entitled under the agreement are applied to offset fixed costs payable under the RMR agreement. Thus, such RMR resources cannot recover amounts in excess of their FERC-approved fixed cost of service and actual variable costs.

Fourth, the ISO differs significantly from other ISOs/RTOs that have an RMR-like procurement mechanism in that the ISO does not upfront fund all capital addition costs. In other words, the accelerated, up-front payment of needed capital improvements that exist in other ISOs/RTOs does not exist in the ISO. Rather, the RMR resource owner must up-front fund or finance all capital additions. Each capital addition will have a depreciation schedule with the RMR compensation limited to the pro rata annual contribution for each year the resource remains under an RMR agreement. The ISO only compensates the RMR owner for a one-year portion of its capital addition costs for each year of RMR service based on the depreciation schedule, and FERC must approve the RMR agreement, including the depreciation schedule. Once the RMR agreement is terminated, the ISO’s contribution towards any balance of unpaid capital additions costs terminates if the resource returns to the market.



CONCLUSION

Management requests the ISO Board of Governors approve this proposal. The important enhancements to RMR and CPM are needed now and should be put in place promptly given the transforming needs of the grid.



Decision on reliability must-run and capacity procurement mechanism enhancements proposal

Keith Johnson
Infrastructure and Regulatory Policy Manager

Board of Governors Meeting
General Session
March 27, 2019

Capacity is procured through resource adequacy program and ISO Capacity Procurement Mechanism and Reliability Must-Run Agreements backstop provisions to ensure reliable grid operations.

RA program → Primary capacity procurement

CPM → ISO backstop of the RA program
Voluntary procurement

Short-term to address a reliability need:

- * Deficiency in RA showings
- * Exceptional dispatch of non-RA
- * Significant event

RMR → Procure resources for reliability need
Mandatory procurement
Longer-term to address a reliability need

Changes in the industry have created a need to update ISO's backstop capacity procurement authority.

- Meeting state's environmental goals has put conventional resources under financial stress due to declining energy market revenues
- Observed need for increased backstop procurement
- Current provisions need to be updated so critical resources continue to be available for operational needs
- At November 2017 Board meeting Management committed to undertake holistic review of backstop provisions

Management proposes several enhancements to ISO's backstop capacity procurement authority.

1. Clear rules for when RMR or CPM procurement is used
 - CPM used to backstop RA program
 - RMR used to address resources at risk of retirement that are needed for a period of time for reliability
2. Advance notice to stakeholders of upcoming retirements to allow procurement by load serving entities in lieu of ISO procurement

Enhancements (continued).

3. More appropriate CPM pricing above soft-offer cap

- Changing from cost of service to going-forward fixed cost plus 20%
- Aligns with CPM pricing below cap

4. Simplified RMR structure

- All retirement procurement done through RMR tariff
- Single option for compensation: full cost of service
- Use same performance mechanism as is used for other capacity

Enhancements (continued).

5. Formal affidavit notice to retire or mothball to mitigate potential gaming of RMR procurement
6. “Must-offer” obligation for RMR resources
7. Rate of return for RMR that reflects current market conditions
8. Streamlined and automated RMR settlement
9. Flexible Resource Adequacy credits for RMR resources

Stakeholder feedback:

- Agree RMR construct needs to be updated
- Support having one mechanism for all retirement-related backstop procurement (RMR)
- Concerned about resources being able to return to market after RMR service is over - “togglng” issue
- Request stronger requirements to mothball a resource
- Concerned RMR must-offer obligation will suppress prices and cause resources to run unnecessarily
- Concerned with using RAAIM “as is” for RMR

Stakeholder feedback:

- Request RMR compensation be decreased from full cost of service
- Agree price that can be bid for offers above CPM soft offer cap should be modified from current cost of service
- Some request different formula than what ISO proposes for price that can be bid above CPM soft-offer cap - want lower price
- Request a lower CPM price, or alternatively use cost of service pricing, for 12-month CPM designations

Management recommends the Board approve the RMR and CPM enhancements proposal.

- Management believes its proposal will result in efficient backstop capacity procurement provisions for maintaining reliable grid operations
- Provides needed updates to backstop provisions
 - Clarifies and streamlines procurement processes
 - Updates compensation methodologies
 - Full cost of service compensation is consistent with FERC precedent given RMR designation is mandatory
 - Existing compensation rules address potential toggling between being RMR resource and market resource

Memorandum

To: ISO Board of Governors

From: Eric Hildebrandt, Executive Director, Market Monitoring

Date: March 20, 2019

Re: DMM comments - Decision on reliability must-run and capacity procurement mechanism enhancements proposal

This memorandum does not require Board action.

EXECUTIVE SUMMARY

The Department of Market Monitoring (DMM) supports moving forward with Management's proposed changes to the capacity procurement mechanism (CPM) and reliability must run (RMR) contracts. The proposal includes incremental enhancements that address several of the key fundamental flaws in the current CPM/RMR backstop procurement framework:

- RMR Condition 2 resources will be subjected to a must-offer obligation.
- The ISO will seek to limit RMR designations only to units that would retire or mothball without RMR contracts.
- Any compensation sought by CPM units above the \$76/kW-year soft offer cap will be based on the unit's going forward fixed costs (GFFC), rather than going forward fixed costs plus full recovery of sunk fixed costs and a return on investment.

However, the ISO's proposal does not address some other key concerns with the ISO's current CPM/RMR procurement mechanisms that are needed as part of a comprehensive reform. The ISO has committed to reassessing the CPM soft offer cap in a separate stakeholder process in 2019.

DMM recommends that this process include consideration of other modifications, including tests for the competitiveness of CPM designations and modification of CPM compensation under uncompetitive conditions. DMM also recommends further assessment of changes in RMR compensation and strengthening of provisions to ensure RMR contracts are not provided for units that would not actually retire without RMR compensation.

MANAGEMENT PROPOSAL

In April 2018, FERC directed the ISO to work on comprehensive reforms to its backstop procurement design.¹ The *Draft Final Proposal* addresses several of the key fundamental flaws in the current backstop procurement framework. However, the ISO's proposal does not address some other key concerns with the ISO's current backstop procurement mechanisms that are needed as part of a comprehensive reform. DMM supports moving forward with the incremental improvements in management's proposal, but recommends the ISO continue working on further changes needed as part of a comprehensive reform.

Must-Offer Requirement for RMR Units

Under the current RMR Condition 2 contract option, units receive full cost recovery plus a return on sunk investment. The RMR contract refers to that as a unit's *annual fixed revenue requirement* (AFRR). When dispatched to operate, RMR unit owners are reimbursed for operating costs, with any net market revenues being used to offset the AFRR payments to the unit.

However, the current RMR Condition 2 contract severely restricts when RMR units can be dispatched to operate — even when it would be economic do so. This creates market inefficiency and is inequitable for ratepayers who pay the AFRR payments of the unit.

This key flaw in the Condition 2 contract has been well known ever since the Condition 2 contract was created through a 1999 settlement.² The potential impact of this flaw was highlighted in fall 2017, when almost 700 MW of very efficient and flexible gas-fired capacity was designated as RMR for 2018 and then selected the Condition 2 contract option.

Under Management's proposal, resources under RMR Condition 2 contracts will be subject to a must-offer requirement, which requires that generation from Condition 2 units be bid at marginal cost. This addresses a key flaw in the Condition 2 contract. However, as discussed later in these comments, DMM believes further modifications in the RMR Condition 2 payments and requirements for unit eligibility should be considered as part of a continued review of CPM compensation and other provisions.

¹ *Order rejecting tariff revisions*, ER18-641-000, April 12, 2018, p. 18.
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14887575>

² *Motion to Intervene and Protest of the Department of Market Monitoring of the California Independent System Operator Corporation*, ER18-240, November 22, 2017, at pp. 9-14.
<https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14762784>

Limiting RMR to Units Actually Facing Retirement

Under Managements proposal, the ISO will seek to limit RMR designations only to units that would retire or mothball without RMR contracts. DMM supports this goal, but recommends further clarification and restrictions of when CPM versus RMR should be used.

DMM's prior stakeholder comments note that the inclusion of resources indicating they will "mothball" (rather than retire) may have a major impact on the amount of resources that may end up under RMR contracts.³ In practice, it may be difficult to distinguish between a unit that the owner indicates will be mothballed for an undetermined length of time versus one that would mothball for an extended or indefinite period. DMM believes that details governing the eligibility of units that may mothball for RMR designations may have a major impact on the amount of resources that may end up under RMR contracts.

DMM supports the ISO's proposal to require an officer-signed affidavit when a retirement notice is submitted to the ISO. However, the *Draft Final Proposal* also states that the ISO will not subject retirement notifications to an economic assessment.⁴ Language relating to such economic assessment currently exists in Tariff Section 43 and the Reliability Requirements BPM.^{5,6} These tariff and BPM sections require a resource owner of a unit at risk of retirement to submit an affidavit along with supporting financial information to the ISO and DMM which attest and demonstrate a unit is uneconomic absent ISO procurement.

The ISO has indicated that it plans to remove this tariff and BPM language. DMM encourages the ISO to maintain, at minimum, the current ROR provision that the resource owner attest it will be uneconomic for its resource to remain in service in the upcoming year absent procurement by the ISO or other entity. This is needed to help deter units that should not retire due to economics but are needed for reliability from seeking RMR compensation.

³ *Comments on Reliability Must Run and Capacity Procurement Mechanism Enhancements Revised Straw Proposal*, Department of Market Monitoring, October 23, 2018, p. 3:

<http://www.caiso.com/Documents/DMMComments-ReliabilityMust-RunandCapacityProcurementMechanismEnhancements-RevisedStrawProposal.pdf>

⁴ *Draft Final Proposal*, p. 17.

⁵ Tariff Section 43A.2.6 (5)

⁶ *BPM for Reliability Requirements*, Section 12.6.4.

Proposed CPM Compensation

Cost filings above the soft offer cap

DMM and the ISO have a long history dating back to 1999 of supporting the principle that units needed for local or system reliability which have market power should be compensated based on going forward fixed costs plus a reasonable *contribution* to sunk fixed costs.⁷

Under tariff provisions that have been in place since 2016 units offered CPM designation by the ISO may seek payments in excess of the \$76/kW-year soft cap by filing at FERC using Schedule F of the pro forma RMR contract, which includes going forward fixed costs, plus full recovery of sunk fixed costs and a return on investment. CPM units also retain all net operating market revenues earned by operating in the ISO energy market. This level of compensation is unjust and unreasonable for entities bearing CPM costs and can create market inefficiencies.⁸

DMM supports changing cost recovery above the soft offer cap to a structure based on GFFC. However, the *Draft Final Proposal* would allow suppliers to file for recovery of their actual GFFC *plus* 20 percent and also retain all net market revenues. This may still allow for excessive cost recovery.

The ISO contends that the 20 percent adder is justified by prior FERC direction and is necessary to allow for some contribution to additional fixed costs. However, FERC's reasoning for rejecting the ISO's 2010 soft offer cap proposal (\$55/kW-year, based on a reference unit's GFFC plus a 10% adder) was simply that the ISO *had not demonstrated or explained* how the proposed methodology would provide sufficient revenues for several specific types of costs or scenarios not directly addressed in the ISO's proposal. As FERC explained:

...we find that CAISO has failed to demonstrate that the proposed long-term, fixed price CPM, which is based on a resource's going-forward costs plus a 10 percent adder, is just and reasonable compensation for the capacity procured to maintain reliable operations, and find that it may be unjust and unreasonable⁹

CAISO, in this filing, has not explained how the use of going-forward costs for CPM compensation will provide incentives or revenue sufficiency for resources to perform long-term maintenance or make improvements that may be necessary to satisfy new

⁷ *Motion to Intervene and Protest of the Department of Market Monitoring of the California Independent System Operator*, Docket No. ER18-641-000, February 2, 2018, pp.3-5, 11-15. http://www.caiso.com/Documents/Feb2_2018_DMMIntervention_Protest-RORCPM_ER18-641.pdf

⁸ *Ibid*, pp. 10-11.

⁹ *Order on tariff revisions*, 134 FERC ¶ 61,211, Docket No. ER11-2256, March 11, 2011, p. 19. <https://www.ferc.gov/whats-new/comm-meet/2011/031711/E-12.pdf>

environmental requirements or address reliability needs associated with renewable resource integration ...¹⁰

Based on this order, DMM does not believe that an adder less than 20 percent is inconsistent with prior FERC orders and guidance. The ISO has not yet sought to analyze or demonstrate in any FERC filing that a lower adder plus net market revenues received by CPM units would be sufficient to contribute to the type of additional fixed costs or plant upgrades cited by FERC.

In addition, DMM notes that the 2010 FERC ruling cited by the ISO applied to the *market-wide soft offer cap*, and did not apply to *resource-specific cost filings* above the soft offer cap. This represents a key difference, since resource specific cost filings ensure that compensation is based on the characteristics of each unit.

If the CPM process was competitive, suppliers would be expected to submit bids reflecting their GFFC *net* of projected market revenues, plus a reasonable profit. Instead, the ISO's primary proposal would allow suppliers to recover full GFFC *plus* 20 percent and also retain net market revenues. This may represent excessive compensation for units with locational market power.

Alternative proposal without 20 percent adder

The ISO proposes to also file an alternative framework for CPM compensation above the soft offer cap which would be based on a resource's GFFC *without* a 20 percent adder. While net market revenues may provide sufficient contribution to additional fixed costs for certain resources, under the alternative proposal there is no explicit contribution for the types of costs cited by FERC in its 2010 order (i.e. long term maintenance or environmental upgrades).

DMM has been recommending that instead of assigning an arbitrary percentage adder to GFFC (e.g. 20 percent) or allowing no adder at all (as in the alternative proposal), the ISO could allow suppliers seeking compensation above the soft offer cap to explicitly file for actual costs associated with long term maintenance or environmental upgrades. DMM believes such additional fixed costs are in practice a form of going forward costs and could be included in a supplier's resource-specific cost filing. Including necessary capital costs in a resource-specific cost filing would prevent resource-specific compensation above the soft offer cap from either being too high or too low.

¹⁰ Id., p. 20

Other CPM Compensation Issues

Soft offer cap for annual CPMs

The ISO's proposal does not address concerns that the soft offer cap may be too high when used as compensation for annual CPMs. In its 2015 CPM filing, the ISO explained that the current soft cap approach was a simple approach that was reasonable under the premise that CPM would be *rarely used* and would typically be used for *shorter periods*:

The approach adopted in the Offer of Settlement recognizes that the CAISO rarely uses CPM and that, under such circumstances, a simpler approach that avoids complex market power mitigation measures and avoids litigation is a more prudent and reasonable approach....¹¹

This will promote efficiency and eliminate burdens associated with developing and establishing proceedings to set prices for individual resources in connection with a mechanism that is rarely used and, when used, typically only results in designations for short periods.¹²

The ISO issued annual CPMs to three resources for 2018.¹³ DMM believes it is important and timely for the ISO to reassess its soft offer cap for annual CPMs. The current soft offer cap was justified under the assumption that use of CPM would be infrequent, and even less frequent for annual CPMs. There is some evidence and concern that these assumptions may no longer hold.

Competitiveness of CPM solicitations

As part of the ISO review of the soft offer cap for annual CPMs, DMM also encourages the ISO to consider options for applying a market power test to CPM solicitations and then linking limits on CPM compensation to the competitiveness of CPM solicitations.

Stakeholders have raised concerns that CPM solicitations, particularly annual CPM solicitations, are not competitive.¹⁴ These concerns are based in part on the fact that prices for most CPM selections made by the ISO have cleared at or close to the soft offer cap.¹⁵

¹¹ *Tariff Amendment and Offer of Settlement Regarding Capacity Procurement Mechanism Revisions and Request for Waiver of Notice Requirement*, California ISO, ER15-1783, May 26, 2015, p. 17. http://www.caiso.com/Documents/May26_2015_TariffAmendment_CapacityProcurementMechanism_Revisions_ER15-1783.pdf

¹² *Id.*, p.20.

¹³ *December 22, 2017 Year Ahead Local CPM Designation Report*, California ISO. <https://www.caiso.com/Documents/December222017YearAheadLocalCPMDesignationReport.pdf>

¹⁴ *Comments on RMR and CPM Enhancements Revised Straw Proposal*, SCE, October 23, 2018, p.2. <http://www.caiso.com/Documents/SCEComments-ReliabilityMust-RunandCapacityProcurementMechanismEnhancements-RevisedStrawProposal.pdf>

¹⁵ *December 22, 2017 Year Ahead Local CPM Designation Report*

A lack of competition – coupled with a soft offer cap that is too high for annual CPMs – raises concern that the CPM soft offer cap for annual CPMs is not an effective form of market power mitigation. DMM’s own review indicates that recent monthly CPM solicitations in fall 2018 were not structurally competitive.

Merging CPM and RMR into a single backstop procurement mechanism

CPM designations will continue to be voluntary and can be declined by suppliers with market power that prefer RMR compensation. DMM shares concerns raised by other stakeholders that under the current and proposed framework, newer pivotal resources with undepreciated capital costs would have an incentive to self-select RMR compensation while older pivotal resources would prefer to self-select CPM compensation. It is not clear what efficiencies this self-selection provides.

A compensation structure based on GFFC plus a reasonable net profit would provide fair compensation to resources contracted for backstop capacity. If a unit needed for reliability would truly retire or mothball if not contracted by the ISO, then compensating the unit based on its GFFC plus any additional net profit would be more profitable for the unit than if it was actually retired or mothballed. GFFC-based compensation also avoids market distortions that may incent resources to seek a backstop capacity contract rather than participating in the RA process.

Paying cost-of-service, defined as a resource’s annual fixed revenue requirement (AFRR), compensates resources with market power for sunk costs and can therefore send inefficient investment signals for longer term substitutes. Specifically, paying a required resource AFRR can create the incentive to build new supply or transmission capacity whose annualized costs would be greater than the existing resource’s GFFC but less than the existing resource’s AFRR. Investing in the new capacity would be inefficient relative to only incurring the GFFC of the existing resource. DMM provided an example of how providing compensation based on AFRR would encourage uneconomic and inefficient investments in alternatives using approximate values for AFRR and GFFC for the Metcalf Energy Center, which received an RMR designation for 2018.¹⁶

In the ISO’s future discussions of the backstop procurement framework, the ISO should consider consolidating CPM and RMR or at the very least, aligning CPM and RMR compensation and adding supplemental rules to prevent self-selection between designations based on maximization of compensation.

¹⁶ *Motion to Intervene and Protest of the Department of Market Monitoring of the California Independent System Operator*, ER-641-000, February 2, 2018, pp. 10-11.
http://www.caiso.com/Documents/Feb2_2018_DMMIntervention_Protest-RORCPM_ER18-641.pdf

Limiting discretion over RMR depreciation methodology

Another refinement in RMR tariff provisions that the ISO should consider is to reduce the amount of discretion that resource owners have in selecting the depreciation method that will be used for RMR compensation. The more discretion that resource owners have in choosing the depreciation method used for a resource's cost-of-service RMR compensation, the more likely it will be for resource owners to threaten retirement and to seek RMR compensation rather than signing a resource adequacy contract or accepting CPM compensation.

DMM recognizes that defining the depreciation method, useful life and salvage value that each resource should use for RMR compensation could be complicated. However, the ISO should consider refining its RMR policy to at least prevent resources from choosing one depreciation method and set of input parameters for tax filings or financial statements and then choosing a different method and input parameters to maximize RMR compensation.

CONCLUSION

Management's proposal addresses several of the fundamental flaws in the current CPM/RMR backstop procurement framework. However, the ISO's proposal does not address some other key concerns with the ISO's current backstop procurement mechanisms that are needed as part of a comprehensive reform. DMM supports moving forward with the incremental improvements in Management's proposal, but recommends the ISO continue working on further changes needed as part of a comprehensive reform.

Attachment D – Market Surveillance Committee Opinion
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation

**Opinion on
Reliability Must Run and Capacity
Procurement Mechanism Enhancements**

by

James Bushnell, Member
Scott M. Harvey, Member
Benjamin F. Hobbs, Chair

Members of the Market Surveillance Committee of the California ISO

March 21, 2019

I. Introduction and Summary of Recommendations

I.A. Introduction

The Market Surveillance Committee (MSC) of the California Independent System Operator (CAISO) has been asked to comment on the ISO's proposed Reliability Must Run and Capacity Procurement Enhancements (RMR/CPM).¹ The initiative leading to this proposal has been addressed during MSC meetings on Aug. 3, 2018, Sept. 28, 2018, and Jan. 25, 2019.

Both RMR and CPM are forms of backstop procurement of resource adequacy (RA). When the CAISO determines that the bilateral RA market in California has not (or will not) result in sufficient resources to meet anticipated reliability standards, it has the authority to directly contract with resources to provide RA and other reliability services. The timing and a pricing of backstop contracts have long been contentious features, in part because the terms of backstop contracts can influence the strategies of buyers and sellers in the bilateral RA market.

The MSC has commented on various aspects of backstop procurement several times. The most directly relevant previous opinions made the following points.

- In 2007 the CAISO implemented an Interim Capacity Procurement Mechanism (ICPM). The MSC argued that the CAISO should have authority to obtain RA through backstop procurement, particularly in the instance of a “significant event” that alters the reliability situation in the CAISO.² This authority subsequently evolved into the CPM as it is applied to short-term (monthly) procurement. We also expressed concern over the central

¹ Reliability Must Run and Capacity Procurement Mechanism Enhancements, Draft Final Proposal, Jan. 23, 2019, <http://www.caiso.com/Documents/DraftFinalProposal-ReliabilityMust-RunandCapacityProcurementMechanismEnhancements.pdf>

² F. Wolak, J. Bushnell, and B. Hobbs. *Opinion on “Interim Capacity Payment Mechanism under MRTU.”* November 2007.

role the must-offer obligation (MOO, as then constituted) was playing in RA policy. Given the rising share of imported, energy limited, and variable energy resources, the CAISO would have to explore options beyond the MOO as it was designed at that time.

- In 2010, the CAISO implement the CPM. The MSC reaffirmed its support for the CAISO’s backstop authority, but also commented that CPM payments would ideally differentiate between areas with local resource scarcity and those with sufficient capacity that was not contracted for in the bilateral market.³
- A 2012 CAISO proposal addressed the risk of retirement of necessary resources – in that case, flexible resources. The MSC recognized that the CAISO has to be ready to intervene if a retirement of a critical resource appears imminent. However, we also expressed concern about the interaction between a pro-active backstop process and the annual bilateral RA process as it existed at that time.⁴
- In both 2010 and 2012, we observed that the need for CAISO backstop intervention could result from several factors, including either buyer- or seller-side market power. While we were not in a position to determine the extent to which either form of market power was influencing market outcomes, the potential for either price-discrimination on the part of buyers, or local market power on the part of resources has been a frequently raised issue by market participants and the CAISO itself. We noted that price discrimination on the part of RA buyers could result in long-run inefficiencies if it resulted in the addition of newer more expensive facilities and the retirement of lower-cost incumbent resources.
- We also in 2012 noted that, “as a general principle it is preferable to award flexible resources through short-run energy and ancillary services markets rather than through differentiated payments in long-run capacity markets” such as a forward RA market and its backstops.⁵

Several consistent issues have been maintained through each of these previous initiatives into the current one. These include questions about the appropriate level of compensation for backstop resources, as well as the interplay between these compensation levels and the potential for market power on the part of either local RA sellers or buyers. Another theme in the 2012 risk-of-retirement initiative was the interplay between bilateral RA procurement, market pricing, and the decision or need for a plant to seek permission to retire. These issues remain in the forefront in the present initiative.

This Opinion is structured as follows. A summary of our recommendations (Section I.B) are provided in this introduction. Section II discusses the current initiative in the context of California’s resource adequacy policy. Section III outlines some key elements of the CAISO proposal. In section IV we comment on the CAISO draft final proposal and offer suggestions for possible changes.

³ Wolak, F., Bushnell, J. and B. Hobbs. *Opinion on the Capacity Procurement Mechanism and Compensation and Bid Mitigation for Exceptional Dispatch*, October, 2010.

⁴ Bushnell, J., Harvey, S., Hobbs, B. and S. Oren, *Opinion on Flexible Capacity Procurement: Risk of Retirement*. September, 2012.

⁵ *Ibid.*, p. 4.

I.B. Summary of Recommendations

The MSC supports the general framework that is proposed for CPM. However, the MSC also recognizes that actions by the CPUC and perhaps the California state legislature, as well as future ISO initiatives, may result in significant changes in RA policy. If such changes occur, elements of the CPM framework will need to be revisited. We also note that the current level of the CPM soft offer-cap needs to be re-evaluated. We understand that this cap is scheduled to be the subject of an ISO stakeholder process in the near future. The level of the cap will affect the relative attractiveness of seeking or accepting a CPM designation versus announcing an intent to mothball or retirement, with the possibility of receiving an RMR designation. As another example, the soft-offer cap initiative and other future processes might explore more comprehensive approaches to local market power mitigation in RA procurement.

The MSC also agrees with the general framework for RMR as targeting risk-of-retirement by resources needed to provide essential reliability services that are not sufficiently compensated for in ISO markets to be accompanied by cost-of-service payments for those units. We would support a regulatory approach that does not pro-forma link these cost-of-service payments to a depreciation schedule chosen previously by the unit owner, but instead determines an appropriate depreciation schedule on its regulatory merits.

We acknowledge concerns about resources with local market power potentially having an incentive to strategically claim an intent to retire. We note, however, that RMR generating units are not free to return to market unless their must-run status is removed through a transmission upgrade or other changes in market conditions. The RMR contract provides the CAISO with an option to renew under cost-based terms as long as the reliability need, and therefore the unit's local market power, remains. Therefore, a unit that chooses to enter into an RMR contract will not possess the same degree of market power upon returning to the market, if it chose to do so.

If toggling back and forth between market-based operations and RMR remains a significant concern, the option framework could be extended to give the ISO or some other party an option to renew the generator's RMR contract, even after the reliability need is resolved. However, we foresee difficulties with giving the ISO discretion over exercise of this option, so this would be a significant alteration to the RMR process.

The MSC agrees that performance requirements for RMR and CPM designated capacity are highly desirable, especially for RMR where there is no other economic incentive to be efficient and available when needed. Our understanding is that the RA Availability Incentive Mechanism (RAAIM) would be applicable for 17 hours per day, 7 days per week, so generators that comply with that requirement are very likely providing the reliability services that are needed under almost all foreseeable scenarios. For extremely idiosyncratic scenarios in which a unit is needed at other times, the ISO could maintain the ability to negotiate targeted performance metrics for units that are meeting niche reliability needs.

The MSC agrees with the proposal to apply a must-offer obligation on RMR and CPM plants. However, it is crucial to ensure that default energy bids (DEBs) reflect all critical costs. A particular issue is increased maintenance costs that might be necessary if an older, less reliable unit is dispatched or made available for a large number of hours.

Another concern with applying the RAAIM mechanism is that CPM or RMR status might be granted to generators with high outage rates near the end of their useful life. It might be uneconomic to make investments to reduce these outage rates to levels that would avoid RAAIM penalties because of the unit's short remaining life or other for reasons. As a result, a RMR unit that is near the end of its useful life and experiencing or expecting high outage rates might reasonably expect to incur RAAIM penalties that would be unrecoverable under present RMR rules.

The CAISO proposal recognizes these issues and addresses them through the inclusion of opportunity costs into the default energy bids (DEBs) of RMR and CPM units. However, opportunity costs remain a complicated and contentious aspect of DEB calculations. Moreover, an aging resource may not be able to completely avoid a relatively high forced outage rate by limiting its hours of operation. Although not described in the draft final proposal, the ISO has explained that the tariff will provide for the ISO to set the DEB in a manner that will allow such resources to limit their operating hours without respect to whether the resources are use-limited. If the opportunity cost framework used to calculate DEBs proves insufficient to address these concerns, the CAISO should consider a unit-specific outage benchmark for such units, applying the same RAAIM framework but with a different reliability threshold target. Alternatively, a targeted performance metric could be negotiated that would focus on periods when a generator is most likely to be needed.

Finally, the MSC recommends that transmission planning that could affect the need for RMR designation recognize that the avoided cost of generation will include just the RMR unit's going-forward cost (including possible opportunity costs for land and salvaging components), and not the entire full-cost-based RMR compensation, which includes sunk costs, depreciation, and return on book value. Because that going-forward cost may be very different from the full cost, situations are possible in which a transmission investment that removes the need for RMR status would be less expensive than the cost of service based RMR compensation, but more costly than the RMR generator's going-forward costs. Consistent with the CAISO TEAM (Transmission Economic Assessment Methodology) philosophy that transmission planning should work towards minimizing social cost, the incremental rather than full RMR cost should be the basis of determining if a network upgrade is economic. Under such a scenario, the RMR unit owner could be offered compensation comparable to the projected transmission replacement cost, which could be well below that unit's cost-of-service.

II. Background: Backstop Capacity Procurement in the CAISO Market

In the CAISO footprint of California, policy for Resource Adequacy (RA) is overseen by the California Public Utilities Commission (CPUC) and the CAISO. Pending changes currently under consideration at the CPUC, the current policy imposes a bilateral requirement on jurisdictional Load Serving Entities (LSEs) to acquire and "show" RA capacity sufficient to meet the

planning reserve goals of each respective Local Regulatory Authority (LRA) in which the LSE operates. The requirements include elements of systemwide (or “generic”) capacity, local capacity—able to address reliability needs within a specific local reliability area—along with flexible capacity capable of meeting the relatively recent Flexible Capacity Requirement.

Ideally, the RA requirement would result in payments from LSEs to generation and other competitive resources that, combined with energy and ancillary service revenues, would be sufficient to support both ongoing resource operations and future investment in the level of resources required to meet the local regulatory authority’s reliability target.⁶ These resources, in turn, operate under a must-offer obligation intended to ensure that the capacity that is procured provides the services necessary to maintain reliability within the CAISO system. However, periodically, gaps or shortfalls in the RA process have made necessary interventions by the CAISO through alternative forms of backstop procurement that have evolved several times since the RA program began in 2006.

Briefly, these interventions can range in length from a single day – through a process known as exceptional dispatch – to monthly or annual contracts. Currently monthly and annual backstop arrangements are implemented either through the CAISOs Capacity Procurement Mechanism (CPM) or through a Reliability Must Run (RMR) contract. The conditions under which CPM or RMR might apply have evolved and blurred over time, and one goal of this initiative has been to establish a more rationalized framework in which the role of each type of agreement would be transparent.

There are at least four broad scenarios in which the bilateral RA market might fail to meet the CAISOs determination of reliability needs.

1. An LSE may simply fail to comply with its RA requirements. In the absence of a waiver granted by the CPUC (discussed below), the LSE would stand in violation of its obligation.⁷ The CAISO has had authority to perform a solicitation of capacity to fill any such shortfall and those costs are assigned to the deficient LSE.
2. While all LSEs may comply with the letter of the RA requirements, the requirements themselves feature gaps such that even under full compliance, “collective deficiencies” remain. In other words, at least some of the RA that has been procured is of either the wrong type or in the wrong locations.

A short-term version of this problem arises when periodic transmission outages require the CAISO to call on non-RA units through the exceptional dispatch (ED) process. In this case, the RA that was procured would have been sufficient but changes to the network force an unanticipated shift in local needs. If a non-RA unit is dispatched through ED, it becomes automatically eligible for a monthly CPM payment.

⁶ While short-term market revenues, combined with an annual or monthly RA payment, may be too uncertain or volatile to support investment in and of themselves, in theory the prospect of annual capacity or RA requirements should provide incentives for long-term contracts in which LSEs procure a stream of annual RA from resources, either bundled with energy sales or on its own.

⁷ These LSEs are required to pay a penalty in addition to the cost of the backstop procurement to fill the need created by their shortfall.

3. All LSEs may comply with the requirements set by a Local Regulatory Authority, but those requirements may be judged by CAISO to be insufficient to meet the mandatory requirements imposed by the North American Electricity Reliability Corporation (NERC).
4. The bilateral market may fail to clear in a competitive fashion. In other words, resources and LSEs fail to reach a mutually acceptable bilateral agreement, and the CPUC grants a compliance waiver to the LSE. This forces the CAISO backstop process to effectively impose the terms of the agreement. The failure of LSEs and resources to agree on a mutually acceptable price could in turn be attributable to either
 - a. Excessive local market power on the part of the resource, raising RA prices to unacceptable levels, or
 - b. Waivers to the local RA requirement granted by the CPUC (or other LRA) to LSEs because the price was deemed too high, despite reflecting actual going-forward costs of the marginal resource in the region.

The waiver process was adopted along with the local RA requirements in 2006, and at that time was viewed by the CPUC as “necessary as market power mitigation measure”⁸ in the RA market. The general approach was to limit the price which LSEs would be obligated to pay for local RA by waiving compliance penalties if an LSE can demonstrate that, despite pursuing “all commercially reasonable efforts” to procure RA, the LSE either received no bids or received only bids above a waiver price threshold, then set at \$40-kw-year.⁹ The trigger price was not meant to be the only criterion considered, and it is our understanding that some local RA agreements have been approved at prices above this threshold.

Waivers are a blunt and imperfect tool for limiting the market power that can be created by local RA requirements. If the waiver price threshold is set too high, then firms may still be able to enjoy substantial rents if they possess local market power. If the waiver is set too low, the RA “market” becomes effectively a cost-based system set largely by the CAISO’s backstop terms. A low waiver could, intentionally or unintentionally, result in price-discrimination among RA resources, where some high-cost resources are paid their costs, and others are capped at the waiver level. The existence of such price discrimination could deter even minor investments in going the forward costs of existing capacity, leading to inefficient exit and higher costs for power consumers. As we discuss below, a rationalized system would ideally reconcile the two primary tools for mitigating market power in this process: the waiver threshold at the CPUC as well as the soft-offer cap in the CPM.

One last important element in the backstop process is the prospect of the retirement of plants important for reliability needs. Prior to the recent February 22nd, 2019, CPUC decision, both bilateral RA requirements and CAISO CPM were either monthly or annual commitments. Some

⁸ CPUC, D.06-07-031/ R.05-12-013, “Opinion on Local Resource Adequacy Requirements,” p. 71. That decision also identified the aggregation of local capacity regions, as well as the CAISO backstop process as additional measures that would combat market power. It also expressed (p 71.) the expectation that local market power mitigation under the CAISO market redesign “would provide mitigation not only with respect to the exercise of market power in the CAISO markets, but it should also have a mitigating effect in the RAR bilateral contracting markets.”

⁹ CPUC, D.06-07-031/ R.05-12-013, p. 73.

plant owners, particularly those requiring new capital investments in order to maintain or improve their facilities, have stated that annual CPM, let alone monthly CPM payments, were not adequate to continue operations. In such cases, either a multiyear contract or increased annual payments would be necessary to prevent the retirement of the facility or to keep the resource temporarily in operation while network upgrades are made to eliminate the need to keep the resource in operation.

It is also important to recognize that the California policy and market landscape is continuing to experience dramatic changes. The rapid proliferation of community choice aggregators has transformed wholesale-retail interactions, with the implication that IOU procurement, overseen by the CPUC, will no longer dominate the buyer side of the wholesale market, potentially increasing competition in generation procurement. California's effort to meet load with higher levels of renewable electricity production will increasingly shape future generation investment, reliability needs, and short-term market outcomes. In the face of these changes, RA policy at the CPUC is continuing to evolve. While the current bilateral requirement remains in place - with more extensive forward commitments - the CPUC has indicated that further changes are quite likely in future years.¹⁰

III. The CAISO RMR/CPM Proposal

The CAISO's proposal covers a wide variety of aspects of backstop procurement, and we will not comment on all of them. In this section we summarize what we understand to be the key structural elements of the CAISOs proposed approach to backstop procurement and the logic behind those elements.

III.A. Roles of CPM and RMR

First, the CAISO is taking steps to clarify and formalize the relative roles of RMR procurement and the CPM. Going forward, RMR will be reserved for units that both fill a critical reliability need and are at risk of retirement (ROR) while all other backstop actions will flow through the CPM process.¹¹

III.B. Risk of Retirement

One aspect of this codification of roles is the process through which the risk of retirement, and reliability need, is determined. Several stakeholders have expressed concerns about the credibility of ROR claims.¹² The perspective of these stakeholders is that a plant that would not otherwise seek to retire or mothball, might claim it is willing to do so because of what they perceive to be favorable RMR terms. At the same time, most stakeholders recognize that market conditions

¹⁰ *Commissioner Blog: Keeping the Lights On*. www.cpuc.ca.gov/cpucblog.aspx?id=6442460494&blogid=1551

¹¹ *Draft Final Proposal*, op. cit., p. 14.

¹² See, for example, CAISO Department of Market Monitoring, *Comments on the Second Revised Draft Proposal*, Jan. 2019. Public Advocates Office, California Public Utilities Commission, *Comments on the Draft Final Proposal*, Feb. 2019. Pacific Gas & Electric Co., *Comments on the Draft Final Proposal*, Feb. 2019

can change such that the continued operation of a resource can become economic and reduce the cost of meeting load. In addition, it is appropriate that resources that provide essential reliability services receive higher compensation than resources that do not provide those services when they are on the margin. Since the CAISO does not have markets for all of these reliability services, there is a potential for inefficient exit absent other compensation mechanisms.

The CAISO proposal recognizes these concerns and relies upon three mechanisms to mitigate the possibility that resources who do not plan to retire would use the threat of retirement to receive a payment greater than that available through the market or through CPM.

First, the CAISO will require legally binding affidavit from a corporate officer stating that

“the resource will not remain in service and that the decision to retire or mothball is definite unless some other type of ISO procurement of the resource occurs, the resource is sold to a non-affiliated entity, the resource receives some other contracts, or the resource enters into an RA contract.”

The CAISO notes that it will have the right to refer the firm to FERC if it determines that the affidavit is false, misleading, or otherwise constitutes an effort to game the RMR process.¹³

Second, if an RMR unit requires going-forward capital investments, such investments would be reimbursed for only an annualized “sliver” of going-forward investment costs, rather than receiving the full amount of the new investment up front. If an RMR unit returns to the market, it would not be eligible to recover any further slivers of that investment.¹⁴ Hence if market conditions change and the resource remains in operation after termination of the RMR agreement, no further reimbursements would be received. Conversely, if the unit retires when it is no longer needed for reliability, it will be eligible for a termination fee that compensates it for having made the investments necessary to operate under the RMR contract.¹⁵

Third, the process involves a degree of uncertainty that adds risk to a strategic claim of ROR. Since the CAISO’s determination of a reliability need is made *after* the unit declares its intent to retire, not all units can be confident they would be offered an RMR contract once they make a retirement declaration. If a firm really didn’t want the plant to retire, but only wanted an RMR contract, there is a risk that the CAISO would not find it necessary to award an RMR contract for the continued operation of the resource and would let the plant retire. If a plant doesn’t retire after declaring an intent to retire, the CAISO proposes that it could be referred to FERC for strategically playing the RMR process.¹⁶

¹³ The proposal also modifies the timelines under which notifications would be made and establishes a publicly available list of units that have provided ROR notifications. Under the Draft Final Proposal, all units 45 MW or greater would be required to follow this process.

¹⁴ *Draft Final Proposal*, pp. 18-19

¹⁵ *Draft Final Proposal*, p. 19. The incurred capital cost, including interest, would be paid as part of a termination fee, but not a rate of return on the capital addition. The unit could return to the market after 36 months without having to repay this termination fee.

¹⁶ *Draft Final Proposal*, p. 16.

Stakeholders have raised concerns that the RMR process can be initiated through notifications of either retirements or of temporary shut-downs (mothballing). Since a mothballing notice need only cover a finite, relatively short, period of time, the risk of such a notification is greatly mitigated. The concern is that a firm could use a mothball notification for one of its units to determine whether the CAISO would consider that unit to be critical for reliability needs

III.C. RMR and CPM Compensation

The CAISO proposes to continue the longstanding practice that a plant that receives an RMR contract will be paid its full cost of service, including a rate-of-return on the remaining book value of its capital stock. The plant would receive no net revenues from short-term energy and ancillary services markets. Those revenues would be used to offset first its variable cost, and then the other components of its cost-of-service payments. In essence the plant would become, for the term of its RMR contract, a traditional cost-of-service regulated resource.

The CAISO proposal envisions the CPM as an additional phase of an RA market process, rather than a full-scale regulatory intervention. Once a shortfall in RA capacity has been identified, the CAISO would first undertake a competitive solicitation process (CSP), in which resources with eligible capacity can make offers to supply the requested RA capacity on a monthly or annual basis.

Resources that make offers into the CSP are subject to a soft-offer cap, currently set at \$75.68 per kW-year. Supply offers up to that level would not be subject to any regulatory review. If there were several units competing to supply RA capacity through the CSP, the CAISO would select the lowest cost offer, adjusted if necessary for the effectiveness of the plant in addressing the reliability need.

A resource is eligible to submit an offer above the soft-offer cap, but would be required to demonstrate that its going-forward fixed costs (GFFC) plus 20% exceeds the \$75.68 soft offer cap.¹⁷ Again, the CAISO would select the lowest cost offers to fill the RA need, but it is likely that it would only be taking offers above the soft-offer cap in situations where there are a limited number of high cost resources able to fill the specific RA need.

In contrast to the RMR compensation, units receiving CPM would be allowed to keep all short-term energy and ancillary service market revenues in addition to their CPM payments.

Several stakeholders have raised concerns about the level of the soft offer cap. The concern is that neither CPM nor RMR compensation will necessarily adequately mitigate the local market power of certain RA units. On the one hand, an older unit with local market power whose capital stock has been largely depreciated could find the soft-offer cap to be substantially above its analogous RMR payment level. On the other hand, it is possible that the CPM payment (based upon 120% of the estimated GFFC of a hypothetical unit) could be less than the actual going-forward

¹⁷ For this purpose, its going-forward costs would be calculated using the same cost categories as used for the reference resource that sets the soft offer cap. These costs would include *ad valorem* costs (property taxes), insurance, and fixed operation and maintenance costs (DFP, p. 43).

costs for some high cost units and could therefore be insufficient to finance the necessary improvements to a unit that needs to make some going-forward capital investments or incur other costs not included in the identified going-forward costs. The expected level of energy market revenues, which are kept under CPM but surrendered under RMR may also be an important consideration for some units. We discuss these issues further in the following section.

III.D. RMR and CPM Performance Requirements Incentives

In addition to the compensation provided to RMR and CPM units, the other important dimension regarding backstop procurement relates to the timing and levels of performance that are provided by resources receiving RMR and CPM contracts. In this area the CAISO's proposal looks to utilize the standards and requirements applied to RA units acquired through the conventional, bilateral process.

All units that sell RA in California are subject to a must-offer obligation (MOO) that requires a unit either offer or bilaterally schedule its output into both energy and AS markets whenever available. In order to incentivize and reward availability, the CAISO applies a Resource Adequacy Availability Incentive Mechanism (RAAIM) to all RA units. The RAAIM applies penalties to units with poor availability performance during certain hours and rewards units with superior performance during those same hours. The CAISO proposes to apply the same MOO and RAAIM mechanisms to RMR and CPM units that is applied to RA units acquired through the bilateral process.

IV. MSC Comments on the CAISO Proposal

We agree with the CAISO's objective of defining distinct roles and pathways for RMR and CPM. Ideally, the RMR channel would be reserved for circumstances where there is little or no prospect that the market could provide a practical or competitive outcome. These instances could be thought of as situations in which the resources able to meet the reliability need possess material local market power in meeting the reliability need. We agree with the CAISO proposal that it is reasonable to address this market power by treating such instances as regulated services and to compensate resources providing these services according to traditional regulatory cost-of-service principles.

As discussed above, the mechanisms used to combat local market power in the RA market are both blunt and less than fully transparent. Given that both RMR and CPM partially function as elements of the overall scheme to mitigate local market power in California's RA markets, it is worth considering, for purposes of comparison, the results that a hypothetically idealized mitigation process--or perfectly competitive market--would produce. Given the current structure of the RA system, and the inherent challenges in mitigating RA in general, we are not arguing that these idealized outcomes are necessarily feasible at this time. Rather, those outcomes provide useful perspective for assessing the current proposal.

IV.A. RA and Market Power Mitigation

In theory, mitigation of local market power in RA would function somewhat like market power mitigation in energy markets. That is, resources would offer in their production (capacity in RA markets) at incremental cost and the market would clear at either the cost of the marginal unit or include some form of scarcity rent if scarcity is present.

In the RA context, resources would offer their capacity at their going-forward incremental cost, which might include some pro-rated cost of required new investment, less their expected, risk adjusted energy and ancillary service market net revenues. In a market with sufficient capacity, prices would clear at the incremental cost of the marginal resource. In a market in which there is a need for investment in new capacity, prices would clear at something resembling the cost of new entry (CONE) less energy and ancillary services revenues (net-CONE). Eastern ISOs strive to replicate such outcomes using capacity demand curves whereby prices rise gradually as reserve margins decline up to a price ceiling that is some specified multiple of Net CONE. Eastern ISOs also require at least some resources to submit mitigated bids in capacity market auctions.

Setting the exact form of these capacity demand curves can be contentious, but it is generally agreed that prices should fall somewhere between the incremental cost of the marginal (last) source of capacity and a multiple of net-CONE as the RA market approaches scarcity or near scarcity levels.¹⁸

For local capacity requirements served by “lumpy” capacity, it could be the case that a single, or small number, of existing units is sufficient to meet existing capacity needs, but the exit of any one of these units would trigger scarcity. In the extreme, this kind of scenario would represent a form of natural monopoly for this local RA service, where one unit is sufficient to meet the local needs on an ongoing basis. The market is not in scarcity if the existing resources remain in operation, but paying the incremental going-forward cost would be insufficient to recover the full average cost of the existing facilities. The CAISO RA design lacks a demand curve that would set the market price of capacity in this situation as is the case in Eastern markets.

It is useful to distinguish between the efficiency implications of capacity payments under such scenarios and the equity implications. The correct outcome from an efficiency standpoint would be to keep the essential plant in service. There is a range of payments that, in the short-run, would accomplish this. In the long run, new investment for meeting the local RA need should only be pursued if that investment were less costly than continued operation of the existing facility (accounting for environmental considerations).

¹⁸In the case of PJM’s system, the demand curve was intended to result in capacity prices that would in the long run average out to net-CONE, assuming that additions of the type of generation underlying the CONE calculation would continue to be needed. Year-to-year variations between going-forward costs for existing capacity and scarcity levels that are defined as a multiple of net-CONE are expected, and would average out to something near net-CONE over the long term (B.F. Hobbs, M.C. Hu, J. Inon, M. Bhavaraju, and S. Stoft, “A Dynamic Analysis of a Demand Curve-Based Capacity Market Proposal: The PJM Reliability Pricing Model,” *IEEE Transactions on Power Systems*, 22(1), Jan. 2007, 3-11),

One last consideration is the potential for price-discrimination between new and incumbent sources of RA. We neither dispute nor endorse claims of such strategies as we have been unable to verify or refute them due to the lamentable lack of transparency in the RA market, but we can discuss the general implications of such strategies. Large LSEs can have an incentive to pay above-market prices for new resources if it results in lower costs for their entire RA portfolio. While this strategy can produce short-run savings for LSEs, it can lead to inefficient early retirement of existing plants and raise RA costs over the long-run.

In a 2010 opinion on CPM,¹⁹ the MSC stated that

While this issue merits serious consideration, we feel that the CPM is too blunt an instrument to correct whatever market dynamics are at play. The fundamental potential for such pricing outcomes lies with the concentration of purchases within a few large LSEs. Extremely large LSEs can have the ability to procure capacity with an eye towards reducing RA prices regardless of the specific market rules for the RA process. This is true even in centralized capacity markets. Whether these LSEs have an incentive to do so, depends on their regulatory status and oversight.

Most of this still applies today, although the changing landscape of retail supply in California could substantially reduce the market concentration of LSE load.

IV.B Risk of Retirement and RMR Compensation

The CAISO proposal views RMR as a form of regulated service intended for plants that are first, necessary for reliability; second, possess such material locational market power that their RA prices should be mitigated; and third, the payments available through CPM are insufficient to sustain their operations. The question remains as to how to make the determination of which plants would fall into this category.

We share the skepticism of some stakeholders that the affidavit requirement, along with limitations on the recovery of going-forward investments, would by themselves eliminate the possibility of a resources strategically claiming a need to retire. In addition, the ability of plants to provide notice of plans to mothball limits the scope of that plant's irreversible commitment if the CAISO analysis determines the plant is not needed for reliability. If the plant didn't really want to retire, and was instead testing the waters regarding its prospects for an RMR contract, the mothball notice can allow for the plant to return to the market, after a period of time, without fear of repercussions if the RMR contract is not forthcoming.²⁰

¹⁹ Wolak, F., Bushnell, J. and B. Hobbs. *Opinion on the Capacity Procurement Mechanism and Compensation and Bid Mitigation for Exceptional Dispatch*, October, 2010, p. 8.

²⁰ The proposal does require an attestation that the plant would be out for the duration of its proposed mothball period. There could be repercussions, such as a referral to FERC, if a plant returned from a mothball designation early (Draft final proposal, op. cit., p. 16).

At the same time, we are not optimistic that the CAISO or some other external party would be well positioned to perform a credible economic test that could confirm or refute the financial viability of a specific plant. These are complicated business decisions that would be difficult for external reviewers to accurately second guess. We instead observe that, under the current proposal and our understanding of RMR contract terms, a unit that enters into RMR with potential local market power will not be allowed to return to the market until after that local market power is resolved through transmission upgrades or other changes to market conditions.

The CAISO RMR framework is focused on scenarios in which a plant is unable to cover its costs under current market conditions, but that framework does not explicitly discuss the implications of a future, predictable improvement in market conditions. It is worth noting that energy markets around the country have gone through periodic cycles before, and the framework the CAISO is seeking to establish should be robust to scenarios in which market conditions become more favorable for flexible conventional facilities in the future. These are conditions where such units can earn sufficient revenues from energy and ancillary service contracts to more than cover variable and going-forward costs, or its compensation under RMR contract terms.

Under the proposed framework, plants will be eligible for full cost-of-service payments if they provide notice of retirement (or mothball). There would be a much larger concern about “toggling” if the unit would have the option to return to market payments if and when market conditions change. An example of such a change would be where they are able to find a counterparty with which to sign a contract. This option bestows a right for resources with material market power to earn the “better of” market or cost-based remuneration. Such an option would increase both the appeal of RMR and the incentive for resource owners to claim a need for it.

From the perspective of mitigation of local RA market power, the concern would be that a pivotal and required RA resource might have the ability to choose either RMR or CPM-based compensation based upon whether it is willing to file a retirement notice. Since energy market revenues are retained under CPM but not under RMR, the attractiveness of CPM relative to RMR will fluctuate with energy and ancillary service prices. A hypothetical ability of a unit to choose to switch between CPM and RMR based only upon expected energy prices would be a form of toggling over which some stakeholders have expressed concern.

However, our understanding of the terms of RMR contracts is that the option over the form of compensation is *not* held by the resource, but rather is held by the CAISO. The CAISO has the ability to renew RMR contracts following similar regulatory principles each year.

Article 2.1 of the RMR Contract²¹ states that

- (b) CAISO may extend the term of this Agreement for an additional calendar year as to one or more Unit by notice given not later than October 1 of the expiring Contract Year. CAISO may extend the term for less than a full calendar year as to

²¹ California Independent System Operator. *Pro-Forma Reliability Must-Run Contract*, www.aiso.com/Documents/AppendixG-ProFormaReliabilityMust-RunContract-asof-Sep1-2018.pdf

one or more Unit but only if CAISO gives notice not less than 12 months prior to the date to which it proposes to extend the term.

Given this ability to renew RMR contracts, there is an important distinction between two situations:

- A situation in which the CAISO, through network upgrades or other changes, eliminates the local market power of a resource, and the resource wishes to return to the market because of changes in market conditions, and
- A situation in which the plant is still necessary, and therefore maintains its local market power, but wishes to return to the market because of changes in market conditions.

Under the proposal, our understanding is that if a plant is leaving RMR because the CAISO no longer needs it, it is free to return to the market (or retire), based upon its determination of its going-forward economic circumstances. At that stage, however, it would no longer possess the same degree of local market power and would no longer be considered to be operating in a natural monopoly circumstance.

We believe this feature of RMR compensation goes a long way toward addressing many of the concerns over the prospect of firms trying to strategically navigate RMR designations for their plants. It creates an incentive structure in which firms seeking (or exploring the prospects for) RMR arrangements forgo the option, as long as their plant remains necessary, to earn higher revenues should energy market prices increase. Firms should therefore be less likely to use such a process if they expected their continued operation to be economic at some date in the future. By maintaining an option to renew the RMR agreement under cost-of-service terms, the CAISO can ensure the plant does not retire if it continues to be needed. If it is no longer needed, the plant is free to re-enter the market, and its retirement decision would be based upon its assessment of going-forward costs against going-forward revenues. The implied multiyear commitment also assures the unit owner that it would be able to recover at least some of the costs of needed investments over several years.

Some stakeholders, such as the CPUC, object to paying full cost-of-service rates to RMR plants. As discussed above, from an efficiency perspective, there is no single “right” payment between the full cost-of-service and the going-forward cost (including new capital costs) of the plant, but there is a long-standing tradition of paying plants offering a regulated service their full cost of that service and of capping the revenues of resources possessing market power based on a regulated rate of return.

That said, we sympathize with the viewpoint that the capital cost component of the cost of service payment should not be driven by historic accounting choices of the owners of the plant if the plants was not historically subject to cost of service regulation. Plants that chose a long depreciation schedule for accounting purposes but recovered their return of, and on, investment in the market, for example, could potentially receive inflated cost of service revenues based on these historical accounting decisions which would yield a larger remaining book value. Indeed,

such an RMR design could incent resource owners to choose inappropriately long accounting depreciation schedules in an effort to increase potential future RMR payments. We would therefore support a regulatory approach that does not *pro forma* link the cost-of-service payments to the depreciation schedule chosen previously by the unit owner, but instead determines an appropriate depreciation schedule based on its regulatory merits. The just and reasonable standard applies to RMR terms so a long depreciation period could be challenged if the implied costs are not defensible.

We note that concerns over strategic retirement notices, toggling, and the compensation levels of RMR plants are unlikely to produce short-run inefficiencies. If the plant is critical for reliability, the CAISO proposal ensures it remains in the market. It is possible that attempts to seek RMR compensation could lead to early retirement of a unit if it was not critical but would have been willing to stay in the market absent an RMR option. Such plants would likely be in a marginal economic circumstance to consider such a strategy, however.

If equity concerns over the potential for the strategic use of mothball or retirement notices are significant enough, the CAISO option could be broadened to include circumstances where the unit is no longer needed for reliability. In other words, the option for paying a resource at a cost-of-service rate can extend for as long as the buyer deems it desirable to do so. This would necessarily create difficult questions about who would make the decision to exercise such an option and what circumstances under which it should be exercised. The CAISO should not be put in a position of exercising contracts strictly for economic reasons divorced from its core mission.

IV.C. CPM Compensation

The positioning of the CPM framework is a difficult challenge as the CPM is a single tool that is the primary means to deal with several potential problems. The CPM is one of the only mechanisms for mitigating local market power in the RA market. It is also playing an important role as a true “backstop” to the bilateral RA process, one that must fill gaps in RA portfolios that, independent from any seller market power, result from the limits of RA requirement definitions or problems in the bilateral RA market itself, as described in Section II above.

The current CPM framework is deployed to fill several roles, including the short-term deployment of RA in response to unexpected outages of resources, and the backstopping of under-procurement. The CPM can also mitigate potential local market power by capping the amount local resources can earn if not procured through the RA market. The framework, however, does not seem well positioned to deal with a situation in which there is a shortfall in RA procurement within a local region because some generation may be in the position to be near-pivotal in some local capacity markets while being able to earn substantial energy revenues. The structure of CAISO RA requirements (for example, lacking a demand curve that is present in eastern capacity markets) create an inelastic demand for RA, and absent a waiver or other RA mitigation, such plants would possess market power in the RA market.

Under the CPM proposal the capacity payment to the RA supplier would be capped at the soft cap, or its actual GFCC + 20%. In this way there is a limit being place on how much rent a unit possessing market power in local RA can extract from the RA market. However, this cap does

not account for the level of energy market revenues so might allow overall expected returns materially above the cost of service rate if that plant is able to earn large margins in the energy market. This would constitute a return above competitive market levels if there were adequate capacity to meet local area RA requirements, but that capacity was owned by a pivotal supplier. Our understanding is that the soft offer cap is based upon the GFFC + 20% of a hypothetical gas plant, and is a rough proxy for the marginal going-forward cost of capacity in the system. However, as discussed above, if the area is not short of capacity, the going-forward cost net of energy revenues (with some margin to cover costs and minor investments not included in the definition of going-forward costs) would be the appropriate benchmark. If the area is capacity deficient, the price should be based upon either some multiple of net-CONE or if greater, net GFFC.

Notwithstanding all of the above observations about the limits of CPM in balancing fair compensation to RA resources and the mitigation of market power, we do not see an obviously better alternative to this framework, at least within the current RA structure in California.

We do believe a new analysis about the *level* of the soft-offer cap is called for, and we understand that the CAISO is already scheduled to undertake such an initiative. Ideally the CAISO's soft offer cap would be reconciled with the thresholds used by the CPUC for granting waivers. Also, the CAISO should carefully consider the types of units likely to fall under CPM in the future, and ways to incorporate expected energy and ancillary services revenues into calculations of an appropriate soft-cap level.

More generally, the CAISO and CPUC may need to more extensively reevaluate California's approach to mitigating market power in the RA market. The California RA market could very well be moving in a direction where a dwindling number of conventional resources will be needed to fill critical reliability needs. Further bifurcation of RA both geographically and by unit characteristics (e.g. flexibility) could increase, or make more transparent, the market power of those resources that remain in the market. It may be advisable to explore more targeted forms of market power mitigation, such as the application of pivotal supplier tests, and to, the extent possible, incorporate other elements of RA market power mitigation as used in eastern ISOs.

IV.D. RMR and New Investment

The paying of full cost-of-service (including a return on sunk investment costs) could potentially create distortions in investment if not properly considered. A long-run distortion could arise if the full RMR payment is used as the benchmark cost of generation against which to compare alternative non-generation solutions to the reliability problem.

For example, assume a plant's GFFC and operating cost is \$5 million and its full cost of service is \$8 million. It is possible that a transmission investment (or other resource) could be added for \$7 million. This would save RMR ratepayers money but also constitute an inefficient investment since the incumbent plant could provide the service for \$5 million.

We propose that, before such investments are undertaken, the RMR plant be offered a payment comparable to the new facility cost, perhaps adjusted appropriately for the net value of energy and ancillary services provided. Such a payment would be lower than what it would be entitled

to under the current proposal, but if it still exceeded GFFC the RMR plant owner should accept this lower “competitive” payment level and the allocation of investment resources would not be distorted. We acknowledge that it can be difficult to compare the relative values of transmission and generation (or storage) resources given that each type of resources provides its own distinct capabilities beyond a specific reliability need. The CAISO also cannot, and should not, control the procurement decisions of other market participants that can be strongly influenced by a host of state policy priorities. However, the CAISO does take the lead in the transmission planning process and should attempt to consider the distinction between the RMR compensation level and the going-forward cost of an RMR resource with regards to transmission specific investments.

IV.E. Performance Incentives for Backstop Resources

There are both efficiency and equity considerations to the performance requirement and incentive aspects of the CAISO’s proposal. Since backstop procurement payments could be substantial, some stakeholders wish to ensure “ratepayers receive the most RA benefits from resources they pay for.”²² Efficiency considerations also arise, particularly with respect to RMR units that would retain none of market revenues earned by the units when they do operate. For these units in particular, it is clear that some kind type of performance incentive is highly desirable.

We do not agree with the perspective that applying a must-offer obligation to RMR units constitutes price-suppression. Even if these units remain operational because of unique, or natural monopoly circumstances, they are in fact operational and we believe it is appropriate that market outcomes reflect this fact as long as offers (DEBs) are based on reasonable accurate estimates of marginal costs. We therefore support the proposal’s application of the must-offer obligation to both RMR and CPM units.

That said, it is important to recognize that the CAISO’s process for calculating default energy bids (DEBs) can be problematic for some units, as highlighted by our recent opinion on Local Market Power Mitigation in EIM regions. Calculation of DEBs is particularly challenging when units may be subject to use limitations due to air-quality regulations or maintenance cost concerns. Such limitations may be relevant for units coming under backstop arrangements. In recognition of these concerns, the CAISO proposal includes provisions that would allow units to incorporate some of these availability costs into an opportunity cost component of their default energy bids (DEB).²³ In their comments on the Draft Final Proposal, NRG also argues that gas procurement costs can be mis-measured when calculating DEBs.²⁴

For RMR units, this would be less a matter of fair compensation as these units would be able to file for cost-recovery (although NRG points out this could be a burdensome process), but there is a concern about the efficient utilization of plants if they are offered into the market at inaccurate costs. If use-limited units are over utilized due to a 17x7 must offer requirement, then they may become unavailable for reliability services during the very periods they were put under RMR to

²² Public Advocates Office. California Public Utilities Commission. Comments on the Draft Final Proposal. February 22, 2019, P. 3.

²³ Draft Final Proposal, p. 23.

²⁴ NRG. Comments on the Draft Final Proposal. February 22, 2019, pp. 2-3.

address. Even if units can remain available, the costs required to make them available may not be worth the value a must-offer obligation provides.

There could also be legitimate concerns for aging units whose availability performance has historically lagged behind that of the averages used for RAAIM performance benchmarks. The performance incentive should incent a resource's operator to take all reasonable and prudent measures within their control to support the availability of the plant. If a plant's inherent characteristics make it difficult to meet RAAIM performance metrics, the RAAIM penalties would be increasing the cost of operating the plant beyond those that could be recovered by the operator, despite the operator taking all reasonable measures consistent with the level of operating and maintenance costs and cost of service payments it is receiving as part of its RMR compensation to maintain the availability of the resource.

As mentioned above, the CAISO acknowledges these issues, and addresses them through its calculation and inclusion of opportunity cost in DEBs. However, opportunity costs continue to be a difficult and somewhat contentious component of DEB calculations and neither the current nor proposed design appears to address opportunity costs used by resources to limit their operating hours in order to reduce their forced outage rate. Moreover, an aging resource may not be able to completely avoid a relatively high forced outage rate by limiting its hours of operation. Hence, it is uncertain whether the current DEB framework will produce DEBs that properly balance the costs of avoidable and unavoidable availability problems. If such cases arise, the CAISO could consider using a unit-specific performance benchmark based upon historic availability.

While conceding these are legitimate concerns, we observe that the CAISO has revised its approach to calculating DEBs under LMPM several times and is continuing to work to improve the representation of opportunity costs and maintenance costs in the process. One important difference is that normal RA units would be subject to DEBs only if they are found to possess local market power during a specific market period, while under this proposal, DEBs (which would include opportunity costs) would be used for RMR units during all hours.

We think that the CAISO's discretion can and should be deployed within the application of this framework. A distinction should be made for units coming under backstop to serve specific idiosyncratic reliability needs, as opposed to those filling more generic shortfalls in local, flexible, or system RA. Units in the former category would ideally be allowed to negotiate specific incentive criteria that are focused on performance of the unit where and when that specific reliability need is binding.

In addition, if the opportunity cost framework does not fully address these issues, units with severe or costly use-limitation constraints should be eligible to negotiate DEBs, and given the nature of the service they provide, RMR units should be given the benefit of the doubt in arguing for specific DEB formulas or levels.

If these measures prove insufficient, the CAISO could consider mitigating the bids of RMR units only during periods in which LMPM is binding for them. During other periods, the unit would be able to offer above its DEB in order to manage its use-limitations and other costs. If this ap-

proach were taken performance incentives would need to be devised to align the resource's incentives with market efficiency. While the dispatch of the unit may be based upon these market-based offers, the net revenue calculation for RMR units would still be based upon the DEB level of costs, for purposes of calculating the allowed operating costs to be recovered.

Attachment E – Letter dated November 28, 2016

Reliability Must-Run and Capacity Procurement Mechanism Enhancements

California Independent System Operator Corporation



CALPINE CORPORATION

November 28, 2016

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Mr. Steve Berberich
President and Chief Executive Officer
California Independent System Operator
250 Outcropping Rd
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Dear Mr. Berberich,

Steve

After unsuccessful, but diligent efforts to try to sell Capacity and Energy from four of its fast-start peaking plants¹ that come off contract at the end of 2017 (“2017 Peakers”), Calpine has concluded that these units will no longer be economic to operate commencing January 1, 2018. Accordingly, our current plan is to remove these units from the relevant Participating Generator Agreement, Schedule 1, making them unavailable for CAISO dispatch effective January 1, 2018.

In order to facilitate Calpine’s operational planning and expenditures, we ask that you direct CAISO staff to undertake the studies necessary to confirm that the absence of these units will not create unacceptable reliability impacts. We ask that the results of that review be communicated to Calpine no later than March 31, 2017, to allow for an orderly and rational cessation of operations on January 1, 2018. Your staff has indicated that completing the necessary analysis within this timeframe is feasible.²

Should Calpine not be apprised of a definitive reliability need by March 31, 2017, it will commence specific actions (which may be difficult to reverse) regarding the disposition of the physical assets. Indeed, some of these actions have already commenced or are imminent, for example:

- Calpine is in the process of retaining the engineering and permitting consultants necessary to develop the required permitting, decommissioning or redeployment plans for each of the units.
- Discussions regarding major maintenance expenditures important for operations in 2018 and beyond have commenced and certain projects have been conditionally eliminated.

¹ The four Calpine Peakers are the 47 MW Yuba City Energy Center, 47 MW Feather River Energy Center, 44 MW King City Energy Center and 48 MW Wolfskill Energy Center. The Resource IDs, respectively are YUBACT_6_UNITA1, BOGUE_1_UNITA1, KNGCTY_6_UNITA1 and WOLFSK_1_UNITA1. The four Calpine Peakers are part of an eleven unit portfolio of LM6000 aero-derivative, fast-start, peaking gas turbines with approximately 550 MW of capacity located throughout NP15 that Calpine owns and operates. A contract for the balance of these peaking facilities expires on December 31, 2021.

² Concurrently, your staff has also requested specific data regarding the 2017 Peakers, which we will be submitting under separate cover pursuant to the confidentiality provisions of the Tariff.

- More generally, by mid-2017, the Calpine budgeting process for 2018 will conclude. This process establishes the operations, maintenance, personnel and/or closure or relocation budgets for each of the units.
- By mid-2017, Calpine will file for approval of a closure plan with the California Energy Commission (CEC) regarding the King City Energy Center. Approval of this closure plan is required to satisfy its CEC license requirements prior to the commencement of decommissioning activities.

These complicated and transformational activities require months to plan and implement, and place a large burden on the commercial, operational, legal and personnel functions at Calpine.³ We cannot and will not defer these decisions until late 2017. In this regard, we have concluded, based on discussions with your staff, that the provisions of the Capacity Procurement Mechanism (CPM) do not allow a sufficient planning period, or “runway” for such complicated and transformational activities. In fact we conclude, with the concurrence of your staff, that even if the 2017 Peakers are needed for reliability, the CPM risk-of-retirement provisions (§ 43A.2.6) would require them to operate uneconomically into 2018 after their contracts expire, but before the CAISO could designate them as eligible for compensation. We do not view continued operation with unknown compensation as an acceptable business outcome. As such, *we will not pursue such a CPM designation.*

We are aware, however, that if the CAISO determines that all or some of the 2017 Peakers are required for reliability, the CAISO retains the unilateral right to designate those units as Reliability Must Run (RMR) under CAISO Tariff §41. As noted earlier, in order to provide for reasoned planning and coordination of activities, Calpine asks that the CAISO complete any reliability analysis and communicate the results on or before March 31, 2017.

As always, we stand ready to meet with you when further discussions are advisable.

Sincerely,



Mark Smith
Vice President, Governmental & Regulatory Affairs

cc: Keith Casey, ISO

³ It is worthy of note that the decommissioning planning and implementation process for combined cycle units (as opposed to the 2017 Peakers), is an even longer process – many CEC licenses require the submission of a decommissioning or closure plan to the CEC for review and approval at least 12 months prior to the commencement of decommissioning activities.

Attachment F – Letter dated June 2, 2017

Reliability Must-Run and Capacity Procurement Mechanism Enhancements

California Independent System Operator Corporation



CALPINE CORPORATION

4160 DUBLIN BOULEVARD

SUITE 100

DUBLIN, CA 94568

925.557.2280 (M)

925.479.9560 (F)

NYSE CPN June 2, 2017

Mr. Steve Berberich
President and Chief Executive Officer
California Independent System Operator
250 Outcropping Rd
Folsom, CA 95630

Dear Mr. Berberich,

Given deteriorating market dynamics, substantial capital required to maintain availability, and the absence of compensatory contracts, Calpine is currently assessing whether to make Metcalf unavailable for CAISO dispatch effective January 1, 2018. Metcalf Energy Center (“Metcalf”) is in a local, constrained sub-area of the Greater Bay Area.¹

In order to facilitate Calpine’s operational planning, capital commitments and approvals needed for the potential suspension of operations of the facility, we ask that you direct CAISO staff to undertake the studies necessary to confirm that the absence of Metcalf generation will not create unacceptable reliability impacts.² We ask that the results of that review be communicated to Calpine as soon as practicable.

The CAISO is well-aware of the financial distress that is mounting upon natural-gas fired resources. In fact, the Department of Market Monitoring indicates that the preponderance of zero (or negative) marginal cost resources have driven energy margins for combined-cycle gas generation facilities (CCGTs), like Metcalf, down to roughly \$1 per kw-month. Resource Adequacy payments have not risen concomitantly, in part because the local RA requirements are enforced by the CPUC at the aggregate (and oversupplied) level of the “Greater Bay Area,” and not at the constrained local sub-area level in which Metcalf resides (the South Bay/Moss Landing sub-area).

In addition, Metcalf’s key generating components (each of the two gas-turbines and the steam turbine) are all expected to require major maintenance, which is currently planned for spring 2018. Current estimates place the expenditures required to complete such major maintenance at well over \$20 million. It would be economically irrational for Calpine to

¹ Metcalf is a 2x1 combined cycle plant with an August NQC of 570 MW. The plant was commissioned and on-line in 2005 and uses reclaimed water for all cooling purposes.

² We are aware that there are other facilities in this constrained sub-area that will quickly be facing similar decision points, including at least the following Calpine facilities, which are nearing the end of their contractual commitments: 120 MW Gilroy Cogeneration (contracted through December 2018), 28 MW Agnews (contracted through Spring 2021), and 135 MW Gilroy Peakers (contracted through December 2021).

Mr. Steve Berberich
President and Chief Executive Officer
June 2, 2017
Page 2

undertake that investment without a clear line-of-sight to compensation that yields capital recovery.³

Our expectations of compensation are clear – the prevailing RA market prices will not support continued operation of Metcalf. In fact, Metcalf has no RA contracts for any part of calendar year 2018 and we do not expect any such contracts to materialize. Of course, we will keep the CAISO apprised of any unexpected success we might have in contracting.

With these uncertainties evident, Calpine cannot and will not defer operational and capital decisions regarding Metcalf until late 2017. As we have informed you previously and again recently, we conclude that the provisions of the Capacity Procurement Mechanism (CPM) do not allow a sufficient planning period, or “runway” for such complicated and transformational activities, such as major maintenance, budgeting and personnel planning. As such, *we will not pursue such a CPM designation.*

We are aware, however, that if the CAISO determines that Metcalf is required for reliability, the CAISO retains the unilateral right to designate it as Reliability Must Run (RMR) under CAISO Tariff §41. As noted earlier, in order to provide for reasoned planning and coordination of activities, Calpine asks that the CAISO complete any reliability analysis and communicate the results to Calpine as soon as practical.

As always, we stand ready to meet with you when further discussions are advisable.



Mark Smith
Vice President, Governmental & Regulatory Affairs

cc Keith Casey, ISO

³ We note that the CPUC once again has proposed to reject a multi-year forward RA procurement requirement.

Attachment G – NYISO’s Generator Deactivation Notice
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation

38.24 Appendix A – Generator Deactivation Notice Form

38.24.1 Instructions

38.24.1.1 Before a Generator may be Retired or enter into a Mothball Outage, the Market Participant must satisfy the requirements set forth in Attachment FF to the OATT, including submitting to the NYISO a completed Generator Deactivation Notice using the form set forth in this Appendix A of Attachment FF to the OATT, and providing the information required by Appendix B of Attachment FF to the OATT.

38.24.1.2 In accordance with the requirements set forth in Section 38.3.1 of Attachment FF to the OATT and ISO Procedures, the Market Participant shall submit to the NYISO via electronic mail (a) the Generator Deactivation Notice form to generator_retirement@nyiso.com and (b) all information required by Appendix B of Attachment FF to NYISO Stakeholder Services, to the attention of the Director of Market Mitigation and Analysis.

38.24.1.3 The NYISO will review the information received pursuant to Section 38.3.1.5 of the OATT to determine whether it is complete. The NYISO will notify the Market Participant to provide any additional information that is required in order for the Generator Deactivation Notice to be determined to be complete.

38.24.1.4 The 365 day notice period applicable to a Generator(s) proposing to be Retired or enter into a Mothball Outage will begin to run on the date that the NYISO issues a written notice to the Market Participant indicating that the Generator Deactivation Notice (including the information received and supporting certification) are complete.

38.24.1.5 The Market Participant has a continuing obligation to timely submit additional information pursuant to Section 38.25.4 of Appendix B, under Attachment FF to the NYISO OATT, and as otherwise required under the ISO Tariffs. All such information shall be sent to NYISO Stakeholder Services, to the attention of the Director of Market Mitigation and Analysis.

38.24.2 Submitting Entity's Information

38.24.2.1 Name of entity submitting notice:

_____ (“submitting entity”)

38.24.2.2 Submitting entity's interest in and relationship with Generator(s) (check all that apply):

- Owner (and if part owner, percent) of Generator(s)
- Operator of Generator(s)

- Market Participant
- Other _____

If the submitting entity is not both the owner and operator, provide the following information for (a) the owner, (b) the operator, (c) Market Participant, and (d) the submitting entity:

38.24.2.3 State of organization or incorporation:

38.24.2.4 Contact information

Name of contact person and alternate contact person, title, relationship to the submitting entity, mailing address, e-mail address, office phone number, and cell phone number:

38.24.3 Identity of Generator(s) Subject to Generator Deactivation Notice

Location:

Unit Name: _____ PTID _____ Nameplate Capacity in MW: _____

Unit Name: _____ PTID _____ Nameplate Capacity in MW: _____

Unit Name: _____ PTID _____ Nameplate Capacity in MW: _____

Unit Name: _____ PTID _____ Nameplate Capacity in MW: _____

Revenue Meter Location(s) (Use PTIDs):

38.24.4 Proposed Generator Deactivation

38.24.4.1 The Generator Deactivation Notice is for the Generator(s) (check one):

- to be Retired
- to enter into a Mothball Outage.

38.24.4.2 If the submitting entity is proposing to enter into a Mothball Outage, please check the box below to acknowledge that the Generator(s) is able to return to service within 180 days.

Generator(s) is able to return to service within 180 days

Please note: If the submitting entity believes that there is good cause for why a Generator will not be able to return to service within 180 days, the submitting entity must separately provide for each such Generator the proposed

number of days for return and supporting information to the NYISO for review. The NYISO will determine whether the information provided satisfies the requirements of Section 5.18.3.2 of the ISO Services Tariff. If the Generator Deactivation Notice is for more than one Generator, and the response to this subsection 38.24.4.2 is not the same for all Generators, specify by Unit Name and PTID which Generators are able and which are not able to return to service within 180 days.

38.24.4.3 If the submitting entity is proposing for the Generator(s) to be Retired on a date other than 365 days after the Generator Deactivation Assessment Start Date (as that term is defined in Section 38.1 of Attachment FF to the NYISO OATT), the desired retirement date is: [day] of [month] of [year].

38.24.4.4 If the submitting entity is proposing for the Generator(s) to enter into a Mothball Outage on a date other than 365 days after the Generator Deactivation Assessment Start Date, the desired date to enter into a Mothball Outage is: [day] of [month] of [year]. The submitting entity proposes to resume operation and participation in the ISO Administered Markets on: [day] of [month] of [year].

38.24.5 Acknowledgments

By submitting the Generator Deactivation Notice, the submitting entity acknowledges:

- After the NYISO determines that the Generator Deactivation Notice is complete, the NYISO will post a notice of that determination (and will notify the submitting entity.)
- If the submitting entity rescinds this Generator Deactivation Notice after the NYISO determines it to be complete, the submitting entity must reimburse the NYISO and the relevant New York Transmission Owner(s) in accordance with Section 38.14.2 of Attachment FF of the NYISO OATT the actual costs that each incurred in performing their responsibilities under Attachment FF of the NYISO OATT and Section 23.4.5.6 of the ISO Services Tariff in response to the submitting entity's submission of this Generator Deactivation Notice, including any costs associated with using contractors.

38.24.6 Submitted By:

Certification

The undersigned certifies that he or she is an officer of the submitting entity, that he or she is authorized to execute this Certification and submit this Generator Deactivation Notice on behalf of the submitting entity, and that the information and statements contained herein (including any and all attachments, and information required by Appendix B of Attachment FF to the NYISO OATT submitted herewith,) and in this certification are true and correct to the best of his or her information, knowledge and

belief, having conducted due diligence.

Signature

Name: _____ Title: _____

Date: _____

Attachment H – MISO’s Attachment Y Notice
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation

ATTACHMENT Y

Notification of Generation Resource/SCU/Pseudo-tied Out Generator

Change of Status,

Including Notification of Rescission

This is a notification of change of status of a Generation Resource, Synchronous Condenser Unit (“SCU”), or Pseudo-tied out Generator in accordance with Section 38.2.7.a of the Tariff. An electronic copy of the completed form will be accepted by the Transmission Provider, however, a form will not be considered complete until the original form containing an original signature, including all attachments, is received by the Transmission Provider at the following address: MISO, Attention: Director of Transmission Planning; 720 City Center Drive, Carmel, IN 46032.

The Transmission Provider may request additional information as reasonably necessary to support operations under the Tariff.

Owner of the Generation Resource, SCU or Pseudo-tied out Generator:

Name of Market Participant: _____

Owner’s state of organization or incorporation _____

Generation Resource/SCU/Pseudo-tied Out Generator [plant and unit number(s)] _____

Source/Identification of Generation Interconnection Service [name of agreement, parties, date, date filed and docket number, and any other information to identify an agreement] _____

Pursuant to the terms of the MISO Tariff, Owner hereby certifies that it will

- Suspend for economic reasons operation of all or a portion of the Generation Resource/SCU/Pseudo-tied out Generator commencing on ___ [day] of _____ [month] of _____ [year]
- Rescind the current notice to SuspendThe facility is further described as follows:

Location: _____

| Unit Name | CPNode (if applicable) | Nameplate Capacity(MW) | Change in Capacity(MW) |
|-----------|------------------------|------------------------|------------------------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

Owner understands and agrees that this notification is provided in accordance with Section 38.2.7 of the Transmission Provider's Tariff and will not be made public by the Transmission Provider except as provided for under Section 38.2.7 of the Tariff.

The undersigned certifies that he or she is an officer of the owner of the Generation Resource/SCU/Pseudo-tied out Generator, that he or she is authorized to execute and submit this notification, and that the statements contained herein are true and correct.

Signature

Name: _____ Contact Information

Title: _____ Email: _____

Date: _____ Phone: _____

STATE OF _____

COUNTY OF _____

Before me, the undersigned authority, this day appeared _____, known by me to be the person whose name is subscribed to the foregoing instrument, who, after first being sworn by me deposed and said:

“I am an officer of _____, I am authorized to execute and submit the foregoing notification on behalf of _____, and the statements contained in such application are true and correct.”

SWORN TO AND SUBSCRIBED TO BEFORE ME, the undersigned authority on this the _____ day of _____, 20__.

Notary Public, State of _____

My Commission expires _____

Attachment I – CAISO Form of Notice of Generating Unit Retirement or Mothball
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation

Notice of Generating Unit Retirement or Mothball
Including Rescission of Retirement or Mothball

This is a notification of the retirement or mothballing of a Generating Unit in accordance with Section 41 of the CAISO Tariff and the CAISO BPM for Generator Management. An electronic copy of this completed form should be sent to the CAISO at RegulatoryContracts@caiso.com. However, this form will not be considered complete until the original form containing an original signature, including all attachments, is received by the CAISO at the following address: CAISO, Attention: Director of Infrastructure Contracts and Management; 250 Outcropping Way, Folsom CA 95630.

The CAISO may request additional information as reasonably necessary to support its review of planned non-operations.

Legal Owner of the Generating Unit: _____

Legal Owner's state of organization or incorporation: _____

Name of Scheduling Coordinator: _____

Identity of Generating Unit(s) Subject to Retirement/Mothball (Resource Name, Resource ID): _____

Category of Retirement: _____

Reason for retirement: _____

Pursuant to the terms of the CAISO Tariff, Owner hereby certifies that:

- [] In accordance with the Business Practice Manual for Generator Management, it is retiring the Generating Unit effective _____ [month], _____ [day], _____ [year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one or both] _____ the current year and/or _____ the upcoming year, it is uneconomic for the Generating Unit to remain in service for such year(s), and the decision to retire is definite unless the CAISO procures the Generating Unit, the Generating Unit is sold to an unaffiliated third-party, a third-party contracts with the Generating Unit for Resource Adequacy purposes, or the Generating Unit obtains some other contract.
- [] In accordance with the Business Practice Manual for Generator Management, it is retiring the Generating Unit effective _____ [month], _____ [day], _____ [year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one or both] _____ the current year and/or _____ the upcoming year, it is retiring the Generating Unit for reasons other than it is uneconomic for the unit to remain in service during such year(s).

Owner is retiring the Generating Unit for the following reason(s) (state with specificity the reason for retiring the unit):

The decision to retire the Generating Unit is definite. Note: The CAISO may designate the resource for RMR service if needed for reliability.

State with specificity any legal, regulatory, or other reason(s) that might present an obstacle to providing RMR service:

[] In accordance with the Business Practice Manual for Generator Management, it is mothballing the Generating Unit effective _____ [month], _____ [day], _____ [year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one and/or both] _____ the current year and/or _____ the upcoming year, it is uneconomic for the Generating Unit to remain in service for such year(s), and the decision to mothball is definite unless the CAISO procures the Generating Unit, the Generating Unit is sold to an unaffiliated third-party, a third-party contracts with the Generating Unit for Resource Adequacy purposes or the Generating Unit obtains some other contract.

[] It is rescinding its prior notice to retire or mothball the Generating Unit before the effective date of the retirement or mothball, because the CAISO has procured the unit, the Generating Unit was sold to an unaffiliated third-party, a third-party contracted with the Generating Unit for Resource Adequacy purposes, or the Generating Unit obtained some other contract.

State with specificity the reason(s) for rescinding the notice:

[] It is terminating the Generating Unit's mothball status because the CAISO procured the Generating Unit, the Generating Unit was sold to an unaffiliated third-party, a third-party contracted with the Generating Unit for Resource Adequacy purposes, the Generating Unit obtained some other contract, or it is economic for the Generating Unit to return to service. State with specificity the reason(s) for returning from mothball status:

[] As the Resource Owner I acknowledge that it is my responsibility to submit the Resource Owner letter (available at: <http://www.aiso.com/Documents/ResourceOwnerSchedulingCoordinatorSelection-LetterTemplate.doc>) to SCrequests@aiso.com to end my SC association.

Owner understands that it must comply with all applicable CAISO Tariff and BPM requirements for retiring a Generating Unit, or mothballing a Generating Unit, or returning a Generating Unit from retirement or mothball status.

Owner understands and agrees that this notification is provided in accordance with Section 41 of the CAISO's Tariff and the request will be noted in the publicly available spreadsheet located at: <http://www.aiso.com/Documents/AnnouncedRetirementAndMothballList.xlsx>.

The undersigned certifies that he or she is an officer of the owner of the Generating Unit, that he or she is authorized to execute and submit this notification and has legal authority to bind the company, and that the statements contained herein are true and correct to the best of his or her knowledge and that this notice is executed under penalty of perjury.

Signature

Name: _____

Contact Information

Title: _____

Email: _____

Date: _____

Phone: _____

STATE OF: _____

COUNTY OF: _____

Before me, the undersigned authority, this day appeared _____, known by me to be the person whose name is subscribed to the foregoing instrument, who, after first being sworn by me deposed and said:

"I am an officer of _____, I am authorized to execute and submit the foregoing notification on behalf of _____, and the statements contained in such application are true and correct."

SWORN TO AND SUBSCRIBED TO BEFORE ME, the undersigned authority on this the ____ day of _____, ____.

Notary Public, State of _____
My Commission expires _____

Attachment J-1 – Table of Proposed Tariff Revisions relating to Legacy RMR Units
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation



| Section | Reason for Change |
|---------------|---|
| 4.9.13.2 | Updated references to RMR load following resources as there are no legacy load following RMR Units. |
| 6.5.3.1. | Modified multiple references to limit to Legacy RMR Contracts and Legacy RMR Resources. |
| 6.5.5.1.2 | Modified references to limit application to Legacy RMR Contract. |
| 7.7.2 | Modified section to apply only to Condition 2 Legacy RMR Units. |
| 11.5.6.3 | Modified section to apply only to Condition 2 Legacy RMR Units. |
| 11.8.2.1. | Modified three pre-existing RMR references to apply only to Legacy RMR Contracts and Legacy RMR Resources. (Proposed new tariff language in this section applies to new RMR resources.) |
| 11.8.4.1.4 | Modified one pre-existing RMR reference to apply only to Legacy RMR Contracts and Legacy RMR Units. |
| 11.10.1.4 | Modified to distinguish between Legacy RMR Units and new rules for RMR Resources. |
| 11.13 | Added introductory sentence to RMR settlements rules to refer to Appendix H for settlements rules for Legacy RMR Units. |
| 11.29.24.1(g) | Modified to include reference to Appendix H for Legacy RMR Units and update a tariff cross-reference. |
| 30.5.2.5 | Updating language to remove the defined term Maximum Net Dependable Capacity that applies to Legacy RMR Units, and replacing it with RMR Contract Capacity. |
| 31.2 | Modified two pre-existing RMR references to apply only to Legacy RMR Contracts and Legacy RMR Units. |
| 31.3.1.4 | Modified one pre-existing RMR reference to apply only to Legacy RMR Contracts and Legacy RMR Units. |
| 31.5.1.1 | Modified one pre-existing RMR reference to apply only to Legacy RMR Contracts and Legacy RMR Units. |
| 31.5.1.3 | Modified section to apply only to Condition 2 Legacy RMR Units. |
| 31.5.6 | Modified to include Legacy RMR language for existing RMR Contracts and RMR Resources and clarify that Legacy Condition 1 RMR Units are eligible for RUC compensation... |
| 34.1.5 | Modified section in several instances to apply only to Condition 2 Legacy RMR Units. |
| 34.10 | Updated to distinguish between Legacy RMR and new RMR rules for dispatching RMR legacy and new RMR resources. |
| 34.11 | Updated to distinguish between Legacy RMR and new RMR rules for dispatching RMR legacy and new RMR resources. |
| 34.12.2 | Updated to distinguish between Legacy RMR and new RMR rules for dispatching RMR legacy and new RMR resources. |



| Section | Reason for Change |
|--|--|
| 40.9.3.6.3 | Updated to distinguish between Legacy RMR and new RMR rules for dispatching RMR legacy and new RMR resources. |
| 41 | Added introductory sentence to RMR tariff procurement, settlement, and cost allocation, to refer to Appendix H for rules for Legacy RMR Units. |
| - Competitive LMP | Removes a tariff cross-reference that is being deleted with this filing. |
| - Condition 1 Legacy RMR Units | Modified to limit term only to Legacy Condition 1 RMR Units. |
| - Condition 2 Legacy RMR Units | Modified to limit term only to Legacy Condition 2 RMR Units. |
| Excess Cost Payment | Modified to refer to Condition 2 Legacy RMR Units. |
| Legacy Reliability Must-Run Contract (Legacy RMR Contract) | Added to refer to pre-existing RMR Contracts. |
| Legacy Reliability Must-Run Unit (Legacy RMR Unit) | Added to apply to resources under an existing RMR Contract. |
| Maximum Net Dependable Capacity | Modified only to apply to L |
| RMR Dispatch | Modified to distinguish between Legacy RMR Units and new rules for RMR Resources. |
| RMR Dispatch Notice | Modified to distinguish between Legacy RMR Units and new rules for RMR Resources. |
| RMR Proxy Bid | Modified to apply only to Legacy RMR Units |

Attachment J-2 – Table of Proposed RMR Contract Revisions
Reliability Must-Run and Capacity Procurement Mechanism Enhancements
California Independent System Operator Corporation



Pro Forma RMR Agreement

| Article | Description | Modification |
|---------|----------------------------|---|
| | Preamble | References to Black Start and other reliability services added to scope of the agreement. |
| 1 | Definitions | CAISO Tariff definitions incorporated by reference as appropriate, but RMR pro forma specific definitions not covered in CAISO Tariff will be listed in Section 1. Also added new definitions to reflect changes to settlements, must-offer obligation etc. |
| 2 | Term and Termination | Minor revisions removing anachronistic provisions and backing out temporary changes included in the interim RMR Contract. |
| 3 | Conditions of RMR | Removing condition 1 and condition 2 concepts in light of elimination of Condition 1 |
| 4 | Dispatch of units | Modifications to reflect that RMR resources will be dispatched in the market through a must-offer obligation like resource adequacy resource and well as exceptional dispatch. Prior restriction on dispatch removed. Test provisions simplified. RMR Dispatch Notice is intended to be used for products and services only available under RMR contract. Otherwise, RMR resources must comply with RA tariff rules based on resource type. |
| 5 | Delivery of energy and AS | Modifications to reflect new must-offer obligation, and removed concept of contract service limits. Preserves the right to issue RMR dispatch notices for all products and services available under the RMR contract. Eliminates anachronistic provisions inconsistent with new policy. |
| 6 | Market transactions | Modifications reflect many of the key policy changes including must-offer obligation, obligation to obtain an opportunity cost, if use-limited process, and a major maintenance adder. Adds marginal cost based bidding obligation, requires RMR units to comply with section 40 and subjects RMR units to section 40, including resources subject to bid generation. Noting availability of outage cards for maintaining use-limited resource availability and maintaining CAISO's existing authority to instruct resource not to participate in market if necessary to preserve resource for reliability. |
| 7 | Operations and Maintenance | Preserved provisions that allow owner to operate and repair resource. Outage provisions eliminated in favor of relying on CAISO tariff outages tariff rules. Updated to eliminate Responsible Utility role. |
| 8 | Rates and charges | Defines new rate calculation process for RMR units, identifies the availability incentive mechanism for RMR as the mechanism applicable to RA resources, and allows for an alternate availability incentive mechanism for RMR if appropriate and offered by CAISO. |
| 9 | Statements and payments | Modified to align RMR settlements process, payment and settlements disputes process with CAISO market settlements process per CAISO tariff. Clarified and added detail to eligibility to invoice for costs not recoverable in CAISO markets. Updated termination fee language to eliminate temporary language included in interim RMR Contract. |



| Article | Description | Modification |
|---------|--|---|
| 10 | Force Majeure events | Minor revisions to remove references to fuel oil units. |
| 11 | Dispute resolution | Minor edits. |
| 12 | Covenants of parties | Eliminated original language to allow parties to negotiate terms, minor edits on other provisions. Eliminate references to Responsible Utility. Added flexibility for RMR owner to provide additional forms of assurance |
| 13 | Assignment | Minor edits to remove anachronistic references. |
| 14 | Miscellaneous provisions | Minor edits to expressly allow for notices by email. |
| A | Unit characteristics | Modified to include RMR Contract Capacity, and deleted sections on unit characteristics so RMR units defer to CAISO tariff rules and Master File process. |
| B | Monthly Option Payment | Updated schedule to reference new daily payment rate based on traditional RMR Schedule F and Schedule L costs and removed calculations of non-performance penalty rates. |
| C | Variable Cost Payment | Updated to include new invoice process for recovering costs not covered or under CAISO Tariff such as voltage support, black start service, excess fuel costs, RMR termination fee and RMR repair cost. |
| D | Start-up payment | Deleted section since start-up costs calculated as per CAISO Tariff and BPM rules. |
| E | AS payment | Deleted section since ancillary service payments calculated as per CAISO Tariff and BPM rules. |
| F | Determination of Annual revenue requirements | Eliminated rate of return provision to require RMR owner to include proposed rate in RMR rate filing, clarified that recovery of monthly scheduling coordinator charges recoverable per Schedule, and removed anachronistic references. |
| G | Charges for service in excess of contract limits | Removed as no longer applicable without contract service limits in RMR agreement. |
| H | Fuel Oil service | Removed as no longer required. |
| I | Insurance Requirements | Eliminated language to allow for negotiation of insurance requirements between parties. |
| J | Notices | Revised to remove specific contacts in <i>pro forma</i> RMR Contract. Parties will identify responsible parties as part of contract negotiations and update as necessary. |
| K | Dispute Resolution | No change. |
| L-1 | Request for Approval of Capital Items or Repairs | Added provision to require RMR owner to identify available start up minimum load and MWH limits available prior to the need for major maintenance. |



| Article | Description | Modification |
|---------|---|---|
| L-2 | Capital Item and Repair Progress Report | No change. |
| M | Mandatory Market Bid for CAISO Dispatched Condition 2 Units | Removed as no longer applicable. Bidding will be subject to CAISO Tariff and BPM rules |
| N-1 | Utility Non-Disclosure & Confidentiality Agreement | No longer applicable since Responsible Utility no longer part of the agreement. |
| N-2 | Non-Utility Persons Disclosure & Confidentiality Agreement | Minor edits to update to latest format developed in 2018 negotiations with RMR owners. |
| O | RMR Owner's Invoice Process | No longer applicable since RMR will follow settlements process outlined in CAISO Tariff and BPMs. |
| P | Reserved Energy for Air Emissions Limitations | Removed as it no longer necessary. |