



California ISO

Reliability Must Run and Capacity Procurement Mechanism Enhancements

Second Revised Straw Proposal

December 12, 2018

Market & Infrastructure Policy

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Appendix 1: List of Acronyms

1. Executive Summary

The California Independent System Operator Corporation (“ISO”) is reviewing and considering improvements to its backstop procurement mechanisms, the capacity procurement mechanism (“CPM”) and Reliability Must-Run (“RMR”) agreement, in light of recent experiences implementing RMR agreements and CPM designations and to address concerns identified by the ISO and stakeholders about the ISO’s use of backstop procurement. This initiative will review the RMR tariff provisions, pro forma agreement and procurement processes, and seek to clarify and align the use of RMR and CPM procurement. The scope of this initiative is shown in Figure 1 below.

Figure 1 Scope of this Initiative

<p>RMR and CPM</p> <ul style="list-style-type: none">• Provide notice to stakeholders of resource retirements• Clarify use of RMR versus CPM procurement• Explore whether Risk of Retirement (“ROR”) CPM and RMR procurement can be merged into one mechanism <p>RMR</p> <ul style="list-style-type: none">• Develop an interim pro forma RMR agreement• Make RMR resources subject to a must offer obligation (“MOO”)• Consider making RMR resources subject to the Resource Adequacy Availability Incentive Mechanism (“RAAIM”)• Consider whether RMR Condition 1 and 2 options are needed• Update rate of return for RMR compensation• Align pro forma RMR agreement with RMR tariff authority that provides ability to designate for system and flexible needs• Allocate flexible Resource Adequacy (“RA”) credits from RMR designations• Streamline and automate RMR settlement process• Lower banking costs associated with RMR invoicing <p>CPM</p> <ul style="list-style-type: none">• Change CPM pricing formula for resources that file at the Federal Energy Regulatory Commission (“FERC”) for a CPM price above the soft-offer cap price• Evaluate if load serving entities (“LSEs”) are using CPM for their primary capacity procurement

The major features of the revised straw proposal are summarized below.

1. The ISO will notify stakeholders when a resource 45 MW or greater informs the ISO that it is planning to retire, mothball or otherwise make the entire resource unavailable.
2. The ISO has the authority to procure resources under both the RMR and CPM mechanisms.
3. RMR procurement will be used to address resource retirements.
4. CPM procurement will be used to backstop the RA program.
5. All CPM and RMR resources will have a similar MOO.

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6. All CPM and RMR resources will be subject to the Resource Adequacy Availability Incentive Mechanism (“RAAIM”).
7. The ISO will merge the existing risk of retirement (“ROR”) CPM procurement authority from the CPM portion of the tariff into the RMR portion of the tariff so that there is one procurement mechanism for all ROR situations.
8. To address the concern that CPM compensation may be excessive for CPM prices above the soft-offer cap, the ISO proposes to change the pricing formula for a resource that files for a CPM price above the soft-offer cap price to an approach where the resource can file at FERC based on the going forward fixed costs (“GFFC”) of its resource using the same cost categories and same cost adder (20% adder) that are used for the CPM reference resource. CPM resources will continue to keep all market rents earned.
9. RMR agreements will be full cost of service agreements where resources will have their full cost of service paid, and they must credit back all market rents earned above that amount. The ISO will eliminate the current Condition 1 option. Through this existing option a resource is not paid its full cost of service through the RMR contract but it may keep market rents earned above its cost of service.
10. The ISO proposes to align the pro forma RMR agreement so that it reflects the ISO’s existing RMR tariff authority to designate for system and flexible needs.
11. To be offered an RMR designation, a resource must submit a formal retirement notice to the ISO, which must include a date that the resource is planning to retire. The ISO will expect the resource to also send a notice to the California Public Utilities Commission (“CPUC”) indicating its intent to retire. To provide for an orderly process, mitigate potential impacts on the RA program, and provide for a longer runway for resources to make important business decisions, a resource can submit its retirement notice by February 1 of the year before it intends to retire.
12. The ISO proposes to remove the fixed rate of return that is currently in the RMR pro forma agreement and require that resource owners specify and support a rate of return for its resource in its RMR rate schedule filing at FERC following RMR designation.
13. The ISO proposes to allocate flexible RA credits from RMR designations to the extent the resource has Effective Flexible Capacity (“EFC”).
14. The ISO proposes to leverage the current ISO settlement system and interface to automate the RMR validation and invoicing processes.
15. The ISO 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.
16. The ISO proposes to keep the current year-ahead CPM local collective deficiency procurement cost allocation methodology, as it believes that the issue of load migration has largely been addressed by the CPUC’s June 2018 RA Decision.

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On October 29, 2018, FERC approved a limited interim change to the pro forma RMR agreement that, effective September 1, 2018, applies to new RMR designations and allows the ISO to terminate the interim form of agreement effective at the end of the contract year and immediately re-designate RMR resources under the new substantive RMR agreement for the following contract year. The right to immediately re-designate would not apply to RMR resources under RMR agreements currently in effect.

The ISO plans to take its proposal for this initiative to the ISO Board of Governors for approval in March 2019. The enhancements are scheduled to be implemented as part of the fall 2019 technology release, and will be in effect on January 1, 2020.

A list of acronyms used in this second revised straw proposal is provided in Appendix 1.

2. Plan for Stakeholder Engagement

The ISO issued a revised straw proposal on September 19, 2018 and held a stakeholder meeting on September 27, 2018 to discuss the revised straw proposal. The ISO received written comments from stakeholders on the revised straw proposal on October 23, 2018. The ISO held a working group meeting on November 1, 2018 to discuss with stakeholders its latest thinking on the items within this initiative and to gather stakeholder feedback. The ISO has developed this second revised straw proposal based on the feedback received from stakeholders through written comments and the discussion that occurred during the November 1, 2018 working group meeting. A stakeholder conference call will be held on December 20, 2018 to discuss the second revised straw proposal. Written comments from stakeholders are due on January 10, 2019. The ISO plans to take a proposal to the ISO Board of Governors for approval on March 27-28, 2019. The schedule for this initiative is shown in Table 1 below.

Table 1 – Schedule for this Initiative

Stage	Date	Milestone
Milestones prior to May 30	Nov 2, 2017	ISO commits to undertake review of RMR and CPM
	Jan 2, 2018	Issue market notice announcing this initiative
	Jan 23	Post issue paper and straw proposal for two items
	Jan 30	Hold stakeholder meeting
	Feb 20	Stakeholder written comments due
	Mar 13	Post draft final proposal for two items
	Mar 20	Hold stakeholder meeting
	Apr 10	Stakeholder written comments due
Straw proposal	May 30	Hold working group meeting
	Jun 26	Post straw proposal
	Jul 11	Hold stakeholder meeting
	Aug 7	Stakeholder written comments due

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Stage	Date	Milestone
Revised straw proposal	Aug 27	Hold working group meeting
	Sep 19	Post revised straw proposal
	Sep 27	Hold stakeholder meeting
	Oct 23	Stakeholder written comments due
Second revised straw proposal	Nov 1	Hold working group meeting
	Dec 10	Post second revised straw proposal
	Dec 20	Hold stakeholder conference call
	Jan 10, 2019	Stakeholder written comments due
Draft final proposal	Jan 23	Post draft final proposal
	Jan 23	Post draft CPM and RMR tariff language
	Jan 30	Hold stakeholder meeting
	Feb 15	Post draft RMR pro forma agreement language
	Feb 22	Stakeholder written comments due
Final proposal	Mar 27-28	Present proposal to Board of Governors
Implementation	Fall 2019	Implement in Fall 2019 Release, effective 1/1/2020

3. Decisional Classification

For this initiative, the ISO will seek approval from only the Board of Governors. The ISO believes this initiative falls outside of the scope of the Energy Imbalance Market (“EIM”) Governing Body’s primary and advisory roles because the initiative does not seek changes to either rules of the real-time market or generally applicable rules of all markets. Rather, the initiative seeks modifications to the ISO’s backstop capacity procurement authority to ensure that reliability requirements are met in the ISO’s balancing authority area. These proposed changes will not apply to EIM balancing authority areas. The ISO seeks stakeholder feedback on this EIM classification of the initiative.

4. Background

The ISO is modifying its approach for this initiative based on FERC’s April 12, 2018, order in Docket Number ER18-641. In that order, FERC rejected the ISO’s January 12, 2018 filing to enhance the process for ROR CPM designations. One of the key features of the ROR CPM proposal was to create a new window each spring, in addition to the existing window each fall, for resources to request a ROR CPM designation. In its order FERC found that a spring window could result in front-running the RA process, price distortions and interference with bilateral RA procurement. In its order FERC noted that the ISO had initiated a stakeholder process to review RMR and CPM issues and strongly encouraged the ISO and stakeholders to adopt a holistic,

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rather than piecemeal, approach and encouraged the ISO to propose a package of comprehensive reforms.

This initiative will consider changes to the RMR and CPM paradigms. The ISO also is actively engaged at the CPUC in advocating improvements to the RA program. The ISO also has started an ISO stakeholder initiative to enhance the RA program that is in the ISO's tariff, which is called the RA Enhancements initiative. The ISO believes that through its efforts in this initiative and its efforts at the CPUC the ISO is reviewing holistically the most important aspects of procurement to ensure reliable operation of the grid.

RMR Authority

Since the startup of the ISO in 1998 the ISO has had authority through RMR designations/agreements to procure essential reliability services from resources. There were a considerable number of RMR resources in the early years of ISO operations. In 2005, the RA program was established to reduce RMR procurement and to cost-effectively secure capacity to meet the reliability needs of the grid. In 2006 the RA program was augmented to include local RA capacity requirements. These forward capacity procurement mechanisms significantly reduced the need for RMR resources. Between 2010 and 2016 there were just a handful of RMR resources under contract as the vast majority of the system's reliability needs were met through RA procurement. Recently there has been an uptick in the number of resources under RMR due to policies and emerging trends in the energy industry that are fundamentally altering the resource procurement and RA landscape. Because RMR use had been declining for years, the ISO had not seen an urgent need to update the RMR provisions and structure. However, with the potential for more RMR as traditional gas-fired resources face retirement pressures, the ISO believes the RMR construct should be updated to reflect current conditions, needs, and expectations. As part of the ISO Board of Governor's November 2, 2017 approval of an RMR designation for the Metcalf Energy Center, ISO management committed to commence a stakeholder initiative in early 2018 to look at the RMR framework process as well as potential modifications to RMR regarding Condition 1 and Condition 2 options.

CPM Authority

Since 2006, the ISO has had backstop procurement authority to meet specific reliability needs. Currently the ISO has authority to procure resources under its CPM tariff to ensure the reliable operation of the grid under the following situations: (1) there is insufficient RA capacity (system, local, flexible) in year-ahead and/or month-ahead RA showings; (2) there is a collective deficiency of local capacity resources; (3) a "Significant Event" occurs on the grid; (4) the ISO "Exceptional Dispatches" non-RA capacity; or (5) capacity is at risk of retirement that is needed for reliability in a future year. The ISO has updated the CPM several times since implementing it. In November 2017, the Board of Governors approved, and the ISO subsequently filed at FERC, enhancements to the ROR CPM process, which subsequently were not approved by FERC. During the November Board meeting, the ISO committed to examine the relationship between RMR and CPM procurement and explore whether they can be better aligned or consolidated.

RA Program

The ISO believes that the RA program needs certain refinements to remain current as the grid transforms. An improved RA program could, among other things, reduce the potential use of CAISO backstop procurement. The CAISO is an active participant in the CPUC's RA proceedings and is advocating changes to its RA program.

On November 21, 2018, the CPUC issued a proposed decision adopting significant refinements to its RA program. Most notably, the proposed decision (1) establishes multi-year procurement requirements for local RA capacity and (2) designates the utility distribution companies ("UDCs") as central buyers for local RA capacity. Specifically, the CPUC's proposed decision would require its jurisdictional load-serving entities to procure local RA resources on a three-year forward looking basis. The load-serving entities would be required to procure 100% of necessary local RA capacity in the first and second years and 80% in the third year of each cycle. The CAISO will provide its local capacity study to serve as the basis for the local procurement requirements.

The CAISO expects to address additional RA issues in Track 3 of the CPUC's RA proceeding, which is expected to conclude in June 2019. Issues to be addressed in Track 3 include:

- Adopting an updated Effective Load Carrying Capability methodology for solar and wind resources that includes accounting for behind-the-meter solar.
- Considering availability limitations such as maximum run time and call events in meeting local capacity needs.
- Adopting a higher demand forecast for system RA requirements in months that exhibit greater peak demand variability.

Separate from the CPUC's RA proceeding, the CAISO has started an RA Enhancements initiative that will consider the following changes to the CAISO tariff beginning with the RA compliance years 2020 and 2021.

- Multi-year RA.
- Multi-year needs assessments and load forecasting.
- Review Maximum Import Capability.
- RA validation to assess showings against CAISO operational needs.
- Slow response resources counting as local RA.
- Clarify RA must-offer obligations for system, local and flexible capacity from all resource types.

5. Stakeholder Comments

Stakeholders provided written comments on the September 19, 2018 revised straw proposal. The ISO has compiled all of the written comments into one document, sorted by initiative topic, which is available at: <http://www.aiso.com/Documents/CommentsSummary-ReliabilityMust->

[RunandCapacityProcurementMechanismEnhancements-RevisedStrawProposal.pdf](#). The ISO has summarized the written comments by each topic and provides ISO responses to each topic in section 7.

6. Changes from September 19, 2018 Revised Straw proposal

The ISO lists below the major changes to the revised straw proposal made in this proposal:

1. Changes the size threshold from 100 MW to 45 MW for informing stakeholders through a market notice of an update to the announced retirement and mothball spreadsheet.
2. Provides a new process to mitigate the potential for front-running the RA program and provide for a longer runway for resources to make business decisions where a resource can submit its retirement notice by February 1 each year.
3. Reports that on October 29, 2018 FERC approved a limited interim change to the pro forma RMR agreement that is effective September 1, 2018.
4. Clarifies how the MOO for RMR resources will work and bidding rules for RMR resources.
5. Clarifies how the RAIM mechanism will work for RMR resources.
6. Eliminated the Condition 1 RMR option.
7. Removes the fixed rate of return that is currently in the RMR pro forma agreement and requires that resource owners specify and support a rate of return for their resource in their FERC filing.
8. Clarifies that the RMR pro forma agreement will specify that a resource must agree to fulfill the RA flexible capacity requirements to qualify for flexible RA credits.
9. Provides additional details on how the ISO intends to streamline and automate the RMR settlement process.
10. Changes the pricing formula for a resource that files for a CPM price above the soft-offer cap price. The existing approach is based on the methodology for determining the annual fixed revenue requirement of an RMR resource as set forth in Schedule F to the pro forma RMR agreement. The new approach would be that the resource can file at FERC based on its GFFC plus a 20% adder. CPM resources would continue to keep all market rents.

7. Second Revised Straw Proposal

This section presents the ISO's second revised straw proposal. The items in this section are divided into the following categories:

- RMR and CPM items (items that are common to or have an overlap between RMR and CPM),
- RMR items (items specific only to RMR tariff provisions, pro forma agreement or procurement processes), and
- CPM items (items specific only to the CPM tariff).

The ISO presents in each subsection below an introductory paragraph that summarizes at a high level the discussion in the September 19, 2018 revised straw proposal. The details of the revised straw proposal are not reproduced in this second revised straw proposal. For the specifics of what was presented in the revised straw proposal please refer to the revised straw proposal at: <http://www.aiso.com/Documents/StrawProposal-ReviewReliabilityMustRunandCapacityProcurementMechanism.pdf>.

7.1 RMR and CPM Items

This section discusses items that are common to or have an overlap between RMR and CPM.

7.1.1 Provide notice to stakeholders of resource retirements

In the revised straw proposal, the ISO stated that it had implemented a new policy where the ISO will now notify stakeholders when it receives a notice that a resource plans to retire, mothball or otherwise make the entire resource unavailable to the ISO long-term. The new notification policy was implemented with the posting of a spreadsheet report on July 6, 2018.¹ The ISO agreed that it should be careful to ensure that accurate information is published in the spreadsheet and the ISO should alert stakeholders when a significant retirement letter is received that causes the spreadsheet to be updated. The ISO has posted a revised version of the spreadsheet. The ISO changed the title of one of the columns from “Resource Owner” to “PGA Holder”. This change will mitigate the possibility of listing erroneous information, as this information will be taken directly off of the executed Participating Generator Agreement (“PGA”). The ISO also has established a size threshold for informing stakeholders of an update to the spreadsheet. In the revised straw proposal the ISO further stated that the ISO will notify stakeholders of an update to the spreadsheet in the ISO Daily Briefing whenever the ISO receives a retirement notice from a resource of 100 MW or greater size that triggers a study by the ISO. Specific plans of the resource owner, such as redevelopment, repowering, or decommissioning, will be held confidential until the resource-owner decides to make them public. However any information related to retention of deliverability and the deliverability retention time, that impacts other projects in the queue will be made public. This includes: deliverability retention choice, minimum deliverability retention date, if a replacement plan has been provided and the status of such replacement plan (the last two items impact the deliverability retention date). For more information on this item, see PRR 1056.²

Stakeholder Comments

Calpine supports a 25 MW limit. **PAO CPUC** wants the 100 MW threshold removed; any change should trigger a market notice to stakeholders. **PG&E** wants the threshold decreased to 20 MW. **SCE** supports ISO proposal. **Six Cities** supports ISO proposal.

¹ See “Announced Retirement and Mothball List” posted to the ISO Reliability Requirements web page at: <http://www.aiso.com/planning/Pages/ReliabilityRequirements/Default.aspx>.

² At <http://http://www.aiso.com/Documents/Presentation-BusinessPracticeManualChangeManagementMay222018.pdf>.

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The ISO has considered stakeholder comments and agrees that the threshold can be lower than 100 MW. At the November 1 working group meeting the ISO offered a 45 MW threshold. At that meeting some stakeholders requested that the threshold be as low as 20 MW. The ISO's second revised straw proposal is to use a 45 MW threshold for notifying stakeholders in the ISO's Daily Briefing market notice of the receipt of retirement/mothball requests. The ISO does not believe that it is necessary to go to a threshold as low as 20 MW. All retirement/mothball requests, regardless of MW size, will be included in the published report. The question is what size threshold warrants a special market notice. The ISO proposes to proceed with the 45 MW threshold and monitor the effectiveness of that approach. Retirement/mothball notices for resources less than 45 MW will continue to be shown in posted report but will not be noticed in ISO Daily Briefing market notice. The ISO can change the MW threshold in the future if needed through the BPM change management process.

7.1.2 Clarify use of RMR versus CPM procurement

Some stakeholders believe that the ISO should provide additional clarity on the use of RMR procurement versus CPM procurement. The ISO agrees that additional information would be helpful and will provide additional clarification in this initiative. The ISO will consider the interplay between RMR and CPM to ensure that both mechanisms work properly. The ISO will provide process flow information showing how retirement requests will be evaluated within the overall process. The goal is to provide an understanding of how the procurement processes interact with each other.

Stakeholder Comments

Calpine agrees notice to retire must be submitted prior to engaging the RMR process. **DMM** states that continuing to offer two backstop procurement mechanisms with distinct compensation schemes will not prevent pivotal resources (with locational market power) from self-selecting designations based on their preferred compensation. Newer pivotal resources with undepreciated capital costs will be incentivized to self-select RMR compensation while older pivotal resources will be incentivized to self-select CPM compensation. **DMM** recommends that the ISO 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. Inclusion of resources indicating they will "mothball" (rather than retire) warrants significant additional discussion and clarification. Compensation for CPM and RMR should include GFFC plus a reasonable profit. Two approaches which ensured recovery of GFFC plus a reasonable profit: (1) Compensate resources GFFC plus a reasonable fixed profit and credit net market revenues back to ratepayers; or (2) Compensate a resource at its GFFC and allow it to keep net market revenues. Both the NYISO RMR order and the ISO-NE/Mystic order appear to establish full cost of service as an upper bound on compensation for resources needed for reliability, but do not establish this form of payment as a minimum or the only appropriate compensation for such resources. RUC payments are capacity availability payments and should therefore be credited back to

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offset the cost of these capacity payments. PJM and NYISO require resource owners to submit detailed cost information to the ISO or their market monitors upon notification of deactivation for purposes of assessing unit economics and the reasonableness of retirement decisions. ISO-NE's market monitor reviews capacity offers of resources seeking to deactivate that exceed a competitive bid threshold. ISO does not propose additional rules that hold a resource owner accountable for such attestations. DMM further states that other ISOs supplement retirement process with policies that facilitate both the retirement and replacement of a retiring asset. **PAO CPUC** has concern that resources requesting retirement may not actually be uneconomic and may simply be seeking the compensation provided by RMR agreement and recommends measures adopted by other ISOs that encourage resource owners to only participate in RMR if they intend to retire. NYISO requires resource owners to submit detailed information on its costs and revenues. **PG&E** - ISO should pay going-forward costs plus a reasonable return, and any resource that obtains CPM or RMR compensation should have its energy market profits netted back. **SCE** - 12 month CPM should be treated like an RMR condition 2 contract with all market rents returned. If ISO believes that competition for a 12 month CPM is feasible, then should employ market power screens and recommends a three-pivotal supplier test. If CPM must be utilized, must ensure that the process to arrive at an outcome is not subject to market power. **Six Cities** - support proposal to procure via RMR resources that are needed and that have informed the ISO of plans to retire and to remove from the CPM the currently-effective risk-of-retirement provisions.

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The ISO has existing authority from FERC to do the majority of the things discussed in this section, and the ISO is not proposing wholesale changes to the overall RMR and CPM construct as the ISO believes that as a whole, these two existing procurement mechanisms work well and function as intended. The key features of the proposed RMR and CPM construct are summarized below.

- The ISO will keep both the RMR and CPM procurement mechanisms.
- The ISO will use CPM procurement to backstop the RA program and for Significant Events and Exceptional Dispatches.
- The ISO will use RMR procurement to address resource retirements. As is the case today, resources must meet reliability needs supported by a reliability study.³
- All retirement procurement authority, including ROR, will be addressed through the RMR tariff provisions. Thus, going forward, RMR procurement will also encompass ROR CPM authority.
- RMR procurement will be based on full cost of service because RMR procurement is mandatory.

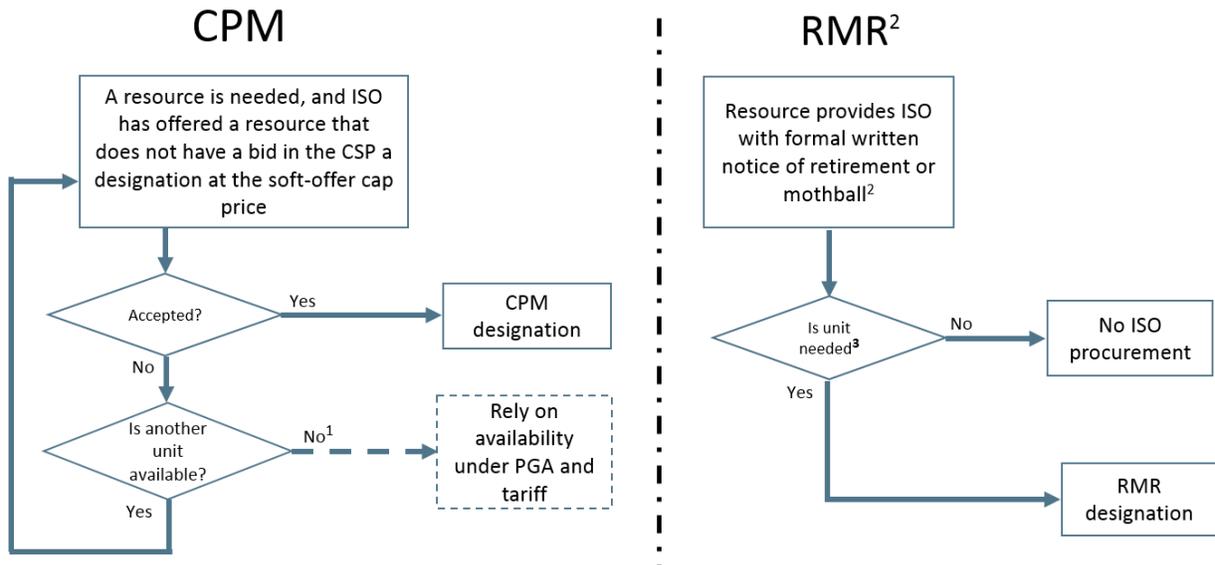
³ The ISO will continue to have the authority to designate resources needed for reliably services under the tariff to retain resources it needs for reliability in circumstances that require the ISO to act to retain such resources.

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- CPM procurement is voluntary if a resource has not submitted a bid into the CSP.
- If a bid has been submitted in the CSP and the ISO accepts that bid, then that resource cannot decline the CPM designation.
- All RMR and CPM resources will have a MOO.
- All RMR and CPM resources will be subject to RAAIM.

A process flow diagram of the use of CPM procurement versus RMR procurement is shown in Figure 2 below.

Figure 2 Use of RMR and CPM Procurement



If a resource declines a CPM designation, the ISO will offer the next most effective resource that can meet the need a CPM designation. If no other resources are available, the ISO will not go directly to offering the resource an RMR designation. The ISO will inform the resource that if the resource wants to be considered for an RMR designation, the resource must submit a formal retirement notice to the ISO. This notice must include an affidavit by an officer of the company who has the legal authority to bind such entity attesting the resource will not remain in service and that the decision to retire is definite unless some other type of ISO procurement of the resource occurs, the resource is sold to a non-affiliated entity, or the resource enters into an RA contract. In the formal retirement notice to the ISO, the resource must state that it is planning to retire at a certain date, but no earlier than 90 days from the notice of termination of the PGA. The ISO will expect the resource to also send a notice to the CPUC, if applicable, indicating its intent to retire. If the resource does not wish to submit a retirement letter and notice of PGA termination, the resource remains available for dispatch under its participating generator agreement and ISO tariff.

The ISO proposes to add new elements to the retirement/mothball process to make it more orderly, mitigate the impacts on the RA program, and provide a longer runway for resource

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owners, if they so choose, to make significant business decisions in a timely manner. The new elements are summarized below and in Figure 3.

If a resource is not an RA resource in the current RA year and is planning to retire/mothball:

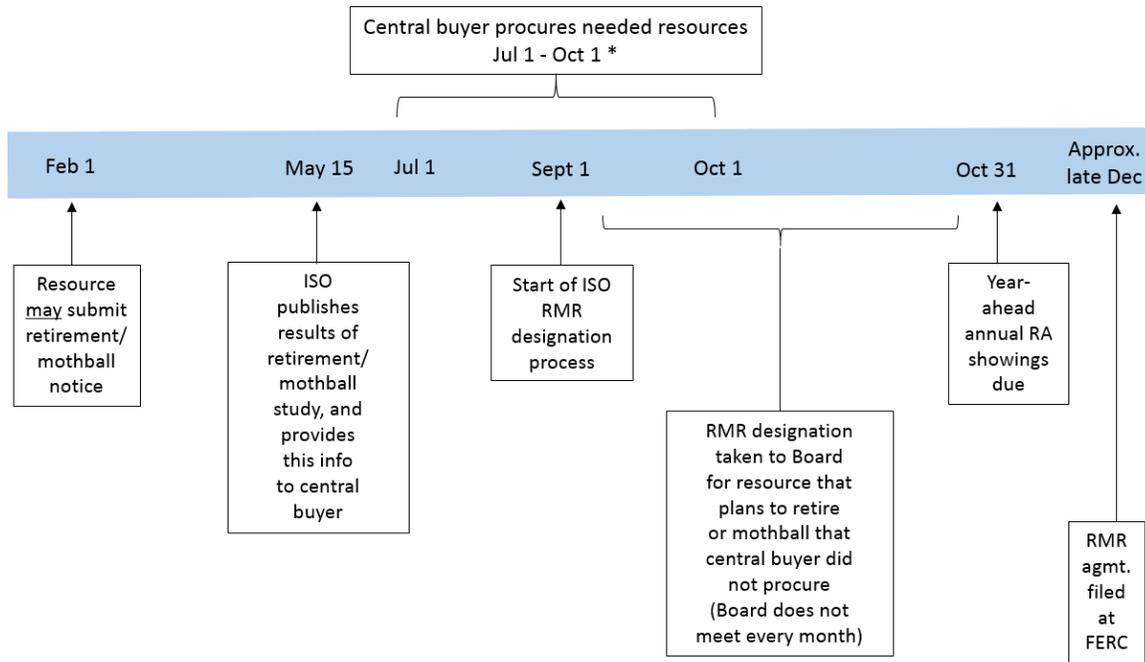
- A resource owner can submit a notice at any time during the year and the ISO will inform the resource owner of the study results promptly.
- If a resource owner wants to obtain a longer runway to make retirement/mothball decisions, the resource can choose to submit a notice before the PGA deadline.

If a resource is an RA resource in the current RA year and is planning to retire/mothball:

- If a resource owner wants a longer runway, it may submit a notice by February 1 of the current RA year, and the ISO will study/inform all stakeholders of results of the study by May 15. However, the ISO will not start its RMR procurement process for such resource until September 1. This delay until September will allow several months for procurement of a needed resource by an entity other 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 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 LSEs to procure such resources prior to the end-of-October deadline for submitting annual RA showings.
- If a resource owner provides notice after February 1, the only commitment the ISO will have is to inform the resource of the study results within 60 days prior to the expiration of the RA contract or 90 days of the request, whichever is later.

Figure 3 – RMR Notice and RA Process Timeline

Timeline of RMR retirement procurement and RA process



* Estimated. CPUC has not yet decided the time period for procurement.

7.1.3 Explore whether ROR CPM and RMR procurement can be merged into one mechanism

As part of this initiative the ISO will consider whether it is possible to integrate RMR and ROR CPM into a single, cohesive ISO procurement mechanism (or merge certain aspects of each) where the ISO would assess the two different reliability need horizons, the upcoming year (or “year one”) and the year after that year (or “year two”) under a single procurement mechanism. In the straw proposal, the ISO proposed to delete from the CPM tariff the existing authority to designate a resource needed for “year two” with a bridge in year one and add that same authority to the ISO’s RMR tariff to allow the ISO to designate a resource as RMR that is needed for year two with an appropriate length bridge.

Stakeholder Comments

Calpine supports the elimination of ROR CPM and the retention of RMR. **PG&E** does not support expanding the CAISO’s authority under the tariff to issue RMR designations for “year two” forecasted needs. Could lead to resources “front running” the bilateral RA procurement processes and therefore result in higher RA costs. **SCE** supports. **Six Cities** - support the CAISO’s proposal to move all retirement-related procurement authority into the RMR provisions of the tariff.

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The ISO proposes that all retirement procurement authority, including ROR CPM, will be merged into one mechanism under RMR tariff. The ISO will move to the RMR tariff the ISO's backstop authority that is currently reflected in the ROR CPM tariff. In other words, if the ISO can designate as RMR for the upcoming year a resource that is needed before the end of the following year. This change will eliminate the current ROR provisions under the CPM tariff. The length of the ROR RMR procurement will remain a maximum of one year, as it is now under the ROR CPM tariff.

7.2 RMR Items

This section discusses items specific only to RMR tariff provisions, pro forma agreement or procurement processes.

7.2.1 Develop an interim pro forma RMR agreement

In the straw proposal the ISO described how the current RMR agreement allows the ISO to extend the term of agreement by giving notice no later than October 1 and limits the ISO's right to re-designate an RMR resource in the event the ISO terminates or does not extend the RMR agreement. The ISO may not re-designate during the one-year period following termination, except under limited circumstances. The ISO described its plan to take to the ISO Board of Governors in July 2018 a non-substantive, limited interim change to the pro forma RMR agreement that would allow the ISO the right to terminate the RMR agreement and re-designate the RMR resource (and other resources at the same facility) under the new comprehensive pro forma RMR agreement (following the end of the RMR agreement year) once the new comprehensive pro forma RMR agreement is accepted by FERC. The right to immediately re-designate would not apply to RMR resources under RMR agreements currently in effect. The proposed interim RMR contract would apply to RMR designations following FERC acceptance of a new pro forma RMR contract.

In the revised straw proposal the ISO stated that it had received approval from the Board on July 25-26, 2018 to make a FERC filing. The ISO made a filing on August 31, requested a FERC order by November 1, and requested an effective date of September 1, 2018. RMR designations made after the approved effective date will be subject to the interim RMR agreement provisions

Stakeholder Comments

No stakeholder written comments were received on the revised straw proposal.

Update for Second Revised Straw Proposal

On October 29, 2018, FERC approved a limited interim change to the pro forma RMR agreement that effective September 1, 2018 applies to new RMR designations and allows the ISO to terminate the interim form of agreement effective at the end of the contract year and immediately re-designate RMR resources under the new substantive RMR agreement for the

following contract year. The right to immediately re-designate would not apply to RMR resources under RMR agreements currently in effect.

7.2.3 Make RMR resources subject to a MOO

The RA program requires that procured resources offer into both the energy and AS markets. The current construct for RMR was developed at ISO startup, before the RA program was implemented, and does not require RMR resources to bid into energy and AS markets with a must offer obligation (MOO). The ISO believes that it is appropriate that resources receiving RMR designations have a must offer obligation for the energy and AS markets. In the revised straw proposal the ISO proposed that RMR resources should have a must offer obligation for energy and AS similar to the current RA must offer obligation for energy and AS. The revised straw proposal described the bidding rules for RMR resources with a must offer obligation and stated that all major maintenance costs (adders) and opportunity costs should be reflected in bids for RMR resources to ensure that the true cost of operation is considered in market decisions. Pursuant to existing provisions, the ISO would have the ability to instruct an RMR resource to not run.

Stakeholder Comments

Calpine objects to a must offer obligation on resources as it will result in price suppression. **CPUC PAO** supports the proposal but asks for more detail on the development of major maintenance adders that would be reflected in bids, such as what maintenance activities it would include. CPUC PAO wants the ISO to clarify what costs should be included in major maintenance adders that may differ from capital costs recorded in Schedule L. **PG&E** supports imposing the must offer obligation. RMR and CPM units should be required to bid in their incremental costs and have any energy market revenues above costs credited back to customers. **SCE** supports imposing the must offer obligation.

Second Revised Straw Proposal

Many stakeholders support the ISO moving forward with its proposal for a MOO; however, several stakeholders have requested that the ISO clarify how maintenance costs will be treated in bids given that an RMR agreement includes compensation for such costs. Several stakeholders believe the ISO should not file a MOO requirement until the ISO has conducted a thorough discussion with stakeholders of all of the items in the scope of this initiative. In addition, some stakeholders believe that if there is to be a MOO additional resource performance requirements are needed beyond what the ISO has proposed to date, such as making an RMR resource subject to the RAAIM mechanism that current RA resources are subject to. Several stakeholders object to having a MOO obligation as is proposed by the ISO; however, the ISO disagrees and believes that RMR resources should have a MOO and be in the market for the hours that the resource is physically capable of submitting bids, with the market making commitment and dispatch decisions based on the true cost of operating each resource and optimizing dispatch.

California ISO –Second Revised Straw Proposal

The ISO proposes that all RMR resources have a MOO, which will be a 24x7 requirement. RMR resources bidding into the market will be required to bid, as outlined below.

The ISO will continue to pay RMR resources their full cost of service and the following will apply:

- Submit cost-based bids into energy and AS markets;
- Have all market rents above variable costs credited to fixed payment;
- Receive uplift for all market rents below variable costs through existing bid cost recovery mechanism;
- Have all Residual Unit Commitment (“RUC”) revenues above \$0 credited to fixed payment;
- Have ISO-generated cost-based bids inserted if no bids were submitted by the SC; and
- May be instructed by the ISO to not run.

The ISO would revise its systems so that the ISO can create and submit ISO-generated cost-based bids for RMR resources that have not bid into the market, similar to how the ISO currently generates and submits ISO-generated bids for RA resources. The ISO-generated bids would include:

- Start-up costs;
- Minimum load costs;
- Energy costs; and
- Multi-Stage Generator (“MSG”) transition costs (using registered default values).

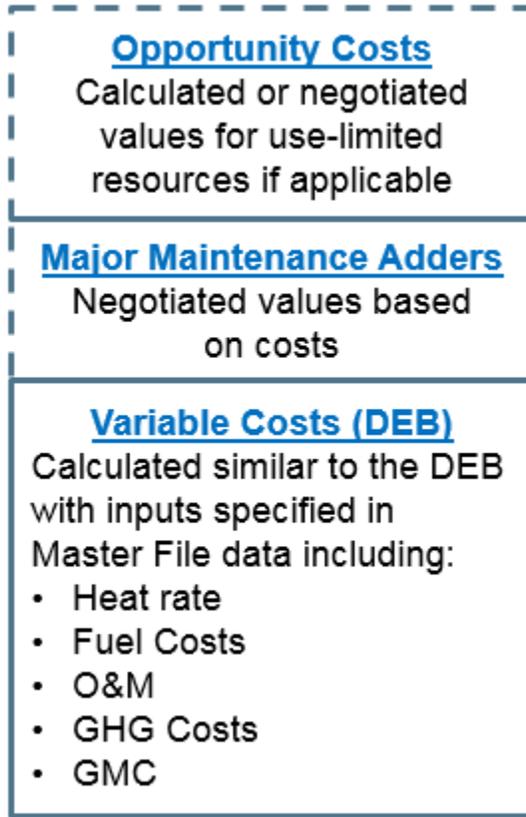
The ISO would generate and submit AS bids at \$0/MWh. The ISO-generated RUC bids would translate to \$0 offers. Energy bids would include the following components:

- Fuel costs;
- Operation and maintenance;
- GHG costs;
- Grid Management Charge (“GMC”); and
- Opportunity costs.

Major Maintenance adders (“MMA”) and opportunity costs, if applicable, will be reflected in bids to ensure true cost of operation is considered in market decisions. Thus, RMR resources will be required to bid into market at total cost. Actual major maintenance costs will be fully compensated via the fixed payment of the RMR, similar to the current RMR design. Any market rents earned above variable costs specified in the RMR contract would be credited to fixed cost payment to prevent double recovery of major maintenance adders, opportunity costs and market rents earned by the resource through market commitment and dispatch instructions. Resources with RMR agreements would be eligible for bid cost recovery (BCR) payments when

market earnings are insufficient to cover variable costs. This concept is illustrated below in Figure 4 below.

Figure 4 – RMR Resources Bidding



Note: MMAs will be used only if applicable.

7.2.4 Consider making RMR resources subject to RAAIM

It is important for RA, CPM and RMR resources to have performance incentives so that the resources are motivated to provide the services for which they were procured. RA and CPM resources are subject to the RAAIM performance incentive mechanism. RMR resources also need to have a performance incentive mechanism. In the revised straw proposal the ISO proposed that all RMR resources would be subject to the RAAIM mechanism and the current two resource performance incentive provisions in the RMR pro forma agreement would no longer be used as RAAIM will be applicable instead.⁴

Stakeholder Comments

Calpine believes that tailoring RAAIM to an RMR unit is incongruous because an RMR unit: (1) must self-schedule when the market does not support operation but the unit is required for

⁴ See Article 8 of Appendix G of the RMR pro forma agreement for the RMR Non-Performance Penalty and Long-term Planned Outage Adjustment.

California ISO –Second Revised Straw Proposal

reliability and because it is not considered an economic bid a self-schedule would unjustly expose the unit to penalties when complying with a dispatch order; (2) could receive RAAIM incentive payments for high availability in addition to other fixed cost recovery; and (3) has no ability to substitute in order to manage or avoid RAAIM. Calpine believes the incentives in the current RMR pro-forma are better tailored to RMR units and under no circumstance would Calpine support exposure to both RAAIM and the pro-forma availability charges. **PG&E** opposes using the same RAAIM performance mechanism for all resources. Does not reflect the unique operational circumstances of an RMR resource. RAAIM incentivizes unit owners to provide sufficient RA capacity to support energy market transactions, especially during high value times of day and year that align with system capacity constraints. RMR dispatches for a local reliability need or for other needs such as voltage control may not coincide with the RAAIM assessment hours. Moreover, the inability to provide substitute resources for unique RMR attributes would not fit the incentive mechanism of RAAIM (which assumes substitutes are readily available). **SCE** supports RMR penalty price. Instead of RAAIM metric, should define the maximum number of hours per year that the resource can be on outage without having its capacity payment impacted. This process should also define whether there are specific times of the year in which outages should be further limited to avoid capacity payment impacts. **Six Cities** supports ISO proposal.

Second Revised Straw Proposal

The ISO believes that the best solution is to apply the same performance mechanism to RA, CPM, and RMR resources. RMR resources would be subject to RAAIM, like RA and CPM resources are, and the ISO would no longer use the two existing penalty provisions in RMR agreement. The RAAIM penalty price for RMR resources would be the higher of the RMR agreement price or the RAAIM penalty price, similar to the approach for a CPM resource. The ISO permits resources to take outages without being subject to potential RAAIM penalties and believes that RMR resources do not face significantly different exposure in finding substitute capacity than RA or CPM resources that are located in a local area. Under the proposed RMR implementation, RMR resources would not be required to self-schedule an RMR dispatch. With the MOO in place, RMR resources would be dispatched using the same process used to dispatch RA and CPM resources. The proposed approach is identical to treatment of CPM capacity; monthly fixed capacity payments include an assumption the capacity is available for the entire month in general with potential for both incentives or penalties for availability and bidding greater than or less than the standard. RMR will be able to substitute using the same rules applicable to RA and CPM resources. The ISO proposal is to replace the RMR incentives and penalties with RAAIM so as not to impose duplicative measures. Rather, the proposal is to align incentives and penalties with RA and CPM because all mechanisms procure capacity required to operate the grid reliably; therefore, the incentives and penalties should be similar. The RMR penalty would be comparable to CPM, where the penalty is based upon the higher of RAAIM or CPM price. A MOO is a key element of the proposal to align RMR with the RA and CPM reliability capacity construct and streamline the process for dispatching market resources economically to meet the system needs. Further, the ability to substitute would be available to RMR resources because the resources will be modeled like RA and CPM capacity in the ISO

systems. The penalty would claw back a portion of the capacity payments similar to the application of RAAIM to CPM capacity. The current RMR availability payment does not provide an incentive to submit bids and it limits the ability to streamline the RMR settlement process by continuing requirement to track and validate availability in a separate tracking system. Further, maintaining a separate set of incentives and requirements creates inconsistencies between capacity procurement mechanisms, adds undue complexity to the ISO systems and processes, and establishes inefficiencies in the market optimization. The ISO recognizes that some stakeholders do not support using RAAIM “as is,” and instead advocate for a different performance mechanism than RAAIM. The ISO proposes to deal with this concern by better describing to stakeholders how the ISO’s outage process can address the concern. Further, if stakeholders still believe a different performance standard or mechanism should be used for RMR resources, the ISO will assess this in the ISO’s RA Enhancement initiative, which is considering possible changes to the resource performance mechanism.

7.2.5 Consider whether Condition 1 and 2 options are needed

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 revenues that it could keep (Condition 1), or an option where the owner could be paid for all of its fixed and variable costs and in return would forfeit any market revenues it earned (Condition 2). Currently the resource owner can choose between the Condition 1 or Condition 2 option. In the revised straw proposal the ISO proposed to update the RMR pro forma agreement so that the default would be a full cost of service agreement with a MOO where the resource would have all of its full cost of service paid and must credit back all market revenues earned above its full cost of service, i.e., a Condition 2 arrangement. The ISO further proposed that, at the ISO’s discretion, and in limited circumstances, a resource may be able to negotiate an agreement where the resource is not paid under the contract for its full cost of service and may keep market revenues earned above its full cost of service, i.e., a Condition 1 arrangement. However, the ISO stated it was considering no longer having the Condition 1 option for a number of reasons. First, a design objective of this initiative is to ensure that resources are not incentivized to hold out from RA or CPM procurement for an RMR contract. The RMR construct is designed to be used as a last resort to extend the life of resources slated to retire that are needed for a specific reliability reason until a new resource or transmission upgrade is available. As a result, the ISO proposes that RMR should be mandatory and receive its cost of service. Condition 1 provides for CPM like cost recovery and the possibility that a resource could recover more than its cost of service. Condition 1 contracts may also provide incentives for resources to select the cost recover method that provides the greatest revenue. For example, a highly depreciated unit may prefer a Condition 1 contract while units with substantial net plant may prefer a Condition 2 contract. On the other hand, the Condition 1 option may be useful to help the parties to the RMR negotiations reach consensus on an RMR agreement and thus avoid a lengthy and costly rate case. Also, there may be specific circumstances where a Condition 1

approach aligns better with grid needs, so the ISO may not want to eliminate this option all together. The ISO requested feedback from stakeholders on whether to retain the Condition 1 RMR option for use at the ISO's discretion or simplifying the RMR and only providing the Condition 2 option. The ISO stated that it would use this feedback from stakeholders in developing the second revised straw proposal.

Stakeholder Comments

Calpine supports Condition 2. While elimination of Condition 1 does allow for settlement simplification, this market-revenue, risk-sharing option could assist greatly in the settlement of RMR contractual matters. **PAO CPUC** - Should clarify the limited circumstances under which Condition 1 agreements would be appropriate and beneficial for ratepayers and the generator. **PG&E** - Recommend eliminating Condition 1 as an option ISO has proposed maintaining both Condition 1 and Condition 2, and allowing the Resource Owner continued discretion to choose. With addition of MOO this discretion no longer makes sense. Uncertainty of forecasting methods and market revenues associated with an RMR resource may make the choice of Condition 1 unduly beneficial to the Resource Owner. **SCE** – ISO should eliminate condition 1. By providing Condition1 as an option, it is reasonable to assume that the generator owner will select the option that maximizes their expected profit. **Six Cities** support retention of RMR Condition 2 as a default. Elimination of RMR Condition 1 would also appear to be reasonable.

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The ISO has decided to eliminate the Condition 1 option for RMR service. The revised RMR tariff and pro forma agreement will no longer offer the option of having an RMR agreement with Condition 1 features. The RMR agreement will be revised to reflect the full cost-of-service approach with credit back of market rents above costs, similar to the Condition 2 option in the current agreement. The ISO believes that it is appropriate to eliminate the Condition 1 option as it creates the appropriate incentives, simplifies the RMR structure, provides clear separation between CPM and RMR compensation, and aligns with the proposal for RMR resources to have a MOO.

7.2.6 Update rate of return for RMR compensation

In this initiative the ISO has considered whether to revise RMR compensation. The current rate of return, as a component of the cost based rate of return, is specified as 12.25% in the RMR pro forma agreement.⁵ This value is applicable on a pre-tax basis and is applied to the 'net-investment' value (undepreciated assets) for resources eligible for RMR. Despite changing economic and business conditions this rate has not been updated since the original language for the RMR agreement was implemented. In the straw proposal the ISO presented six potential options for updating the rate of return. These options are shown in Table 2 below.

⁵ The compensation for an RMR agreement is outlined in Schedule F of the Pro Forma RMR contract in the Tariff: http://www.aiso.com/Documents/AppendixG_ProFormaReliabilityMustRunContract_asof_Apr1_2017.pdf.

Table 2 - Potential Options for Updated Allowed Rate of Return

No.	Option
1	Leave current 12.25% rate of return in place, i.e., “no action” option
2	Determine a base rate that is allowed to float – up or down - relative to a benchmark rate
3	Have an independent expert construct a rate of return to use, which is inserted and periodically updated
4	Require market participants to propose and justify a rate of return in RMR filings
5	Use a blended rate from recent transmission projects, plus an agreed upon risk adder (or could use responsible utility’s rate of return)
6	Determine a methodology for an “in-house” calculation to determine a rate of return to use, which is periodically updated

Stakeholder Comments

Calpine’s preference would be to have a pre-approved, pre-tax, rate-of-return embedded in tariff, as it is today. Conceptually they would not object to using the utility’s FERC-approved transmission rate of return. **DMM** and the **CPUC** have indicated a desire to change compensation for RMR resources from the existing full cost of service compensation paradigm to GFFC. **Six Cities** is unable to support a default rate of return calculated as the average return for the three IOUs, updated every four years. Currently-effective rate of return should, at a minimum, be reduced to reflect the reduction in the federal corporate income tax rate.

Second Revised Straw Proposal

GFFC does not include any rate of return, and would therefore imply a rate of return of 0%. RMR designations are mandatory, not voluntary on the part of the resource. 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.⁶ For example, in the 2016 order on compliance and rehearing to NYISO the Commission 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.”⁷ In its prior order, the Commission 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.’”

⁶ *N.Y. Indep. Sys. Operator Corp.*, 150 FERC ¶ 61,116, at P 17 (2015), *order on compliance and reh’g*, 155 FERC ¶61,076 at PP 84, 100 (2016); *Midcontinent Indep. Sys. Operator, Inc.*, 148 FERC ¶ 61,057, at P 84 (2014).

⁷ *N.Y. Indep. Sys. Operator Corp.*, 155 FERC ¶61,076 at P 100 (2016).

In summary, the ISO has concluded that the general RMR compensation structure is consistent with FERC precedent and need not be changed. However, the ISO sees a need to update the rate of return because it has not been updated in many years. Calpine and NRG differed in their feedback to the straw proposal. Calpine preferred that RMR applicants not have to justify a rate while submitting an application for an RMR, while NRG felt strongly that RMR owners should be required to go through this process. The ISO acknowledges that requiring an RMR applicant to request a rate would require additional work, likely in the form of hiring an independent expert to calculate a reasonable number, and then it may take additional effort during the negotiation process to reach an agreement on a specific number.

Based on the difficulty of setting a rate of return in a pro forma agreement that would be generally applicable, the ISO is proposing to eliminate the existing 12.25 percent from the *pro forma* agreement and require the RMR owner to establish the rate of return for schedule F cost as part of its initial rate schedule filing at FERC following designation for RMR service. The rate of return for new capital additions under schedule L will continue to be handled per schedule L submission with a rate of return to be established for each project based on the costs of each project. This approach will result in an up to date rate of return for future RMR agreements.

7.2.7 Align pro forma RMR agreement with RMR tariff authority that provides ability to designate for system and flexible needs

In the second straw proposal the ISO stated that it intends to clarify that existing RMR authority includes the ability to make an RMR designation for system and flexible needs, in addition to RMR designations for local needs. In the second straw proposal the ISO explained its existing authority. In the revised straw proposal below the ISO further clarifies its proposal.

Stakeholder Comments

Calpine supports the proactive expansion of the ISO's designation authority to include both system and flexibility needs. **PAO CPUC** - should clarify the applicable reliability criteria it will use and what technical studies it will perform to determine whether the criteria are met. **PG&E** does not support expanding the CAISO's authority under the tariff to issue RMR designations for system or flexible needs. Flexibility is not a transmission reliability attribute for which an RMR can be an appropriate remedy. **SCE** supports. Should procure all attributes of a resource otherwise it risks leaving stranded attributes that no one can procure. **Six Cities** supports. Should obtain all of the attributes of the procured resource.

Second Revised Straw Proposal

The ISO disagrees with stakeholders who argue that the ISO is seeking to add to its procurement authority. The ISO already has tariff authority to make RMR designations to meet reliably needs based on reliability studies. This includes meeting system, local and flexible needs. To date, this authority has been implemented through the current *pro forma* RMR agreement only for local needs. Specifically, ISO Tariff Section 41.2 provides that "The 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.” ISO Tariff section 41.3 provides that “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.” Appendix A to the ISO Tariff defines Reliability Criteria as “Pre-established criteria that are to be followed in order to maintain desired performance of the CAISO Controlled Grid under Contingency or steady state conditions.” Therefore ISO Tariff section 41 gives ISO authority to enter into RMR contracts to meet any NERC, WECC or ISO established compulsory standards that otherwise cannot be met without the designated resources.

7.2.8 Allocate flexible RA credits from RMR designations

In the straw proposal, the ISO stated that CPUC Staff had requested that any future RMR designations include the flexible RA attributes of the RMR resource. CPUC Staff argued that because ratepayers are paying for all of the costs associated with the operation and dispatch of these RMR resources, ratepayers should be allocated the flexible RA capacity attributes of the resources.

In the revised straw proposal, the ISO stated that stakeholders support allocating flexible RA credits from RMR designations. The ISO stated that it supports allocating flexible RA credits from RMR resources. However, not every RMR resource will automatically qualify as a flexible RA resource. To qualify for RA flexible credit, an RMR resource must: have an approved Effective Flexible Capacity value that qualifies the resource as eligible to provide flexible RA capacity, the resource owner must agree in the RMR agreement to fulfill RA flexible capacity requirements such as offering economic bids, and RMR resources eligible for flexible RA credits must submit economic bids based on the assigned flexible category and may choose to self-schedule for remaining hours. The ISO would allocate as they are allocated today. RMR capacity that meets these criteria will be taken off of the top of the RA flexible requirement.

Stakeholder Comments

Calpine supports an allocation of flex, local or system attributes of backstop contracts to loads. **PAO CPUC** supports. Not clear why resource owner must agree to fulfill flexible RA requirements rather than requiring the resource owner to fulfill such requirements. **SCE** supports. Should procure all attributes of a resource. **Six Cities** supports. Clarify whether, if the RMR designation is not specifically for flexible capacity, the decision to provide flexible capacity will be optional on the part of the resource owner;

Second Revised Straw Proposal

Stakeholders support allocating flexible RA credits from RMR designations. The ISO also supports allocating flexible RA credits from RMR resources. However, to qualify for RA flexible credit an RMR resource must: have an approved Effective Flexible Capacity value that qualifies the resource as eligible to provide flexible RA capacity. Otherwise it is not providing – and cannot provide -- flexible capacity. The RMR pro forma agreement will specify that the resource must agree to fulfill RA flexible capacity requirements. RA credits will continue to be allocated as

they are today. RMR capacity that meets these criteria will be taken off of the top of the RA flexible requirement.

7.2.9 Streamline and automate RMR settlement process

In the straw proposal, the ISO stated that the RMR invoicing process has remained relatively unchanged since April 2009. Generator transactions and costs are captured on a spreadsheet and submitted to the ISO for invoicing. The RMR invoice amount is based on calculations and validations executed manually outside the existing settlements system and timelines, then subsequently billed through a manual pass-through-bill mechanism. The ISO proposed to leverage the current settlement system and interface to automate the RMR validation and invoicing processes. The ISO 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. In order for all parties to manage resources more effectively, the ISO proposed to merge the timing of RMR invoicing with the current market settlement timelines. Rather than submit an invoice, the scheduling coordinator would submit revenue and cost requirements in time for RMR invoicing, which would occur at the same time as market invoicing of monthly settlement statements. In the straw proposal the ISO stated that it would provide a more detailed discussion of this item in the revised straw proposal.

In the straw proposal, the ISO discussed the following items in the RMR pro forma agreement that need to be updated:

- Remove Ancillary Service bid insufficiency test completely and revise the dispatch provisions to align with current market paradigm – In the straw proposal the ISO stated that the original pro forma RMR agreement contains several limitations on the ISO ability to dispatch RMR units and these limitations were designed when there was no market power mitigation and no capacity procurement requirement. These limitations remain in the current form of the RMR pro forma and include dispatch for non-competitive congestion, and dispatch for Ancillary Services (“AS”) only after a bid insufficiency criteria has been met. Under the current ISO market construct, the RA obligations have been designed to ensure there is sufficient capacity bidding into the market where energy and AS bids are co-optimized in the Day-Ahead Market (“DAM”) and Real-Time Market (“RTM”). Further, the ISO 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 RMR agreement serves no purpose; therefore, these limitations may be lifted to allow for more efficient use of the resource by dispatching it to serve reliability needs, whenever the market is unable to meet those needs. Also, even with current co-optimization of energy and AS bids, the ISO still has the issue of being able to address inter-hour AS needs in the RTM. This gap can be filled by increasing ISO’s flexibility to dispatch for AS beyond “bid insufficiency”, since such situations arise in spite of sufficient bids in DAM. Additionally, applying RA type MOO for energy and AS resources to RMR resources, makes the bid insufficiency test anachronistic.

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- Update pro forma RMR agreement Schedule M and Schedule C to include Greenhouse Gas (“GHG”) compliance cost calculation, DAM and RTM gas price index, and updated Scheduling Coordinator (SC) charge calculation, update Schedule M to be consistent with ISO tariff and BPM rules on bidding, and seek input on defining a heat rate curve formula in Schedule C for multi-stage generator resources – In the straw proposal the ISO stated that Schedule C and Schedule M of the current RMR pro- forma agreement contain a few archaic provisions such as antiquated gas price indices, an out-of-date fixed scheduling coordinator charge, and no provisions to reflect GHG compliance cost. The RMR pro forma agreement also needs updates to accommodate the multi-stage generator resource model. The ISO currently has well defined 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. The ISO recently included tariff and BPM defined forms of some of these concepts in the FERC filed RMR agreements for Metcalf Energy Center, LLC and Gilroy Energy Center, LLC, with definitive support from all parties. The ISO believes that while this does not affect the purpose or scope of the RMR agreement it helps improve efficient operation and administration of RMR units.

These pro forma RMR Agreement items were in a separate section in the straw proposal and the revised straw proposal and are incorporated now into this section due to dependency with the automate and streamline RMR Settlements portion of the proposal.

Stakeholder Comments

Calpine supports changes. While Calpine sees significant advantage to the RSP proposals for Condition 2 units, careful consideration of Condition 1 contracts is required with respect to bid cost recovery. The current RMR is structured to settle hourly – that is, rather than BCR occurring over 24 hours, the current RMR applies BCR over only a single hour. Blind implementation of current BCR mechanisms to a Condition 1 unit would strip the owner of some of the market revenues that they were designed to retain. Regarding removing the Ancillary Service bid insufficiency test, Calpine believes that to avoid price suppression RMR Condition 2 units should have no ubiquitous MOO and bids should be inserted and the unit should be dispatched only when reliability requirements demand its operation. As such, the bid insufficiency test may still be a necessary trigger for RMR dispatch. Regarding updating the pro forma RMR agreement Schedule M and Schedule C, Calpine supports changes to the RMR schedules that represent undeniable variable costs of operations such as those suggested above. Regarding input on defining a heat rate curve formula in Schedule C for multi-stage generator resources, Calpine supports consistency in the formulations of bid components between the contract and Masterfile; it seems more efficient that the RMR agreement schedules merely refer to values embedded within the Masterfile. **NRG** - Regarding removing the Ancillary Service bid insufficiency test, NRG does not oppose the elimination of the AS bid insufficiency test, but does oppose forcing cost-based energy and AS offers from RMR units in all hours. The current design of the RA MOO does not compel cost-based energy and AS offers. Regarding updating the pro forma RMR agreement Schedule M and Schedule C, NRG strongly supports

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restructuring Schedule C to eliminate the archaic gas price mechanism. In so doing, the ISO must replace this mechanism with a mechanism that better reflects actual gas procurement costs. NRG supports updating Schedule M. NRG believes that Schedule C will also need to be modified to allow for configuration-specific heat rates. Other schedules must be modified (Schedule D) or created (Schedule D-1) to account for MSG transition costs. NRG believes that should the ISO insist on modifying the RMR contract it must also consider modifying other provisions of the RMR contract, including the ISO's authority to dispatch under Section 4.1, how contract service limits are determined, and how service in excess of those contractual service limits is compensated

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Consistent with the ISO's proposal to adopt a MOO obligation and RAIM for all RMR resources, the ISO proposes revisions to the RMR contract to better align with existing tariff rules and processes, and intends to review the entire RMR contract in a holistic manner to better align with the policy changes proposed in this stakeholder process.

To address FERC anti-toggling concerns, the RMR agreement will be used to prevent retirement or mothball of capacity needed for reliability. In addition, the pro forma RMR Agreement is designed to limit annual compensation to only the cost for providing one year's service. The costs are based on established ratemaking principles using the resource book value and latest available cost of service. Separate capital expenditures approved for recovery under the agreement are also based on recovery of annual costs for each year of service and provide for recovery of unrecovered capital if the resource closes within six months of RMR Agreement termination. If the closure criteria is met, the ISO pays back the unrecovered portion of capital over 36 months, and the resource must pay it back it returns to service at any point during the 36-month period. These provisions minimize incentives and ability to toggle on and off the RMR Agreement.

Calpine and NRG supported the ISO exploring streamlining and automating the RMR settlement process. Regarding NRG's comment regarding RMR units being walled off from market credit default risk, the ISO intends to treat RMR resources just as it treats them today.

The ISO 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 for efficient market and reliability systems operations and maintenance. The goal is to revise the RMR implementation process and streamline to align with existing market and reliability tools including the following:

- Align bidding and dispatch with RA/CPM rules and operating procedures
- Simplify RMR compensation structure
 - Fixed charges defined in Schedule B are proposed to change from hourly availability payments to fixed monthly payments similar to CPM and still based on costs as defined in Schedule F

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- Variable cost recovery defined in Schedule C and Schedule D will be eliminated and replaced with the Bid Cost Recovery mechanism to ensure resources startup and minimum load costs are recovered
- Market rents received in excess of costs will be credited back to the Responsible Utility
- Penalties provisions including hourly availability reduction for outages, long term planned outage adjustment and the non-performance penalty would all be eliminate and replaced with application of the Resource Adequacy Availability Incentive Mechanism (RAAIM)
- Align RMR Invoice/timeline with ISO market settlement invoicing process and timeline
- Revise the RMR Contract and ISO tariff accordingly

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

- Establish a MOO and bid insertion rules for RMR resources by modeling RMR capacity as RA/CPM capacity
- Consolidate the reliability dispatch processes by eliminating RMR dispatch procedures and modeling RMR capacity as RA/CPM capacity
 - Enables use of existing market and reliability mechanisms used for RA/CPM capacity to dispatch all reliability capacity when needed
- RMR capacity represented in CIRA as reliability capacity
- SIBR RA/CPM bidding rules would apply
- RAAIM incentives and penalties would apply to provide incentive for capacity to remain available and submit bids
- Major maintenance/opportunity cost adders utilized to ensure market dispatch considers appropriate costs and limits dispatching resources with any use limitations

While the initiative previously discussed the proposal of establishing a MOO, the concept is repeated here to emphasize that this is a key element of streamlining the RMR dispatch process. The ISO market design includes mechanisms to dispatch resources for modeled constraints and use of Minimum Online Commitment (“MOC”) or ED 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 MOO is critical to the streamlining effort. The must offer obligation must be supported with a bid insertion mechanism to ensure bids are available at all times. Modeling the RMR capacity in ISO systems as RA/CPM capacity will enable use of the existing bid insertion SIBR rules, application of the RAAIM and use of

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existing processes for dispatch to allow elimination of the manual workarounds and extra procedures used under the current RMR implementation.

Streamlining the RMR settlement process is also impacted in a significant way by the structure of the RMR compensation, so the ISO proposes to maximize the use of existing market functions and eliminating all RMR provisions covered by an existing market or reliability mechanism. The first of these is simplification of the fixed cost compensation by updating hourly availability payment to a monthly fixed payment and application of RAAIM discussed earlier. RAAIM penalties and incentives will apply as well as all RA/CPM substitution and replacement rules.

The variable cost provisions of the RMR Contract are intended to ensure market dispatches keep resources whole for variable costs. These costs are defined in Schedule C for costs associated with MWhs delivered and in Schedule D for startup costs. The Bid Cost Recovery provisions of the ISO Tariff provide this mechanism over each trade day and are proposed to replace Schedule C and D. Consistent the cost-of-service resources, all market revenues in excess of calculated costs will be credited against the other RMR charges. Costs will be calculated using values and processes used in the Bid Cost Recovery (“BCR”) mechanism with adjustments as needed to ensure no double recovery. These processes eliminate the need to identify RMR Dispatches which must be manually identified in the current market structure.

The current process for invoicing RMR contracts continues to be handled 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. Further, the RMR contract established a separate and unique invoicing timeline that does not align with the ISO market settlement timeline. With the simplifications discussed regarding bidding, dispatch and compensation structure and elimination of service limits, the RMR Invoicing can be transformed into a few line items within the ISO market settlement invoice process.

The ISO proposes to replace RMR invoicing template and owner submitted Excel based invoices and to use the ISO settlement system invoice process and timeline. With the simplification of the fixed payment to a fixed monthly amount as previously discussed in the RMR compensation structure section, there are no complicated calculations required as the settlements systems will receive the monthly amount through the same mechanism used to provide the CPM monthly payment amounts. Additional charge codes will be created to track costs and allocate to appropriate stakeholders, presently defined as the Responsible Utility, and to track excess market revenues to enable crediting of these back to the Responsible Utility. The cumbersome RMR invoicing steps and RMR payment calendar would be eliminated by using the ISO market settlement timeline and invoicing process. In addition, the dispute process defined in the RMR Contract would be eliminated and replaced with the process defined in the ISO tariff. Figure 5, Figure 6, and Figure 7 below show validation tools and parameters available to support the ISO Market settlement of the RMR Invoice amounts, while a sample of the ISO payment calendar is shown in Figure 8.

1 Search Parameters

This section contains a set of parameters available for user interaction, to provide an opportunity to limit the output of a report. For example, if a user would like to see the files specific to a trade date, then the specific trade date can be entered in the Trade Date field.



File Type

This parameter is used to narrow down the search based on the file types. The file types available are:

- Business Associate Bill Determinants
- CAISO Bill Determinants
- Configuration Output Files
- Invoices
- Settlements Statements

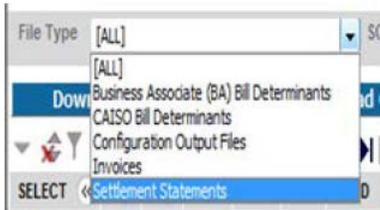


Figure 1 – Validation Parameters

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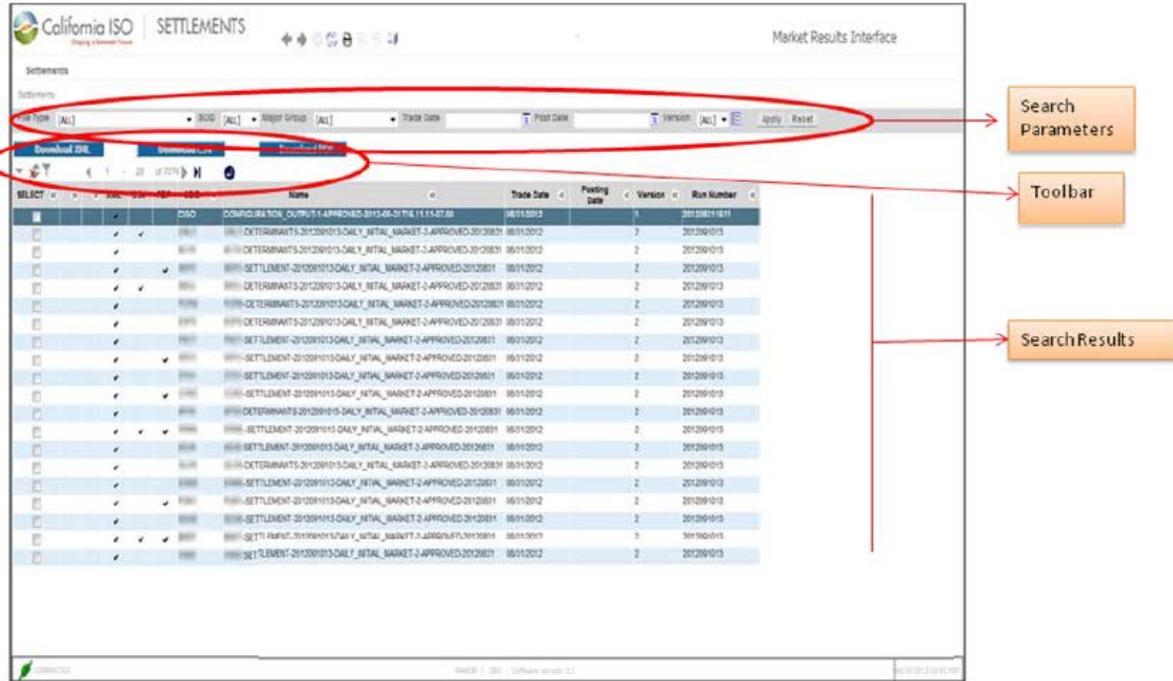


Figure 2 – Validation Tools

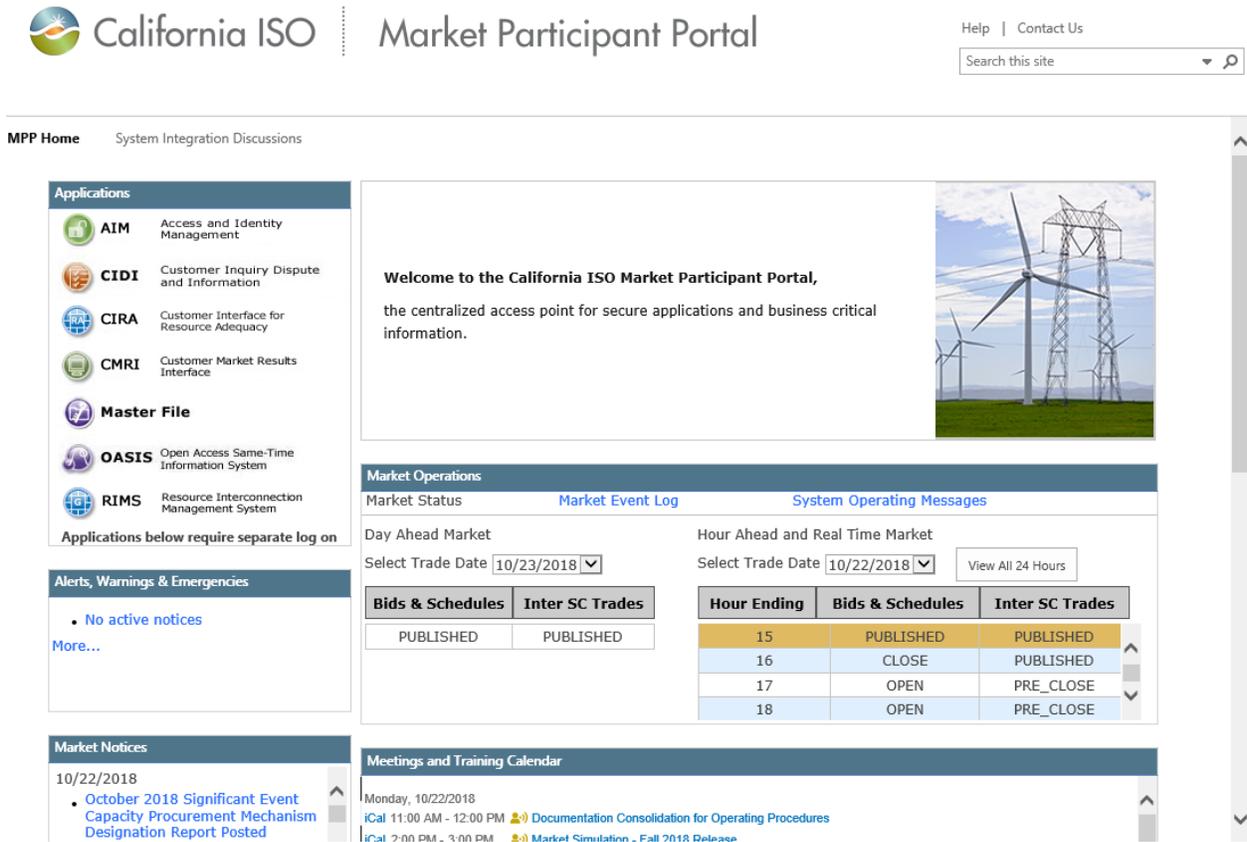


Figure 3 – Information available to Validate Invoice

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CAISO Payments Calendar
January 1, 2018 through December 31, 2018

Calendar Date	Day	Publish Initial Statement Publish Day-Ahead Price Corrections T+3B	Publish Real-Time Price Corrections T+5B	Receive End-Use Meter Data, Manual Submission of non-PTO Wheeling Data T+8B	Publish Recalculation Statement T+12B	End of SC Review Period T+26B	Receive End-Use Meter Data (to include non-PTO load) T+48B	Publish Recalculation Statement T+56B	End of SC Review Period T+77B	Meter Data Resubmission Deadline (to include non-PTO load) T+8M (as T+172B - T+160B), optional Subject to Rule of Conduct	Publish Recalculation Statement T+9M (as T+194B), optional	End of SC Review Period for Incremental Changes T+216B, if applicable
1-Jan-18	Monday											
2-Jan-18	Tuesday	12/27/2017	12/22-12/25/2017	12/19/2017	12/13/2017	11/21/2017	10/20-10/22/2017	10/11/2017	09/11/2017	04/26-05/02/2017	03/27/2017	02/23/2017
3-Jan-18	Wednesday	12/28/2017	12/26/2017	12/20/2017	12/14/2017	11/22-11/26/2017	10/23/2017	10/12/2017	09/12/2017	04/27-05/03/2017	03/28/2017	02/24-02/26/2017
4-Jan-18	Thursday	12/29-01/01/2018, Dec 2017 Monthly	12/27/2017	12/21/2017	12/15-12/17/2017	11/27/2017	10/24/2017	10/13-10/15/2017	09/13/2017	04/28-05/04/2017	03/29/2017	02/27/2017
5-Jan-18	Friday	01/02/2018	12/28/2017	12/22-12/25/2017	12/18/2017	11/28/2017	10/25/2017	10/16/2017	09/14/2017	05/01-05/07/2017	03/30/2017	Feb 2017 Monthly
6-Jan-18	Saturday											
7-Jan-18	Sunday											
8-Jan-18	Monday	01/03/2018	12/29-01/01/2018	12/26/2017	12/19/2017	11/29/2017, 11/30/2017	10/26/2017	10/17/2017	09/15-09/17/2017	05/02-05/08/2017	03/31-04/02/2017, Mar 2017 Monthly	03/01/2017
9-Jan-18	Tuesday	01/04/2018	01/02/2018	12/27/2017	12/20/2017	Nov 2017 Monthly	10/27-10/29/2017	10/18/2017	09/18/2017	05/03-05/09/2017	04/03/2017	03/02/2017
10-Jan-18	Wednesday	01/05-01/07/2018	01/03/2018	12/28/2017	12/21/2017	12/01-12/03/2017	10/30/2017	10/19/2017	09/19/2017	05/04-05/10/2017	04/04/2017	03/03-03/05/2017
11-Jan-18	Thursday	01/08/2018	01/04/2018	12/29-01/01/2018	12/22-12/25/2017	12/04/2017	10/31/2017	10/20-10/22/2017	09/20/2017	05/05-05/11/2017	04/05/2017	03/06/2017
12-Jan-18	Friday	01/09/2018	01/05-01/07/2018	01/02/2018	12/26/2017	12/05/2017	11/01/2017	10/23/2017	09/21/2017	05/08-05/14/2017	04/06/2017	03/07/2017

Figure 4 – ISO Payment Calendar

Finally, the ISO proposes to remove certain provisions from RMR pro forma agreement to complete the simplification process and maximize streamlining efforts. A high level summary of the provided in Table 3 below.

Table 3 – Pro Forma RMR Agreement Update Summary

Change	Term
Revise to reflect proposal	Art-3 Conditions, Art-4 Dispatch, Art-5 Delivery, Art-6 Market Transactions, Art-8 Rates and Charges, Art-9 Statements and Payments, Sch B–Monthly Option Payment,
Minor adjustments to address impacts	Art-1 Definition, Art-2 Term, Art-7 Operation and Maintenance, Art-12 Covenants of the Parties, Art-13 Assignment, Art-14 Miscellaneous Provisions, Sch A–Unit Characteristics, Limitations and Owner Commitments; Sch E–Ancillary Services, Sch F-AFRR, Sch J-Notices, Sch L-Cap Items, Sch N-NDA
Eliminate/use existing ISO Tariff provisions	Article 10 Force Majeure Events, Article 11 Remedies, Sch C–Variable Cost Payment, Sch D–Startup Payment, Sch G-Excess Service, Sch H-Fuel Oil Service, Sch I-Insurance, Sch K-Dispute Resolution, Sch M-Market Bids, Sch O-Invoicing, Sch P-Reserved Energy for Emission Limitations

7.2.10 Lower banking costs associated with RMR invoicing

Currently, each RMR agreement requires the establishment of two segregated commercial bank accounts (RMR Owner Facility Trust Account and Responsible Utility Facility Trust Account). These accounts are used to collect charges paid by the responsible utility and disbursed to the

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RMR owner (and vice-versa). These accounts do not carry any balances as RMR funds are disbursed on the same day as they are received. The current protocol of establishing two accounts does not serve any discernable purpose since all funds are tracked and recorded, regardless of where they are received. In the straw proposal the ISO stated that with the recent increase in RMR contracts, the ISO, in its effort to streamline processes and reduce bank fees, would like to change the tariff provisions so that the requirement to open new accounts for each RMR contract are no longer required. In its place, the ISO would propose to use the ISO's established market clearing account to administer RMR related transactions.

Stakeholder Comments

Calpine - Yes. Please.

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Given that all of the stakeholder comments that have been received support the revised straw proposal, the ISO reiterates that proposal here. The ISO proposes to use the ISO's established market clearing account to administer RMR related transactions. Going forward, all payments from and disbursements to RMR parties will be made from this account. The advantages to this change are:

- Streamlined process - Since RMR transactions will be processed using one account, it will be simpler for both the ISO and the RMR contract parties to administer the processing of payments and disbursements.
- Faster RMR contract implementation - Time and effort are required to open new bank accounts when new RMR contracts are signed. In addition, multi-stage testing is necessary to ensure that these accounts are visible on both the ISO and the RMR contract parties. Under this proposal, testing will be reduced or eliminated (if the RMR contract party has another RMR contract in place).
- Reduced bank fees - The ISO 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). Thus, less accounts to maintain will have both financial and other non-financial benefits (monitoring, reconciliation) as well.

Under any proposal, the possible sections of the ISO tariff that may need to be revised are:

- *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 the use of the clearing account.

7.3 CPM Items

This section discusses items specific only to the CPM tariff.

7.3.1 Change CPM pricing formula for resources that file at FERC for CPM price above the soft-offer cap price

The ISO currently compensates CPM resources whose costs exceed the CPM soft-offer cap price and who desire compensation above the CPM soft offer cap a price based on the formula for determining cost of service compensation for RMR resources. The current FERC-approved formula uses Schedule F of Appendix G of the RMR tariff and allows the resource to keep all market rents earned. The Schedule F methodology does not allow for major maintenance capital additions to be considered in the compensation. Several stakeholders believe that allowing such resources to keep all market rents earned is excessive compensation. In the revised straw proposal the ISO proposed to change the pricing formula for a resource that files for a CPM price above the soft-offer cap price such that all market revenues earned above the approved cost of service for the resource would be clawed back.

Stakeholder Comments

Calpine agrees with the ISO proposal to claw-back energy rents from resources that bid a cost-of-service price into the CSP. **DMM** - To prevent pivotal resources from withholding capacity from the bilateral market in favor of compensation at the soft offer cap which might far exceed a resource's annual GFFC, the ISO should reconsider the level of the soft offer cap for annual CPMs. Alternatively, the ISO could consider SCE's suggestion discussed in the September 27th stakeholder meeting, which is to apply a market power test to CPM processes. **SCE** - If CPM is utilized for long-duration procurement, the AISO should use a three pivotal supplier test on the Competitive Solicitation Process to ensure competitive CPM bids. Supports changing the CPM pricing formula. In particular, the claw-back of market rents is appropriate when the CPM payment is above the soft-offer cap and is set at the cost of service through a FERC process. **Six Cities** previously supported the proposal to base CPM compensation above the soft-offer cap on going forward fixed costs plus an adder and retention of market revenues. Conceptually, support new cost of service proposal; however, are concerned with designating the whole of the resource because may result in excess procurement.

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The ISO does not agree with suggestions from stakeholders that the ISO should make CPM designations mandatory and eliminate RMR procurement. Nor does the ISO believe that the pricing methodology approved by FERC for CPM needs wholesale change. The ISO agrees that it may be excessive to pay a resource a CPM price above the soft offer cap price based on the resource's full cost of service if it also allows a CPM resource to keep all market rents earned. Therefore, the ISO proposes to change the pricing formula for a resource that files for a CPM price above the soft-offer cap price to an approach where the resource can file at FERC based on the GFFC of its resource using the same cost categories (*i.e.*, *ad valorem* costs, insurance

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and fixed operation and maintenance costs) and same cost adder (20%) that are used for the CPM reference resource. CPM resources that are paid both below and above the soft-offer cap will continue to keep all market rents earned. Using a 20% adder would parallel how the existing, Commission-approved CPM soft-offer price cap – which the ISO is not changing --is determined and provide incentives or revenue sufficiency for resources to perform long-term maintenance or make improvements that may be necessary to satisfy new environmental requirements or address reliability needs associated with renewable resource Integration. Also, the proposed revision is consistent with FERC decisions that full cost of service recovery is only required when the backstop procurement is mandatory, and accepting CPM designations is voluntary not mandatory.⁸ The revised formula is consistent with prior FERC directives that the CPM price should provide for some contribution to fixed cost recovery to facilitate incremental upgrades and investments by resources.⁹ Finally, in 2019, the ISO will commence a stakeholder process to assess the CPM soft offer cap, including performing a cost study, in accordance with tariff section 43A.4.1.1.2. The ISO’s second revised straw proposal is illustrated in Table 4 below.

Table 4 - Pricing for CPM Designations

Type of Designation	Price used to determine CPM Capacity Payment ¹⁰
System monthly System annual Local monthly Local annual Local annual collective deficiency Cumulative flexible monthly Cumulative flexible annual Significant event Exceptional dispatch	1. Price bid into CSP – there is a “safe harbor” price at or below the \$75.68/kW-year soft-offer cap price 2. If no bid in CSP - ISO may offer resource soft-offer cap price of \$75.68/kW-year (and resource can decline designation if it chooses) 3. Resource can submit bid above soft-offer cap price - based on GFFC of its resource using the same cost categories and same 20% cost adder that was used for the reference resource that established the soft-offer cap price and resource keeps all market rents earned.

7.3.2 Evaluate if LSEs are using CPM for their primary capacity procurement

This item was discussed at the May 30, 2018 stakeholder working group meeting. In the straw proposal the ISO agreed that one item from the CPM Offer of Settlement had been triggered through CPM designations that were made in December 2017.¹¹ The ISO stated that would consider in this initiative how those designations in the SDG&E area could have been prevented had the CPM design included additional remedial measures to discourage LSEs from relying on

⁸ *N.Y. Indep. Sys. Operator Corp.*, 150 FERC ¶ 61,116, at P 17 (2015); *Midcontinent Indep. Sys. Operator, Inc.*, 148 FERC ¶ 61,057, at P 84 (2014).

⁹ *California Independent System Operator Corporation*, 153 FERC ¶61,001 at P 14 (2015); *California Independent System Operator Corporation*, 134 FERC ¶61,211 at PP 57-59 (2011).

¹⁰ CPM resources are paid a capacity payment and keep all market rents earned.

¹¹ The item triggered was “any load serving entity meets more than 50 percent of its annual or monthly Resource Adequacy obligation for a year or month, respectively, with CPM Capacity procured by the CAISO on that load serving entity’s behalf.”

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the backstop for forward capacity procurement. During the ensuing discussion with stakeholders the ISO stated that it believes that the December 2017 CPM designations were driven by circumstances not related to the design of the CPM.

Stakeholder Comments

Calpine agrees with the ISO that the December 2017 events do not constitute a cause for opening the CPM settlement or pricing conditions. **NRG** agrees that the CPM design was not responsible for the outcome that occurred in December 2017.

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The ISO has received limited stakeholder comments on this item. The ISO has included in this initiative consideration of some changes to the design of the CPM. The ISO proposes to monitor future CPM procurement and drop this item from further active consideration in this initiative.

8. Next Steps

The ISO will discuss the second revised straw proposal with stakeholders during a conference call on December 20, 2018. Stakeholders are encouraged to submit written comments by January 10, 2019 to initiativecomments@caiso.com. Please use the template available at the following link to submit your comments:

http://www.caiso.com/informed/Pages/StakeholderProcesses/Review_ReliabilityMust-Run_CapacityProcurementMechanism.aspx.

List of Acronyms

AFRR	Annual Fixed Revenue Requirement
ARC	Applicable Reliability Criteria
AS	Ancillary services
BCR	Bid Cost Recovery
BPM	Business Practice Manual
Calpine	Calpine Corporation
CCA	Community Choice Aggregator
CEC	California Energy Commission
CHP	Combined heat and power
CLECA	California Large Energy Consumers Association
CPM	Capacity Procurement Mechanism
CPUC	California Public Utilities Commission
CRI	Center for Renewables Integration
CSP	Competitive Solicitation Process
DAM	Day-Ahead Market
DEB	Default Energy Bid
DMM	Department of Market Monitoring
DSA	Dynamic stability analysis
ED	Exceptional Dispatch
EFC	Effective Flexible Capacity
EIM	Energy Imbalance Market
ELCC	Effective Load Carrying Capability
FERC	Federal Energy Regulatory Commission
FRACMOO 2	Flexible Resource Adequacy Capacity Must-Offer Obligation Phase 2
GFFCs	Going forward fixed costs
GHG	Greenhouse Gas
GMC	Grid Management Charge
IEP	Independent Energy Producers Association
ISO	California Independent System Operator Corporation
IOU	Investor-owned utility
Joint CCA	East Bay Community Energy, Marin Clean Energy, Peninsula Clean Energy Authority, and Sonoma Clean Power Authority
LAR	Local Area Requirement
LCR	Local capacity requirements
LSE	Load Serving Entity
MIC	Maximum Import Capability
MMA	Major-maintenance adder
MOC	Minimum online commitment
MOO	Must-Offer Obligation
MSG	Multi-stage generator
NRG	NRG Energy, Inc.
OAL	Office of Administrative Law of State of California
OCC	Opportunity cost component
O&M	Operation and maintenance
ORA	Office of Ratepayer Advocates, California Public Utilities Commission

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OTC	Once-through cooling
PGA	Participating Generator Agreement
PG&E	Pacific Gas and Electric
PRR	Proposed Revision Request
PTO	Participating Transmission Owner
PURPA	Public Utility Regulatory Policies Act
QF	Qualifying Facility
RA	Resource Adequacy
RAAIM	Resource Adequacy Availability Incentive Mechanism
RMR	Reliability Must Run
ROE	Return on equity
ROR	Risk of retirement
RTM	Real-Time Market
RUC	Residual unit commitment
SC	Scheduling Coordinator
SCE	Southern California Edison
SDGE	San Diego Gas and Electric
SIBR	Scheduling Infrastructure Business Rules
Six Cities	Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California
SWRCB	State Water Resources Control Board
TAC	Transmission access charge
VSA	Voltage stability analysis
WPTF	Western Power Trading Forum