RMR and CPM Enhancements Initiative
Stakeholder Written Comments on
September 19, 2018 Revised Straw Proposal

RMR and CPM

a. Provide notice to stakeholders of resource retirements

Calpine supports the posting of retirement/mothballing notices received by the CAISO. We appreciate the RSP clarifications that the future plans of the resource owner will be held confidential to the extent possible. We do agree with the comments of PG&E and SCE that the "100 MW or greater" posting limitation should be reduced as to allow more transparency. A 25 MW limit would eliminate insignificant changes, while allowing for public disclosure of material retirements, such as LM6000, 45 MW peakers.

PAO CPUC agrees that a notice need not be sent if the list is modified by an event that does not require a CAISO study of the possible reliability impact associated with the event. However, the 100 MW threshold should be removed. Any change to the retirement list that necessitates a reliability study should trigger a market notice to stakeholders. The potential retirement of a resource in a constrained area may lead to stakeholder or CAISO responses through alternative procurement, regardless of whether it is a large resource, a single-unit 50 MW peaker, or a smaller generating resource. CAISO appears to propose a 100 MW threshold in order to decrease the number of notifications sent through the Market Notices program, but it is unreasonable to require stakeholders to maintain daily vigilance over the retirement list in order to plan for changes to the grid which CAISO would be privy to. The Public Advocates Office notes that, as of this filing, the Announced Retirement and Mothball list has only been modified once since July 18th which begs the question of how burdensome such notifications would be.

PG&E - The CAISO should decrease the threshold for stakeholder notification in the ISO Daily Briefing from 100 MW to 20 MW. The CAISO has suggested a size threshold of 100 MW for informing stakeholders via market notice of an update to the spreadsheet for a significant retirement letter. The intent of the spreadsheet is to provide stakeholders with an early indication of resources seeking to modify their generator status in a manner that would trigger a CAISO study of the need to use a backstop procurement mechanism to ensure reliability. PG&E appreciates the desire not to burden stakeholders' inboxes with retirement notices for very small resources, however, the suggested threshold of 100 MW is too high. As an example, it would have failed to identify at least two of the 2018 RMR designations (Feather River and Yuba City) that were approved by the CAISO for facilities within PG&E's PTO footprint. PG&E recommends that the minimum threshold for market notice of a retirement letter be set at 20 MW. This size is consistent with the WECC standard for modeling aggregate capacity on the transmission grid and is consistent with the CAISO interconnection procedures that treat resources 20 MW or greater as Large Generating Facilities.

SCE supports.

Six Cities interpret the Revised Straw Proposal to provide that the CAISO will provide notice to stakeholders of resource retirements when the retiring facility is of 100 MW or greater, but that the CAISO will continue to include smaller resources on its list of retiring resources posted on the CAISO website (albeit without specific notice to stakeholders). Subject to this understanding, the Six Cities support the CAISO's proposed resolution of this issue. Further, the Six Cities support the CAISO's proposal not to treat as confidential information related to the retention of deliverability.

b. Use of RMR versus CPM procurement

Calpine agrees with the CASIO that the submission of a notice to mothball or retire must be submitted to the CAISO prior to engaging the RMR process. See August comments.

DMM - Under the Revised Straw Proposal, the ISO will continue to maintain two backstop procurement frameworks, adding clarification that CPM is to be used as a backstop to the RA program while the RMR mechanism will be used to address resource retirements. While the ISO outlines a process for determining when CPM versus RMR should be used, 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. CPM designations will continue to be voluntary and can be declined by suppliers with market power that prefer RMR compensation. DMM shares concerns raised by other stakeholders that under the current and proposed framework, newer pivotal resources with undepreciated capital costs will be incentivized to self-select RMR compensation while older pivotal resources will be incentivized to self-select CPM compensation. It is not clear what efficiencies this self-selection provides. If two separate backstop procurement mechanisms and compensation structures are necessary, the ISO should provide an economic rationale for maintaining both. If there is no rationale for maintaining two different compensation structures other than the fact that each has been approved by FERC in separate cases, the ISO should consider consolidating CPM and RMR, or at the very least, aligning CPM and RMR compensation and adding supplemental rules to prevent self-selection between designations based on maximization of compensation. DMM believes the ISO has not yet adequately addressed how backstop procurement mechanisms fit into the overall resource adequacy framework to support efficient bilateral procurement and resource retention, retirement, and replacement. DMM supports the ISO moving forward expeditiously with key incremental enhancements to the CPM and RMR framework such as applying a must offer obligation to RMR resources (with limited exceptions) and clawing back net market revenues above the CPM soft offer cap. However, DMM encourages the ISO to develop more comprehensive changes to its backstop procurement mechanisms than those currently proposed, in order to fully address potential inefficiencies of the overall CPM and RMR design. **Resources "mothballing" vs retiring -** A key change in the Revised Straw Proposal is that the CAISO seeks to clarify that the CPM procurement will be used only to backstop the RA program, while RMR procurement will only be used to address resource retirements. However, the flow diagram in the Revised Straw Proposal clearly indicates that RMR will be used in cases when a "resource provides ISO with formal written notice of retirement or mothball." DMM believes that the inclusion of resources indicating they will "mothball" (rather than retire) warrants significant additional discussion and clarification. For instance, is there a minimum time period that a unit would need to assert it will "mothball"? In practice, it may be difficult to distinguish between a unit that indicates it plans to go on an "economic outage" of an undetermined length versus one that would mothball for an extended or indefinite period. DMM believes that details governing the eligibility of units that may mothball for RMR designations may have a major impact on the amount of resources that may end up under RMR contracts. **RMR and CPM compensation -** The Revised Straw Proposal misrepresents DMM's prior recommendations concerning compensation. The Revised Straw Proposal asserts that: DMM and the CPUC have indicated a desire to change compensation for RMR resources from the existing full cost of service compensation paradigm to Going Forward Fixed Costs ("GFFC"). GFFC does not include any rate of return, and would therefore imply a rate of return of 0%. The ISO does not believe that this would be appropriate, and would contradict recent FERC precedent. DMM's prior recommendations clearly suggested that compensation for the ISO's backstop procurement mechanism (which include CPM and RMR) should include GFFC plus a reasonable profit. As stated in DMM's comments on the ISO's prior straw proposal: Going Forward Fixed Cost (GFFC) plus a reasonable net profit would provide fair compensation to resources contracted for backstop capacity. If a unit needed for reliability would truly retire or mothball if not contracted by the CAISO, then compensating the unit based on its GFFC plus any additional net profit would be more profitable for the unit than if it was actually retired or mothballed. GFFC-based compensation also avoids market distortions that may incent resources to seek a backstop capacity contract rather than participating in the RA process. DMM's comment went on to suggest 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. Going Forward Fixed Cost (GFFC) plus a reasonable net profit would provide fair compensation to resources contracted for backstop capacity. If a unit needed for reliability would truly retire or mothball if not contracted by the CAISO, then compensating the unit based on its GFFC plus any additional net profit would be more profitable for the unit than if it was actually retired or mothballed. GFFC-based compensation also avoids market distortions that may incent resources to seek a backstop capacity contract rather than participating in the RA process. **RMR Condition 1 compensation -** DMM believes the Revised Straw Proposal misrepresents prior FERC orders and rulings in cases directly applicable to the CAISO markets regarding the use of going forward fixed costs (GFFC) versus annual fixed revenue requirements (AFRR) in compensation for resources under reliability contracts. For example, the Revised Straw Proposal asserts that: "In a 2000 initial decision for RMR designations in the ISO, FERC notes that "rates must provide an opportunity for service providers to recover their cost of service, which subsumes both a return of and on investment." The complete quotation from the 2000 decision cited by the CAISO is as follows: "It is axiomatic under traditional cost-of-service ratemaking principles that rates must provide an opportunity for service providers to recover their cost of service, which subsumes both a return of and on investment [citing Hope and Carolina cases] [emphasis added]." The 2000 RMR decision then goes on to explain that the Hope and Carolina cases referenced in the FERC order quoted by the ISO is outdated and not applicable in the ISO's market design: "Hope and Carolina Power reflect a superceded cost-of-service paradigm. That framework envisioned neither competition among service providers nor any opportunity for them to earn market-based rates. In contrast to the regulated environment in which Hope and Carolina Power were decided, California's electric industry has been restructured to rely on competitive markets to establish appropriate rates for services …. And unlike the regulated markets addressed in Hope and Carolina Power, competitive markets do not guarantee the opportunity for return of/on investment through cost-based rates. That opportunity is provided through authority to charge market-based rates for services " ".. even in a pure cost-of-service environment, Hope and Carolina Power do not unconditionally guarantee return of/on investment. Those cases stand for the more limited ratemaking principle that rates must provide an opportunity for return of/on investment. Moreover, prior to the 2000 RMR decision, compensation under Condition 2 of the RMR contract had already been settled under an April 1999 Stipulation and Agreement for a three year period ending in December 2001. The RMR ruling cited in the Revised Straw Proposal only involved the Fixed Option Payment (FOP) of units under Condition 1 of the RMR contract. On the issue of Condition 1 compensation, the 2000 RMR ruling found that for units which retained market revenues (which now include units under the current CPM provisions of the ISO tariff), the appropriate level of compensation is the net incremental cost approach supported by the CAISO at that time. As explained in the 2000 RMR decisions: "Going forward" costs are the costs of keeping an uneconomic unit operating in the absence of RMR obligations. Rational actors in a competitive market would shut down any unit whose going forward costs exceeded net incremental cost compensation. Paying the RMR unit owner the difference between net incremental cost and going forward costs eliminates the economic incentive to shut down the unit, thereby preserving unit availability for RMR dispatch." The decision went on to note that: "In addition, compensating … RMR availability obligations at net incremental cost would provide appropriate price signals for potential replacement resources. The record indicates that allocating sunk costs to RMR availability payments would create perverse incentives to invest in duplicative or uneconomic generation, transmission and demand-side management… In addition, allocating sunk costs to RMR availability payments also would undermine the ISO's ability meaningfully to determine and evaluate economically efficient alternatives to RMR generation under its Local Area Reliability System process." DMM provided an example of how providing compensation based on AFFR would encourage uneconomic and inefficient investments in alternatives using approximate values for AFRR and GFFC for the Metcalf Energy Center, which received an RMR designation for 2018. **Other FERC Rulings -** The Revised Straw Proposal also cites other FERC rulings that do not actually support the CAISO proposal. For example, the ISO indicates that in a 2016 NYISO RMR 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." This citation simply indicates that in that case, the Commission found that RMR compensation should be bounded by a minimum level which allows for recovery of GFFC and a maximum negotiated level up to full cost of service. The ISO also cites a 2006 Order on RMR agreements for Mystic units in the ISO New England footprint: "Consistent with our determinations in other RMR proceedings, the Commission will reject the intervenors' request to limit cost recovery to going-forward costs or to a form of levelized costs … full cost of service recovery is consistent with the cost-of-service provisions of Market Rule 1 and thus appropriate for RMR Agreements." 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. The fact that the current RMR structure may be consistent with FERC precedent (insofar as it may be within range of reasonableness suggested by some prior rulings) should not preclude the ISO from considering changes to CPM and RMR payment structures that are also consistent with FERC precedent but which drive efficient behaviors and prevent arbitrary self-selection between designations. **Net RUC revenues for RMR resources -** While the ISO proposes to claw back net RUC revenues from RMR Condition 2 resources, DMM believes whether to claw back RUC revenues from RMR Condition 1 resources warrants further discussion If the ISO believes Condition 1 RMR resources should retain RUC revenues, then forecasted RUC revenues should be included in market revenues netted against the resource's fixed contract payment. However, RUC payments are capacity availability payments and should therefore be credited back to offset the cost of these capacity payments. RMR capacity is fully contracted and will be treated like RA capacity in other respects under the ISO proposal. RMR units should be treated as RA capacity with respect to RUC payments as well. **Benchmarking with other ISOs -** DMM believes that the CAISO's efforts at comprehensive redesign of the CPM/RMR framework to may benefit from additional benchmarking of the details of how other ISOs have dealt with similar issues. **Assessments of unit economics upon notice of deactivation -** Other ISOs have a variety of rules and processes that supplement resource deactivation processes. 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. This information is also used to identify potential market power issues. NYISO also uses cost submissions to calculate an Availability and Performance Rate (APR) which the NYISO uses as a basis for RMR compensation. ISO-NE's market monitor reviews capacity offers of resources seeking to deactivate that exceed a competitive bid threshold. As these offers are expected to exceed auction clearing prices, resource owners must submit detailed cost information to the ISO which will allow its market monitor to assess the validity of capacity offers and address any market power issues. **Cost of service compensation -** PJM, NYISO, and ISO-NE or their market monitors generally calculate going forward costs or avoidable costs of resources seeking retirement or deactivation and use calculated rates as a starting point for RMR compensation. Though these ISOs allow suppliers to seek cost of service compensation, PJM, NYISO, and ISO-NE generally treat cost of service compensation as an upper bound on RMR compensation and rely on suppliers to justify cost of service rates with FERC. Cost of service compensation is treated as an option rather than the default compensation framework for RMR resources in these ISOs. **Facilitation of resource retirement -** While the ISO proposes that a resource owner will be required to submit an officer affidavit if it plans to retire a resource, the ISO does not propose additional rules that hold a resource owner accountable for such attestations. Other ISOs supplement the resource retirement process with policies that facilitate both the retirement and replacement of a retiring asset. For example, as part of NYISO's resource deactivation process, if a reliability issue is identified due to a resource's deactivation the NYISO will open a solicitation for solutions to address the reliability need. Proposed solutions may include generation or transmission projects which are evaluated against the costs of an RMR agreement. As part of a comprehensive design, the ISO should consider how CAISO backstop procurement, the RA program, and the Transmission Planning Process will facilitate both resource retirement and efficient entry of new resources or development of transmission solutions to resolve reliability needs.

PAO CPUC appreciates CAISO's clarification that even if resources decline CPM designation, "if the resource wants to be considered for an RMR designation, the resource must submit a formal retirement notice to the ISO." California Public Utilities Commission (CPUC) staff raised a concern during the September 27 stakeholder meeting that resources requesting retirement may not actually be uneconomic and may simply be seeking the compensation provided by RMR agreements. For example, a resource that was not in fact uneconomic but that obtained compensation for capital expenditures through an RMR agreement could return to competitively participating in energy markets after the RMR agreement expires. The Public Advocates Office shares similar concerns and recommends that the CAISO consider measures adopted by other Independent System Operators that encourage resource owners to only participate in RMR if they intend to retire. For example, the New York Independent System Operator (NYISO) requires resource owners to submit detailed information on its costs and revenues that demonstrate that retirement is the economic choice for the generator. If the resource owner rescinds its retirement notice or does not actually retire or mothball their unit (if it is not operating under an RMR agreement), the resource owner must reimburse the ISO and Responsible Transmission Owner(s) the actual costs that each incurred in performing their responsibilities in response to the retirement notice. If the resource owner received compensation for all or a portion of the cost of a capital expenditure that was necessary to provide service during the term of an RMR Agreement and seeks to return to participation in the energy markets after the agreement ends, it has a repayment obligation before the NYISO will permit participation. The adoption of similar measures by the CAISO could discourage resource owners with economic units from gaming the Resource Adequacy (RA) market to obtain more lucrative RMR agreements.

PG&E - The CAISO's process enhancements should encourage generators to participate in the bilateral Resource Adequacy process and should consider modifying the compensation for both RMR and CPM processes to prevent using the CAISO mechanisms as a front stop. Additionally, PG&E believes that CAISO's CPM and RMR processes (if separate) should not create an incentive for generators to hold out for a more lucrative RMR compensation. In its order rejecting the CAISO's proposed CPM Risk of Retirement tariff1, FERC found merit in the concerns raised by stakeholders that changes to CPM and RMR terms and conditions can risk distorting prices and interfere with the bilateral process for RA procurement, altering the balance of incentives faced by Resource Owners. FERC encouraged the CAISO to pursue more "holistic" solutions through this stakeholder initiative process, rather than to tinker piecemeal with individual components of the backstop procurement mechanisms in isolation. Since the FERC order, the CAISO has made some progress in its proposal, but has not yet taken sufficient steps that would prevent Resource Owners from circumventing the bilateral RA process to earn higher revenues through the CAISO mechanisms. The CAISO has also stated the importance of maintaining its broad level of authority to ensure that it has the ability to backstop for any unmet reliability needs. PG&E believes there must be a consistent and integrated approach to backstop procurement that prevents Resource Owners from navigating the process in an unjust and unreasonable manner, in order to use the CAISO backstop procurement processes in a manner that undermines the bilateral marketplace. This can best be done by aligning the CPM and RMR compensation terms with the objectives of a competitive market to procure the least-cost resource to meet reliability needs. In order to ensure the CAISO's mechanism does not become the front stop, PG&E believes that CAISO should evaluate a backstop mechanism that allows generators to recover their going-forward costs (plus a rate of return), but does not encourage generators to hold out from participation in the bilateral market processes. For resources at risk of retirement, we believe compensation based on going-forward costs would provide a better market signal. Compensation based on going-forward costs would effectively allow alternatives (such as transmission upgrades, operating procedures, preferred resources, and storage) to be considered and compared against the costs of backstop procurement. Resources needed for reliability (but, due to their economic offers, not picked up in the bilateral processes) would remain economically viable by recovering their going-forward costs plus a reasonable return, but the CAISO's process would not otherwise undermine the functioning of the bilateral market. For any of the mechanisms the CAISO is considering, PG&E believes any resource that obtains CPM or RMR compensation should have its energy market profits netted back. This includes resources that have bid into the Competitive Solicitation process, those that receive the Soft-Offer Cap, and those that seek to recover their going-forward costs above the Soft-Offer Cap. Implementing these changes will align the incentives of RMR and CPM with the bilateral market and encourage Resource Owners to participate in the voluntary bilateral RA process, rather than take advantage of the CAISO's backstop procurement authority to arbitrage differences in compensation terms.

SCE - Specific area where the proposal needs some minor course corrections. As noted by SCE, it is questionable whether a CPM designation for an RA deficiency for a 12 month period can truly result in a competitive outcome. Recent CPM awards of this duration have been clearing consistently close to, or at, the soft offer cap. And those cleared CPM prices have been very consistent with the recently signed RMR agreements. Given the nature of the payments with respect to the retention of market rents, SCE finds it difficult to grant a resource a CPM paying prices consistent with the prices paid in RMR and continuing to allow the resource to retain market rents. This optionality should be avoided. For those reasons, SCE has generally concluded that the 12 month CPM should be treated like an RMR condition 2 contract with all market rents returned to offset the capacity cost of the resource. If the CAISO still believes that competition for a 12 month CPM is feasible, then the CAISO should employ market power screens when conducting the competitive solicitation process for such a CPM. SCE recommends that a three-pivotal supplier test based upon ownership be conducted. If the screen cannot be passed, then the CAISO would terminate the competitive solicitation and enter into an RMR agreement instead. SCE - As noted above, the CAISO should not show a preference of CPM over RMR, nor should incentives be set up such that resources will have a preference. If CPM must be utilized, the CAISO must ensure that the process to arrive at an outcome is not subject to market power by the participants in the process.

Six Cities - Consistent with their comments on the CAISO's Straw Proposal, the Six Cities support the CAISO's proposal to procure via RMR resources that are needed and that have informed the CAISO of plans to retire and to remove from the CPM the currently-effective risk-of-retirement provisions.

c. Explore whether Risk of Retirement CPM and RMR procurement can be merged into one procurement mechanism

Calpine - See August Comments.

PG&E does not support expanding the CAISO's authority under the tariff to issue RMR designations for "year two" forecasted needs. The CAISO's proposal may skew generator incentives in contracting because the generator will know whether it has received an RMR designation prior to the bilateral market process. This could lead to resources "front running" the bilateral RA procurement processes and therefore result in higher RA costs. In addition, this would prevent the CAISO from considering cost-effective transmission alternatives that could be implemented immediately to honor the unit's explicit request to cease operation.

SCE supports.

Six Cities - As noted above, the Six Cities support the CAISO's proposal to move all retirement-related procurement authority into the RMR provisions of the tariff. While the Six Cities previously supported the CAISO's proposal to make risk-of-retirement designations under the CAISO's RMR tariff authority for anticipated needs during up to three years in advance, the Six Cities do not oppose the CAISO's current proposal to issue such designations for needs during years 1 and 2, particularly in light of the CAISO's expectation that year 3 procurement will be addressed as part of the CAISO's RA Enhancements stakeholder initiative, which will address multi-year backstop authority.

RMR

d. Develop interim pro forma RMR agreement

Calpine - See August Comments

SCE supports this need and the CAISO's filing at the FERC.

e. Update certain provisions of pro forma RMR agreement

i. Remove AS bid insufficiency test and revise dispatch provisions to align with current market design

Calpine - See August comments.

Six Cities take no specific position at this time on the proposed modifications to the pro forma RMR agreement in Section e.i through e.iv of this comments template (addressing Section 7.2.2 of the Revised Straw Proposal), but support the CAISO's proposal to "review the entire RMR contract in a holistic manner to better align with the policy changes proposed in this stakeholder process." (*See* Rev'd Straw Proposal at 18-19.)

ii. Update Schedule M and Schedule C to include GHG compliance cost calculation, DAM and RTM gas price index, and updated SC charge calculation

Calpine - See August comments.

iii. Update Schedule M to be consistent with bidding rules in ISO tariff and BPM

Calpine - See August comments.

iv. Seek input on defining a heat rate curve formula in Schedule C for multi-stage generator resources

Calpine - See August comments.

f. Make RMR resources subject to a must offer obligation

Calpine continues to object to a must offer on Condition 2 units as it will result in price suppression. See August Comments.

PAO CPUC supports CAISO's proposal to apply a Must Offer Obligation (MOO) to RMR resources to bid into energy and ancillary services markets. Applying a MOO will better integrate RMR resources in the energy markets and align treatment of the resources with RA requirements, ensuring ratepayers receive the most benefit from the resources they pay for. CAISO should provide more detail on the development of Major Maintenance Adders (MMA) that would be reflected in bids, such as what maintenance activities it would include. MMAs would allow the RMR resource to recover costs of increased dispatch and increase the bid price for the unit which would decrease possible dispatch. CAISO should clarify what costs should be included in MMAs as opposed to capital costs recorded in Schedule L of the RMR agreement to ensure no duplicative cost recovery for the same maintenance. CAISO acknowledged that the Public Advocates Office has previously raised this concern.

PG&E supports the extension of the full RA Must Offer Obligation (MOO) for RMR resources. As a general rule, 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.

Six Cities support this element of the Revised Straw Proposal.

g. Make RMR resources subject to the Resource Adequacy Availability Incentive Mechanism

Calpine - See August comments and section l. below.

PG&E opposes CAISO's proposal to use the same RAAIM performance mechanism for all resources with a MOO as this does not reflect the unique operational circumstances of an RMR resource. PG&E appreciates that the CAISO has modified its position to ensure that the existing penalty provisions within the RMR agreement would be the basis of the RAAIM penalty for an RMR resource. This does not completely address the unique challenges of operating an RMR resource. The objective of RAAIM was to create an incentive for resources to meet the must-offer obligation by providing replacement capacity when resources go on outage in a given availability assessment hour. The CAISO assumes that RMR resources would be dispatched using the same process for RA and CPM resources, which is accurate for market dispatches. However, this is not accurate in the case for RMR dispatches. The CAISO would evaluate when an RMR unit commitment is required to meet local reliability needs, which may occur at different times (and for different reasons) than a system-wide capacity need. If the unit isn't needed to meet local reliability, then it is allowed to submit market bids and deliver energy as a market transaction. 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). The CAISO should not assume that a Resource Owner can simply substitute energy for RMR dispatches that are different than market transactions.

SCE supports the proposal on the RMR penalty price. The CAISO proposes to have the RAAIM penalty price for RMR at the agreement price of the contract. SCE supports this. As clarified by SCE in prior comments, the optimal penalty price is exactly the agreement price. A lower penalty (relative to agreement price) allows a resource to collect payments for doing nothing, while a higher penalty makes a resource worse off. SCE - Specific area where the proposal needs some minor course correction: *Historical outage information is not a reasonable input to inform a future RMR contract.* During the last stakeholder meeting, some parties suggested that the use of RAAIM coupled with an anticipated outage rate was unnecessary as the current RMR already accounts for outages. The current RMR agreement accounts for outages based upon a historical outage rate of the facility. Such a mechanism does not provide sufficient incentive to maintain the facility to the level of reliability that the CAISO believes is needed, nor is it consistent with how other resources are expected to perform under RAAIM. While there must be some allowance for maintenance outages, the reliance on historical outage rates is not appropriate. Instead, the CAISO 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. Such mechanisms will provide appropriate incentives as well as ensure that the CAISO and the load paying for these resources receive the benefits that are being paid for. SCE - RAAIM is a market based mechanism dependent on RA contracting between LSEs and resources. The RMR is a non-market backstop mechanism contracted between the CAISO and resources. The RMR penalty for non-compliance should be only dependent on, and exactly equal to, the RMR award. As the latest straw-proposal would set the RAAIM penalty to the contract amount, SCE supports the straw-proposal.

Six Cities support this element of the Revised Straw Proposal.

h. Consider whether RMR Condition 1 and 2 options are needed

Calpine continues to support the full cost-of-service (Condition 2) structure for RMR compensation. While the elimination of Condition 1 does allow for settlement simplification (see section l.) Calpine continues to believe that this market-revenue, risk-sharing option could assist greatly in the settlement of RMR contractual matters.

PAO CPUC - CAISO proposes to make Condition 2 the default RMR agreement, but allow the resource owner to negotiate a Condition 1 agreement "at the ISO's discretion, and in limited circumstances when appropriate." From the discussion at the stakeholder meeting, it is not clear under what limited circumstances the use of Condition 1 would be appropriate. Given CAISO's proposal to apply a MOO, which would require bidding in the energy markets, it is not clear what benefit Condition 1 agreements will provide. CAISO should clarify the limited circumstances under which Condition 1 agreements would be appropriate and beneficial for ratepayers and the generator.

PG&E - PG&E supports the extension of the full RA Must Offer Obligation (MOO) for RMR resources and recommends eliminating Condition 1 as an option for Resource Owners. As a general rule, 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. The CAISO has proposed maintaining both Condition 1 and Condition 2, and allowing the Resource Owner continued discretion to choose whether or not to receive the benefit of market revenues in compensation for allowing market participation by an RMR unit. With the addition of the Must Offer Obligation (MOO), this discretion no longer makes sense, because the unit will be available to the market and will be committed whenever its cost-based bids are below the market clearing price (so long as the unit is not exceptionally dispatched by CAISO operators for meeting reliability needs). Moreover, the 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 and provide a regulated return that is not just and reasonable. The RMR or CPM return should be sufficient to ensure that a needed resource receives appropriate compensation, while crediting back all energy market profits earned against the RMR costs borne by transmission customers.

SCE - Specific area where the proposal needs some minor course correction: SCE believes that elimination of condition 1 RMR is appropriate. During the valuation of an RMR contract, the resource as well as the CAISO perform their analysis of how the resource may place optimal market bids to recover part of the cost of service. First, the CAISO's assumptions in its analysis may not agree with the resource owner's assumptions, regarding optimal market bids. Second, the CAISO, as a ratepayer cost-minimizing agent, is a proxy for the best informed agent for ratepayer cost-minimization – the load serving entity (LSE). The CAISO may have different assumptions toward how to best cost-minimize for the ratepayer, based on less information than is available to a LSE. By providing an option, it is reasonable to assume that the generator owner will select the option that maximizes their expected profit. Such a process will then likely need to be subject to some form of settlement with interested parties being able to opine on which structure the CAISO should accept for any given contract. SCE does not see this additional option as creating sufficient benefit to outweigh the complexity of a likely contentious term that will need to be negotiated for each agreement. At this time, SCE believes that it would be more straightforward to simply remove condition 1 from RMR and proceed with a cost of service based contract with market rents utilized to pay down the capacity cost of the contract. SCE provided various reasons above, none of which support continuation of two Conditions. As such, the CAISO should eliminate the option for a Condition 1 RMR.

Six Cities continue to support the retention of RMR Condition 2 as a default, whereby resources are paid their full cost of service, with all market revenues above the cost of service credited back. Consistent with their prior comments, the Six Cities are not categorically opposed to retention of RMR Condition 1, but believe that the CAISO has raised valid considerations regarding the potential for a resource to select whichever condition will provide for the greatest amount of revenue, even where the selection may result in recovery greater than the cost of service. For this reason, elimination of RMR Condition 1 would also appear to be reasonable. The Six Cities look forward to continued consideration of this issue in the Second Revised Straw Proposal. (*See* Rev'd Straw Proposal at 25.)

i. Update rate of return for RMR compensation

Calpine - See August comments. Calpine agrees with the CAISO that resources needed for reliability and that are ordered by the CAISO to be available must be compensated at the mitigated price of their full cost-of-service, including a return of and on capital. Calpine's continued preference would be to have a pre-approved, pre-tax, rate-of-return embedded in the CAISO tariff, as it is today. This simplifies the significant burden placed on the resource owner in either filing a CSP offer that is above the soft cap, or in preparing an RMR revenue requirement. The RSP offers a safe-harbor pre-tax rate (the simple average of the three LSEs) which could be used in the same manner as the current tariff. Alternatively, a resource owner can use their Section 205 rights to file something higher, or different. Calpine conceptually supports the safe-harbor approach proposed and would not object to using the utility's FERC-approved transmission rate of return.

Six Cities are unable to support at this time the CAISO's proposal to set as a default rate of return the average return for the three investor-owned utilities, updated every four years. First, this proposal assumes that each utility will have a FERC approved rate of return in effect; historically, Participating TOs have at different times exercised the option to use stated rates (rather than formula rates). Such stated rates may be determined in settlement agreements that do not provide for a specific ROE. Second, even if these Participating TOs do have FERC approved-ROEs, those ROEs may have been determined in settlement agreements that provide for a negotiated agreement that resolves multiple issues. The ROE term, as with all of the settlement terms, would reflect a balance among various considerations by all parties during the settlement process. Those considerations may not translate to generating resources owned by other parties under RMR designations. Third, at the time the CAISO performs its every-four-year update, an ROE may be in effect subject to refund and the outcome of hearing and/or settlement procedures. It would not be appropriate to use an as-filed ROE that may be subject to change following an administrative process. Further, what is the basis for performing the updated calculation every four years, versus more or less frequently? As stated before, given these considerations, it may be most appropriate to require individual resource owners to propose and support an appropriate return for their circumstances. Even if no other changes are made to the current rate of return, the Six Cities concur with PG&E that the currently-effective rate of return should, at a minimum, be reduced to reflect the reduction in the federal corporate income tax rate resulting from the Tax Cuts and Jobs Act.

j. Align pro forma RMR agreement with existing RMR tariff authority that currently provides ability to designate for system and flexible needs

Calpine - See August comments.

PAO CPUC - Discussion during the stakeholder meeting included questions on what additional technical studies the CAISO would perform before designating a resource as RMR based on system and flexible needs. CAISO 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. The current surplus of system capacity precludes the possibility of an RMR designation being needed to preserve system reliability. Over the forward planning horizon, the RA requirements (including planning reserve margins) should be sufficient to guarantee that system resource needs are met. Moreover, even if enough capacity that is not picked up for RA were simultaneously to seek retirement, RMR designations would be triggered for many of these units to meet local needs before any possible system deficiency could occur. PG&E fails to see what problem the CAISO is trying to solve and objects to giving CAISO staff explicit discretion to issue RMR contracts for circumstances that may be purely hypothetical. PG&E also objects to the CAISO proposal to give itself discretion to issue RMRs for flexible needs. First, flexibility is not a transmission reliability attribute for which an RMR can be an appropriate remedy. PG&E recovers RMR costs in its FERC-approved Reliability Services Balancing Account; it makes no sense to recover costs for flexible needs in this manner. Flexibility is an attribute of a portfolio of generation resources and the CAISO has not specified how it would test whether an individual resource has the attributes that would cause it to be uniquely necessary and irreplaceable to meeting system flexibility targets. As there are no transmission alternatives for flexible needs. If an RMR is created for a flexible unit, it is not clear what process would be used to allow the generator to be retired. Costs for flexible needs should not be allocated to customers as a transmission charge but should remain a procurement cost, allocated to load serving entities through the bilateral flexible RA procurement process. Flexibility is a characteristic of the mix of generation resources and the need to procure sufficient flexible reserves to manage uncertainty in the forecasting of both load and resource behavior at different forward time intervals. Given the availability of energy, ancillary service, and capacity market instruments to procure flexibility, it is unclear what additional flexible system characteristics might warrant the designation of an RMR for a particular unit at risk of retirement. Creating a new RMR for flexibility will only serve to grant a guarantee of cost-of-service regulated transmission rate recovery to those flexible units that threaten to retire early, incenting further gaming of the retirement process.

SCE supports an alignment. Regardless of the procurement need, the CAISO should procure all attributes of a resource otherwise it risks leaving stranded attributes that no one can procure. As SCE discussed during the stakeholder meeting, the current RA process through the CPUC, only the entity that purchased the system/local attribute of a flexible resource can purchase the flexible attribute. If the CAISO were to explicitly not purchase the flexible attribute and if the must-offer obligation for the resource did not utilize the flexible capacity, the flexible capability for such resource would be unobtainable by any party. In addition, the RMR agreement is paying for the cost of the resource and the bidding of energy would recover any variable operating costs. As such, load is paying for the entirety of the capacity and energy associated with the facility and should be allocated any benefits that accrue including system, local, and flexible RA.

Six Cities support this element of the Straw Proposal. Consistent with SCE's comments on the Straw Proposal, when the CAISO issues an RMR designation, it should obtain all of the attributes of the procured resource, even if the procurement decision is driven by the need for a specific attribute.

k. Allocate flexible Resource Adequacy credits from RMR designations

Calpine - See August comments.

PAO CPUC continues to support allocation of flexible RA value for RMR resources. However, it is not clear why the CAISO proposes that the resource owner must agree to fulfill flexible RA requirements rather than requiring the resource owner to fulfill such requirements. Procuring a resource for RMR without ensuring procurement of the available flexible capacity would strand the flexible RA value of that resource and could lead to additional ratepayer costs to meet flexible RA requirements. The CAISO should simply procure and allocate the system, local and flexible RA for any resource it designates as RMR.

SCE supports. Regardless of the procurement need, the CAISO should procure all attributes of a resource otherwise it risks leaving stranded attributes that no one can procure (see j. above).

Six Cities support this element of the Revised Straw Proposal. The Six Cities urge the CAISO to 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; the Revised Straw Proposal suggests at page 28 that it may be. If the CAISO issues an RMR designation for local reasons (for example) and the resource is capable of providing flexible capacity, it should do so (with credits allocated accordingly).

l. Streamline and automate RMR settlement process

Calpine supports changes that would allow simplification and automation of invoicing and settlement. Shifting the burden of invoicing to the CAISO, where it can leverage existing systems, data and processes has significant benefits. 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. This ensures that losses which may be imposed by operating an RMR resource uneconomically in one hour are not off-set by gains that may occur in another 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. Calpine supports other components of simplification – such as the conversion of hourly availability to a fixed monthly payment if in fact, the CAISO also decides to impose a modified RAAIM on RMRs. (Note: Calpine understands that the RSP asserts that the CAISO would never require an RMR owner to self-schedule thereby exposing it to possible RAAIM penalties.)

Six Cities take no position on this aspect of the Revised Straw Proposal at this time.

m. Lower banking costs associated with RMR invoicing

Calpine - See August comments.

Six Cities take no position on this aspect of the Revised Straw Proposal at this time.

CPM

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

Calpine agrees with the CAISO proposal to claw-back energy rents from resources that bid a cost-of-service price into the CSP. This makes the CPM mechanism similar to a Condition 2 RMR (except for the significant differences associated with incremental capital cost recovery.)

DMM - As noted in DMM's prior comments, if the current CPM soft offer cap is paid to a resource for all 12 months of an annual CPM, this compensation is likely to exceed the annual GFFC of many resources. In addition to this fixed payment, CPM units keep all market revenues. 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. DMM notes that this framework would be similar to other ISOs' application of pivotal supplier tests in capacity auctions. Other ISOs apply pivotal supplier tests to capacity auctions and cap offers of pivotal resources at competitive levels. In general, other ISOs calculate competitive capacity offers for pivotal resources reflecting GFFC net of forecasted market revenues, or *net avoidable costs*. If resources are uneconomic but are needed for ISO reliability, then suppliers generally have the option to accept compensation at a calculated reference value, or file at FERC for additional out of market compensation. Applying similar processes to the ISO's CPM framework would eliminate a pivotal supplier's incentive to self-select compensation at the soft offer cap when this compensation far exceeds its resource's GFFC. The Revised Straw Proposal introduces a change to the CPM compensation for units bidding in excess of the soft offer cap. Under the Revised Straw Proposal, units bidding over the soft offer cap which seek compensation including a return on sunk costs under Schedule F of the RMR agreement would credit back all net market revenues. DMM believes that while this is an improvement, this change does not address the fundamental problems with the CPM/RMR payment structure.

SCE - Specific area where the proposal needs some minor course correction: If CPM is utilized for long-duration procurement, the CAISO should use a three pivotal supplier test on the Competitive Solicitation Process to ensure competitive CPM bids. While SCE has noted that it may be simpler to utilize RMR for any contract with a duration of twelve months, if the CAISO believes that competitive forces can produce lower costs to load, then such mechanisms should feature elements to ensure that such competitive forces are present. As such, SCE believes that if the CAISO continues to rely on the Competitive Solicitation Process for CPM to procure long-duration CPM, then the CAISO must employ a three pivotal supplier test based upon ownership. If, in any solicitation, the three pivotal supplier test is failed, then competition in the CPM cannot be assured. As such, the CAISO, under a failed pivotal supplier test, should utilize an RMR contract instead. Such a mechanism ensures that the generator receives sufficient payment to recover their costs as well as a reasonable return while avoiding potentially non-competitive outcomes. As noted by the MSC, the three pivotal supplier test is reasonable in the CAISO's existing local market power mitigation mechanism3. Further, during the September 28 meeting, the MSC noted that other ISO/RTOs use the three pivotal supplier test in mitigating market power in similar circumstance. The CAISO should implement a three pivotal supplier test, based on resource ownership, to ensure competitiveness in CPM bidding. SCE - SCE supports the CAISO proposal to change 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 note that the Revised Straw Proposal reflects a change relative to the Straw Proposal, and that they 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. Here, the CAISO is proposing to claw back market revenues in excess of the cost of service. Conceptually, the Six Cities support this approach as a reasonable way of mitigating against the potential for excess compensation; however, the Six Cities are concerned that the CAISO's proposal to only designate the whole of the resource because partial compensation is infeasible for resources being paid based on a cost of service above the soft-offer cap may result in excess procurement. To what extent could this be a concern? Further, why would it not be possible to pro-rate market revenues over a defined period (e.g., daily, monthly) to correspond to partial CPM designations?

o. Evaluate year-ahead CPM local collective deficiency procurement cost allocation to address load migration

Calpine - See August comments.

SCE agrees that this issue is largely moot given the CPUC decision impacting the cause of this concern. SCE believes that the CAISO should continue to monitor developments in this space and re-initiate discussion of this element if the need arises in the future.

Six Cities take no position on this aspect of the Revised Straw Proposal at this time.

p. Evaluate if load serving entities are using CPM for their primary capacity procurement

Calpine - See August comments.

p) Evaluate if load serving entities are using CPM for their primary capacity procurement

Six Cities - The CAISO's proposed resolution of this issue appears to be reasonable.

Other Comments

Calpine - The generation landscape and the expectations of policy reforms continues to change. We agree with the comments of many who suggest that this initiative be suspended for approximately 6 months – or more congruously, be included as part of the RA Enhancements track 2 efforts. Redesigning RMR and CPM while the CPUC is considering changes to the fundamental structure of RA (e.g., multi-year forward requirements, central buyer, etc.) seems at best, ill-timed and at worst, and effort that will have to be repeated once the CPUC takes – or does not take – action on reforms.

DMM appreciates the opportunity to comment on the ISO's Reliability Must Run and Capacity Procurement Mechanism Enhancements Revised Straw Proposal issued on September 19, 2018. The Revised Straw Proposal includes modifications to the CAISO's current CPM and RMR provisions which represent an appreciable improvement from the current CPM and RMR framework. The ISO's proposed changes are significant incremental enhancements to the existing design. However, DMM believes the ISO's current proposal falls short of "a package of more comprehensive reforms" which FERC encouraged the ISO to propose in its Order on the ISO's Risk-of-Retirement Capacity Procurement Mechanism filing. DMM recognizes the challenge of designing truly comprehensive reforms of CPM and RMR provisions of the CAISO tariff given the ongoing effort in CPUC proceedings to develop comprehensive changes to the state's resource adequacy (RA) program. Thus, DMM encourages the CAISO to move forward with changes that address some of the fundamental flaws in the CPM and RMR framework, while continuing to work on more fundamental changes in conjunction with changes to the RA process. DMM suggests that the ISO move forward with important enhancements such as placing must-offer obligations on RMR resources and clawing back net market revenues above the CPM soft offer cap, on an expedited timeline. The ISO could classify these changes as necessary incremental enhancements to the existing design while continuing to develop broader design changes.

SCE appreciates the CAISO's efforts and largely agrees with many of the CAISO's proposals SCE thanks the CAISO staff for their guidance in this productive stakeholder process. The CAISO's direction, within the comprehensive scope, has led to substantial progress in RMR and CPM enhancement. SCE's comments, below, are in general support of the CAISO's various proposals in this initiative, and are meant to serve as suggestions toward fine tuning of the proposals.