UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corporation	))	**Docket No. ER19-1641-000**

MOTION TO INTERVENE AND COMMENTS
OF THE DEPARTMENT OF MARKET MONITORING
OF THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION

Pursuant to Rules 212 and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission ("FERC" or "Commission"), 18 C.F.R. §§385.212, 385.214, the Department of Market Monitoring ("DMM"), acting in its capacity as the Independent Market Monitor for the California Independent System Operator Corporation ("CAISO"), submits this motion to intervene and comment in the above-captioned proceeding.

In this proceeding, the CAISO has filed a tariff amendment to implement numerous revisions to improve its Reliability Must Run (RMR) program and further differentiate it from the Capacity Procurement Mechanism (CPM) backstop procurement framework.[1] DMM supports the proposed tariff changes as incremental improvements which address significant and pressing flaws in the CAISO's RMR tariff provisions. However, as explained in these comments, DMM believes further changes are needed in the overall RMR and CPM backstop procurement mechanisms as part of a comprehensive package of changes which the Commission has indicated is needed in the CAISO's market design.

[1] *Tariff Amendments to Improve the Reliability Must Run Framework*, California Independent System Operator Corporation, Docket No. ER19-1641, April 22, 2019 ("Transmittal Letter").

I. MOTION TO INTERVENE

DMM respectfully requests that the Commission afford due consideration to these comments and motion to intervene, and afford DMM full rights as a party to this proceeding. The mission of DMM, as prescribed in the CAISO tariff pursuant to the Commission's Order 719, is as follows:

> To provide independent oversight and analysis of the CAISO Markets for the protection of consumers and Market Participants by the identification and reporting of market design flaws, potential market rule violations, and market power abuses.[2]

The CAISO tariff further states that "DMM shall review existing and proposed market rules, tariff provisions, and market design elements and recommend proposed rule and tariff changes to the CAISO, the CAISO Governing Board, FERC staff, the California Public Utilities Commission, Market Participants, and other interested entities."[3] As this proceeding involves CAISO tariff provisions which affect the efficiency and potential for market power in the CAISO markets, it implicates matters within DMM's purview.

II. COMMENTS

Part A of this section provides a summary of these comments. Part B addresses changes to the RMR tariff provisions being proposed by the CAISO. Part C provides comments on issues not addressed in the CAISO's proposal, but which should be addressed and included as part of a more comprehensive package of changes to the RMR and CPM backstop procurement framework.

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[2] CAISO Tariff Appendix P, Section 1.2.

[3] CAISO Tariff Appendix P, Section 5.1.

A. Summary

CAISO's filing is the result of a year-long stakeholder process to review the CAISO's RMR and CPM backstop procurement provisions. The Commission's April 18, 2018 order recommended that the CAISO adopt a "holistic, rather than piecemeal, approach" to modifying RMR and CPM tariff provisions in this stakeholder process and to "coordinate reform of these programs rather than proposing incremental changes that only address a portion of the underlying challenges."[4] The Commission encouraged the CAISO to "propose a package of more comprehensive reforms" which "balance appropriate compensation for resources with the consideration of ratepayer concerns, as well as the need to strike a balance between CAISO's backstop procurement authority and primary procurement of supply needed for resource adequacy purposes."[5]

DMM supports most of the proposed tariff changes, which address significant and pressing flaws in the CAISO's RMR tariff provisions. Most importantly, DMM supports eliminating the Condition 1 RMR option and establishing a must-offer obligation at cost-based offers for resources under Condition 2 RMR contracts. DMM also supports proposed tariff revisions aimed at limiting the use of RMR contracts to only those units that resource owners specify would otherwise be retired or mothballed for either *economic* or *non-economic* reasons.

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[4] *Order Rejecting Tariff Revisions,* 163 FERC ¶ 61,023, ER18-641-000, April 12, 2018.¶46, ¶48, at p.17.

[5] *Order Rejecting Tariff Revisions,* (April 12, 2018), ¶46, at p.17.

Under the proposal, DMM will be expected to review notices of intent to retire or mothball submitted by resource owners and refer to the Commission any cases which DMM determines may involve false or misleading information. To facilitate this process, DMM recommends that CAISO clarify that units are expected to have made a diligent effort to contract resources in the bilateral resource adequacy process and considered these potential revenues prior to submitting notifications to retire or mothball units.

DMM also believes it would be beneficial for the CAISO to clarify whether the CAISO would exercise its option to renew an RMR contract in subsequent years as long as the unit is needed for reliability, even if the resource was willing and able to obtain a resource adequacy contract after the end of an RMR contract year.

However, the CAISO's filing does not represent a comprehensive and coordinated package of changes in the RMR and CPM backstop procurement framework. CAISO management has committed to a stakeholder process later this year to re-evaluate the CPM framework and pricing.[6] DMM encourages the CAISO to include consideration of broader changes to RMR and CPM provisions as part of this upcoming stakeholder process. Ultimately, a more comprehensive evaluation of both CPM and RMR backstop procurement frameworks will be necessary to eliminate the inefficiencies associated with offering two backstop procurement mechanisms with different compensation structures.

[6] Transmittal letter, p. 11.

The CAISO's proposal does not modify current tariff provisions providing RMR Condition 2 units with compensation covering full *cost of service* — defined as including recovery of all undepreciated sunk costs and a return on this investment. The CAISO has indicated it will not consider modification of this RMR compensation requirement due to prior FERC guidance suggesting that when acceptance of a backstop procurement offer is mandatory, an ISO must pay the resource a full cost of service rate.

In practice, however, no other ISO appears to have RMR provisions which *require* that units needed for reliability be paid this type of prescriptive cost of service compensation and do not allow other options. All other ISOs appear to provide generators with the ability to seek approval for a range of RMR compensation levels, ranging from a minimum rate which ensures recovery of going forward costs plus some contribution to sunk costs, up to a maximum rate which includes full recovery and a return on all undepreciated sunk costs.

As explained in these comments, providing RMR compensation based on the full cost of service approach required under CAISO market rules can distort bilateral capacity markets and provide inefficient signals for investment in new generation or transmission options. These market distortions may be limited in the case of older highly depreciated RMR units nearing retirement. However, these distortions can be significant for newer RMR units (with relatively high undepreciated capital costs) indicating they intend to be mothballed and which may later return to operate under market based rates.

As the CAISO continues to consider further changes to its CPM and RMR backstop procurement framework in its upcoming stakeholder process, DMM believes it would be beneficial for the Commission to provide guidance on the issue of compensation for units needed for reliability. Specifically, a key question that affects the scope and outcome of this process is the degree to which CAISO may be required to compensate RMR resources at the full cost of service rate required under the CAISO proposal, or if CAISO may adopt other approaches that may help make the CAISO's CPM and RMR backstop procurement framework more consistent and efficient.

B. Proposed RMR Tariff Changes

DMM supports the proposal to establish a must-offer obligation and cost-based bidding for RMR Condition 2 units.

Under current rules, RMR Condition 2 units can only be committed to operate manually by CAISO operators and dispatched for energy under very limited conditions, even if the resource would otherwise be economic in the market.[7] Condition 2 units are likely to be withheld from the market during many – if not most hours. This withholding of RMR capacity from the market could artificially inflate market prices. As explained in prior filings by DMM to the Commission, the current limits on market participation by Condition 2 units are economically inefficient, distort overall market prices, undermine the CAISO's automated market power mitigation procedures, and are unjust and unreasonable for consumers.[8]

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[7] See, ISO Tariff, Appendix G, Section 3.1 (ii)

[8] *Motion to Intervene and Protest of the Department of Market Monitoring*, ER18-240-000, November 22, 2017.

DMM supports the CAISO's proposal to establish must-offer obligations for RMR units that are consistent with those applicable to resource adequacy resources and to require RMR resources to submit cost-based offers. If ratepayers must pay a resource for the unit's cost of service, ratepayers should benefit from the resource's participation in the market. CAISO's proposed rules for market participation and bidding by RMR resources address most of DMM's key concerns about the inefficiencies and inequities of current tariff provisions for Condition 2 RMR units.

DMM supports tariff revisions aimed at using RMR contracts only for units that resource owners indicate would otherwise be retired or mothballed.

DMM supports proposed tariff revisions aimed at limiting the use of RMR contracts to only those units that resource owners indicate would otherwise be retired or mothballed for economic or non-economic reasons. Under the CAISO's proposal, unit owners will be required to specify on the notice of intent to retire/mothball that units are being retired or mothballed for either *economic* reasons or for other *non-economic reasons*. For units citing *non-economic* reasons, the CAISO's form provides owners the opportunity to provide additional written explanation.[9]

The CAISO's filing notes that the Commission has previously indicated that false information on retirement claims can constitute false and misleading conduct which is subject to referral to the Commission.[10] The CAISO's filing states that the Commission's rules against false or misleading information to the

http://www.caiso.com/Documents/Nov22_2017_DMMMotion_Intervene_Protest-MetcalfEnergyCenterRMRAgreement_ER18-240.pdf

[9] Transmittal letter, p. 42-44.

[10] Transmittal letter, p. 58 and footnote 142.

CAISO render it unnecessary for the CAISO to also require unit owners to submit financial information demonstrating that it is uneconomic for the unit to keep operating.[11] However, the CAISO's Market Surveillance Committee ("MSC") notes that "we are not optimistic that the CAISO or some external party would be well positioned to perform a credible economic test that could confirm or refute the financial viability of a specific plant," since "these are complicated business decisions that would be difficult for external reviewers to second guess."[12]

The CAISO's filing indicates that CAISO will rely on DMM to review attestations and refer any potential false or misleading information to the Office of Enforcement. The CAISO's filing specifically cites the Commission's 2011 CPM order[13], which states:[14]

> Based on the fact that a market participant is prohibited from submitting false or misleading information to CAISO, the affidavit should be sufficient to establish that a resource cannot continue to operate economically. If the Department of Market Monitoring has reason to suspect that a resource submitted false, inaccurate, or otherwise misleading information in its affidavit, the CAISO tariff requires such a suspected violation to be referred to the Commission for appropriate sanction.

DMM appreciates how the Commission and CAISO have highlighted these market rules and clarified the role DMM will be expected to play in the

[11] Transmittal letter, p. 58.

[12] *Opinion on Reliability Must Run and Capacity Procurement Enhancements*, Market Surveillance Committee, March 18, 2019, p. 13 ("MSC Opinion"). http://www.caiso.com/Documents/MSC-Opiniononreliabilitymustrunandcapacityprocurementmechanismenhancements-Mar20_2019.pdf

[13] Transmittal letter, p. 58.

[14] *Order on Tariff Revisions,* 134 FERC ¶ 61,211, ER11-2256, March 17, 2011, ¶132, at p.46.

enforcement of these rules. Given the reliance being placed on DMM to perform this role, DMM would expect to routinely request the financial data and analysis which a unit owner developed and relied upon when deciding to mothball or retire a unit. The CAISO tariff already provides DMM with the authority to require submission of any information it may require to make such assessments.[15] With this after-the-fact approach, however, DMM notes that it may not be possible for DMM to obtain the needed information and complete a review of submissions prior to any key deadlines that may exist in the RMR contracting process.[16]

The CAISO should clarify that unit owners are expected to make a diligent effort to contract resources in the bilateral resource adequacy process prior to submitting notifications to retire or mothball units.

Under the CAISO proposal, DMM will be expected to review notices of intent to retire or mothball submitted by resource owners and refer to the Commission any cases which DMM determines may involve false or misleading information. To facilitate this process and reduce potential disagreements, DMM recommends that CAISO clarify that unit owners are expected to have made a diligent effort to contract resources in the bilateral resource adequacy process prior to submitting notifications to retire or mothball units.

Other ISOs which require generators to submit formal notices to retire or mothball units administer centralized capacity markets, which provide a clear basis

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[15] CAISO Tariff, Appendix P, Department of Market Monitoring, Section 8.5.1.

[16] For example, PJM's tariff requires the market monitoring unit to notify PJM within 30 days of a deactivation request about any market power issues, along with the specific impact of the proposed deactivation and an initial assessment of steps that could be taken to mitigate the market power impact. (PJM Tariff Attachment M – Appendix, Section IV Deactivation Rates).

for the ISO or its market monitor to assess the revenues that generators could receive for this capacity.[17] The CAISO, however, has no capacity market and no other transparent basis exists for assessing the revenues that a supplier may have received by participating in the bilateral market for capacity (or through a tolling contract or purchase agreement for capacity and energy). These potential revenues represent a key determinant in the economics of plant retirements or mothballing.

The CAISO's filing indicates that the CAISO clearly expects and encourages bilateral contracting between LSEs and generators as the preferred alternative to RMR contracts.[18] The CAISO's proposal is explicitly designed on the expectation that bilateral contracts "should be encouraged because RMR is – and should be – a procurement measure of last resort."[19]

In both of the examples of recent RMR designations provided in the CAISO's filing, letters from the plant owner confirm or infer that the owner had made diligent efforts to sell capacity from these units in the bilateral market. Calpine's 2016 letter indicates that it had determined it was uneconomic to keep units in operation only "[a]fter unsuccessful, but diligent efforts to try to sell the Capacity and Energy from four of its fast-start peaking units."[20] Similarly, Calpine's 2017 letter indicates that it

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[17] The Southwest Power Pool does not administer a centralized capacity market, but has not yet developed a formal process for evaluating and processing generation retirements. The Midcontinent ISO has a formal retirement notification process and operates voluntary Planning Resource Auctions. However, the MISO's market design provides an incentive for resources without bilateral contracts to offer into Planning Resource Auctions by enforcing physical withholding provisions and allowing suppliers to develop resource-specific, retirement-based avoidable cost rates in consultation with the ISO's market monitoring unit.

[18] Transmittal letter, p. 64.

[19] Transmittal letter, pp. 64, 74.

[20] Transmittal letter, Attachment E

was considering retiring or mothballing the Metcalf unit since it had not received a resource adequacy contract and that prevailing prices for resource adequacy contracts were not high enough to make it economic to keep the unit in operation.[21]

DMM's January 10, 2019 comments on the CAISO's proposal indicated that:

> The criteria for filing at FERC could also include the requirement that the generator make a showing that they intend to retire and it is not economic to stay on-line absent additional RMR compensation. *This might also include a showing that the unit was not economically or physically withholding from the bilateral RA process* [emphasis added]. [22]

While the Commission's rules against false or misleading information to the CAISO may render it unnecessary to require unit owners to submit financial information demonstrating that it is uneconomic for the unit to keep operating, DMM believes it is useful to clarify that unit owners are expected to have made a diligent effort to sell capacity in the bilateral market prior to submitting notifications to retire or mothball units and to factor potential revenues from resource adequacy contracts into the decision to retire or mothball units. Such clarification may help avoid potential after the fact disagreements and ensure that RMR contracts are a "procurement measure of last resort." This clarification might be provided by the CAISO as part of the formal retirement/mothball notification form or other related written materials or filings.

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[21] Transmittal letter, Attachment F

[22] *Comments on Reliability Must Run and Capacity Procurement Mechanism Enhancements Second Revised Straw Proposal*, Department of Market Monitoring, January 10, 2019, p. 5. http://www.caiso.com/Documents/DMMComments-ReliabilityMust-RunandCapacityProcurementMechanismEnhancements-SecondRevisedStrawProposal.pdf

The CAISO should clarify if there are any limitations on units under RMR contracts returning to the market in future years.

The CAISO's Market Surveillance Committee (MSC) states that under the CAISO's proposal, RMR generating units are not free to return to market unless their must-run status is removed through a transmission upgrade or other changes in market. As stated in the MSC opinion included in the CAISO's filing:[23]

> … We acknowledge concerns about resources with local market power potentially having an incentive to strategically claim an intent to retire. We note, however, that RMR generating units are not free to return to market unless their must-run status is removed through a transmission upgrade or other changes in market conditions. The RMR contract provides the CAISO with an option to renew under cost-based terms as long as the reliability need, and therefore the unit's local market power, remains.

The MSC also states that:[24]

> There would be a much larger concern about "toggling" if the unit would have the option to return to market payments if and when market conditions change. An example of such a change would be where they are able to find a counterparty with which to sign a contract. This option bestows a right for resources with material market power to earn the "better of" market or cost-based remuneration. Such an option would increase both the appeal of RMR and the incentive for resource owners to claim a need for it.

As explained in the CAISO's filing, the RMR contract provisions limit the ability of an RMR owner to unilaterally terminate an RMR Contract and allows the CAISO the *option* to renew an RMR contract on a year-by-year basis at the end of each year. However, as long as the unit continues to be needed for reliability, there does not appear to be any *requirement* that the CAISO renew an RMR contract for the following year if the owner was able to obtain a resource adequacy contract. If

[23] MSC opinion, p.3.

[24] MSC opinion, p.13.

this situation arose, it is unclear what criteria would be used by the CAISO to determine whether or not to exercise its option to renew the RMR contract. DMM has previously assumed that in this situation, the CAISO would prefer that the unit participate in the market under a resource adequacy contract and not renew the RMR contract. This situation merits clarification by the CAISO.

C. Further Enhancements to RMR and CPM Framework

Offering two backstop procurement mechanisms with different compensation structures may allow resources to self-select preferred compensation.

Under its proposal, the CAISO will continue to maintain two backstop procurement mechanisms, but clarifies that CPM will be used as a backstop to the resource adequacy program and that RMR will be used to address resource retirements (and mothballing). Continuing to offer two backstop procurement mechanisms with distinct compensation schemes may not prevent pivotal resources from self-selecting designations based on their preferred compensation. This is particularly concerning when CPM solicitations are not competitive. The CAISO has committed to commencing an effort to re-evaluate the broader CPM design this year.

While the CAISO's proposed changes to RMR provisions add some checks to the retirement and mothball process, these additional provisions do not obviate the need to re-evaluate the broader CPM framework including CPM pricing and competitiveness of CPM solicitations. Many -- if not most -- resources in local capacity areas can determine whether they are needed for reliability without initiating the retirement process based on publically available information on local capacity area requirements and generation available in these areas. A resource that is needed or pivotal for reliability that may consider retirement could conceivably choose between CPM and RMR compensation depending on which compensation structure maximizes compensation for the resource owner.

Moreover, when CPM solicitations are not competitive, resources with market power may have an incentive to hold out for CPM compensation at the soft offer cap.[25] The current $76/kW-year soft offer cap may far exceed a gas-fired resource's actual going forward costs.[26] When combined with the net market revenues retained by CPM generators, this may represent excessive payment significantly in excess of competitive market levels for a resource with locational market power. Therefore, it is important to evaluate both CPM and RMR backstop frameworks together so that pivotal resources cannot self-select preferred compensation solely based on maximization of compensation.

If a generator does not submit a bid into the CPM process, the CAISO may submit a bid on behalf of a resource at the $76/kW-year soft offer cap. CPM designations based on CAISO-generated bids for units that do not submit bids into the CPM process are voluntary and can be declined by suppliers with market power that prefer RMR compensation. DMM shares concerns raised by other stakeholders

[25] The CPM soft offer cap is currently set at $6.31/kW-month (or about $76/kW-year) and is based on the going forward fixed costs of a merchant-constructed mid-cost 550 MW combined cycle unit with duct firing, plus a 20% adder to account for additional capital costs. Resources compensated up to the soft offer cap can also retain market revenues.

The CAISO may generate bids at the soft offer cap for any eligible capacity not offered into competitive solicitations if there is insufficient capacity voluntarily bid-in to meet minimum capacity requirements.

[26] A recent report indicates the mid-range of going forward fixed costs in California is about $34/kW-year for combined cycle units and about $25 to $28/kW-year for combustion turbines. *Estimated Cost of New Utility-Scale Generation in California: 2018 Update, California Energy Commission Staff Report*, May 2019, p .B-25. https://www.energy.ca.gov/2019publications/CEC-200-2019-005/CEC-200-2019-005.pdf

that under the current and proposed framework, newer pivotal resources with undepreciated capital costs may have an incentive and ability to self-select RMR compensation while older pivotal resources would prefer CPM compensation at or near the soft offer cap. It is not clear what efficiencies this self-selection provides.

Recent cases highlight the potential for resources to self-select between CPM and RMR compensation.

Two recent cases highlight the potential for resources to self-select between CPM and RMR designations. In these examples, a much newer unit (with less depreciated sunk costs) selected compensation under an RMR contract, while a much older unit on the verge of retirement obtained compensation under the CPM provisions.

In 2017, Calpine notified the CAISO that it was considering making the Metcalf Energy Center ("Metcalf") unit unavailable for 2018 and clearly expressed to the CAISO that it would not pursue a CPM designation.[27] In comments on the CAISO's RMR designation of Metcalf, Calpine further expressed that a CPM designation was unworkable for Metcalf as the CPM framework did not provide financial certainty that it would recover additional capital expenditures.[28]

The Metcalf unit was not offered a CPM designation and was given an RMR contract for 2018. The Metcalf unit, at the time, was a 12 year old combined cycle

[27] *Metcalf Energy Center Retirement Assessment*, Calpine Corporation, June 2, 2017: https://www.caiso.com/Documents/CalpineLetter_CAISO_MetcalfEnergyCenterRetirementAssessment.PDF

[28] *Comments of Calpine Corporation on RMR Designation for the Metcalf Energy Center*, Calpine Corporation, October 6, 2017, p. 3: http://www.caiso.com/Documents/CalpineComments_PotentialReliabilityMust_Run_MetcalfEnergyCenter.pdf

resource and filed for about $40M in return on net plant investment (return on undepreciated capital), in addition to major maintenance costs.[29] Metcalf's RMR contract was not renewed for 2019 as the sub-area need was no longer binding due to planned transmission upgrades.[30] However, Metcalf has not retired and has since returned to the market.

Meanwhile, in 2017 the Encina Power Station ("Encina") units accepted an annual CPM designation for 2018 at the soft offer cap of $76/kW-year.[31] The Encina generating units were over 60 years old and presumably had very limited undepreciated capital. If the Encina units declined annual CPM designations for 2018, the units would presumably have been eligible for RMR contracts. For the Encina units, acceptance of an annual CPM designation at the soft offer cap (and then retaining market revenues) was likely much greater than the compensation it

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[29] *Unexecuted Must-Run Service Agreement between Metcalf Energy Center LLC and California Independent System Operator*, Metcalf Energy Center, LLC, Docket No. ER18-240-000, Attachment B, November 2, 2017.

[30] *Update on results of reliability must-run contract extensions for 2019*, California ISO, November 7, 2018: http://www.caiso.com/Documents/CalpineComments_PotentialReliabilityMust_Run_MetcalfEnergyCenter.pdf

[31] It was understood that the Encina Power Station would be retired to comply with the state's *Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* ("OTC Policy"). In 2017, the California State Water Board extended Encina's compliance date with the state's OTC policy from the end of 2017 to end of 2018 to maintain grid reliability in Southern California until replacement capacity could come online. *State Water Resource Control Board Resolution No. 2017-0047*, California State Water Resources Control Board, August 15, 2017: https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2017/rs2017_0047.pdf

Report of the Statewide Advisory Committee on Cooling Water Intake Structures – Encina Power Station 2018 Reliability Study, February 2017 ("2018 Encina Reliability Study"): https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/saccwis/docs/saccwis_encina_2018rpt.pdf would receive under an RMR contract. The Encina units were retired at the end of 2018.

These examples illustrate how offering two compensation options allows pivotal resources to self-select backstop designations based on preferred compensation. These options do not appear to enhance reliability or market efficiency. Therefore, DMM has suggested that the CAISO consolidate its backstop mechanisms into a single backstop procurement mechanism that prevents self-selection of compensation.

The CPM and RMR mechanisms can be modified to have consistent rules governing recovery of needed new capital expenses.

Calpine has indicated that one deficiency in the CPM provisions which caused it to seek a RMR contract for the Metcalf unit in 2018 is that CPM compensation would not have provided Metcalf with certainty that it could recover going forward capital expenditures.[32] However, the CPM soft offer cap includes a 20 percent adder to a reference units' going forward fixed costs which was intended to serve as a "reasonable proxy" for additional capital-related fixed costs.[33] DMM has also suggested that a more targeted way to address this issue is to adopt a CPM framework based on unit-specific going forward costs that explicitly accounts for contributions to additional needed capital expenditures, either in mitigated offers if

[32] *Metcalf Energy Center Retirement Assessment (2017)*, op cit.

[33] *Tariff Amendment and Offer of Settlement Regarding Capacity Procurement Mechanism Revisions and Request for Waiver of Notice Requirement,* California ISO, ER15-1783, May 26, 2015, p. 17:

http://www.caiso.com/Documents/May26_2015_TariffAmendment_CapacityProcurementMechanism_Revisions_ER15-1783.pdf

CPM solicitations were to include tests for market power, or when resources file for costs above the soft offer cap.

Other ISOs allow suppliers to reflect contributions to capital expenditures within resource-specific avoidable cost or going forward cost rates, under certain circumstances. Suppliers can justify embedding capital costs within cost-based capacity offers if such investments are needed to keep a resource operational in subsequent years.[34] These cost-based calculations are typically developed in consultation with ISO market monitors.

Self-selection of backstop compensation is particularly concerning when the CPM process does not yield competitive outcomes and the soft offer cap is too high.

The CPM framework is designed to encourage and produce competitive outcomes by providing units without resource adequacy contracts the option to enter a competitive solicitation for backstop capacity contracts. The soft offer cap is intended to serve as a form of market power mitigation when the CPM process is not competitive.[35] However, there is no explicit test for market power within CPM solicitations. CPM compensation is capped by the soft offer cap, with an option for

[34] *PJM OATT, Attachment DD Section 6.8 Avoidable Cost Definition:* PJM's Avoidable Project Investment Recovery Rate (APIR) can be a component of resource-specific Avoidable Cost Rates.

ISO-NE Tariff – MR1, Section III.13.1.2.3.2.1.2.: "Expected capital expenditures, in dollars, are the Lead Market Participant's expected capital investments that might otherwise be avoided or not incurred if the resource were not subject to the obligations of a listed capacity resource during the Capacity Commitment Periods"

[35] *Tariff Amendment and Offer of Settlement Regarding Capacity Procurement Mechanism Revisions and Request for Waiver of Notice Requirement,* California ISO, ER15-1783, May 26, 2015, p. 19.

resource owners to file at FERC if their costs are expected to exceed the soft offer cap.

If the CPM process was competitive, suppliers would be expected to submit bids reflecting their going forward fixed costs *net* of projected market revenues, plus a reasonable profit (or contribution to sunk costs). DMM and other stakeholders have expressed concerns that CPM solicitations have not been competitive and the soft offer cap is currently too high, given that CPM prices have cleared at or close to the soft offer cap since the implementation of the current CPM framework in 2016.[36] Moreover, no generator has ever filed with the Commission for recovery of going forward fixed costs in excess of the soft cap.

Each year, DMM publishes residual supply indices for major local capacity areas in CAISO.[37] These analyses indicate that many local areas are not structurally competitive because there are one or more suppliers that are pivotal and control a significant portion of capacity needed to meet local requirements. In addition, in September and October 2018, the CAISO solicited CPM offers for system-wide capacity (including imports) to meet deficiencies in system resource

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[36] *See DMM Annual Reports on Market Issues and Performance,* 2016-2018:
DMM 2018 Annual Report, p. 254:
http://www.caiso.com/Documents/2017AnnualReportonMarketIssuesandPerformance.pdf
DMM 2017 Annual Report, p. 240:
http://www.caiso.com/Documents/2017AnnualReportonMarketIssuesandPerformance.pdf
DMM 2016 Annual Report, p. 239:
http://www.caiso.com/Documents/2016AnnualReportonMarketIssuesandPerformance.pdf

[37] *DMM 2018 Annual Report*, p. 162.

adequacy.[38] DMM calculated residual supply indices for these auctions, which indicated significant market power in capacity sales at the system level.

In the case of the Encina units that accepted compensation at the soft offer cap, there were no other resources able to meet the reliability need that the Encina units resolved and alternative solutions considered each posed risks to system reliability.[39] A non-competitive CPM process could enable pivotal resources like the Encina units to hold out for compensation at the soft offer cap that may far exceed resource-specific net going forward fixed costs and potential RMR compensation.

Opportunities for self-selection of compensation appears greater at CAISO than other ISOs

The CAISO filing notes that the opportunity for self-selection of compensation exists today and is not unique to the CAISO:

> The CAISO points out that although other ISOs and RTOs do not have multiple backstop procurement mechanisms like RMR and CPM, they permit a generating unit owner that is needed for reliability to select the compensation scheme it desires from two alternatives, either cost of service recovery or pricing based on some pre-established mechanism, typically based on going forward costs. Thus, the CAISO's two compensation schemes are not "out-of-line" with the practices of other ISOs and RTOs.[40]

However, the ISOs referenced by the CAISO all have centralized capacity markets which include very different market rules than the CAISO's CPM framework. Other ISOs referenced by the CAISO test for market power within capacity auctions,

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[38] *Intent to designate CPM capacity pursuant to CPM significant event*, California ISO, August 2, 2018. http://www.caiso.com/Documents/Presentation-CapacityProcurementMechanismSignificantEvent.pdf

[39] *2018 Encina Reliability Study*, pp. 6-7.

[40] Transmittal letter, p. 40.

with offers of resources with market power being potentially subject to offer caps. In these markets, resource-specific net avoidable cost or net going forward cost rates are typically reviewed or developed in conjunction with each ISO's market monitor.[41]

In addition, these ISOs' capacity markets do not have the same voluntary nature as the CAISO's CPM framework. Other ISOs have specific provisions for ensuring resources cannot physically withhold from the capacity market, and under some circumstances, these ISOs enforce must-offer obligations into capacity auctions.[42]

Thus, these other ISO's have much different capacity procurement rules than the CAISO's CPM framework. The CAISO's CPM framework does not test for market power, and is voluntary and does not enforce must-offer obligations, and does not address potential physical withholding. Under the CPM framework, resources with

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[41] ISO-NE Tariff – MR1, Section III, Appendix A, 23 Pivotal Supplier Test for Existing Capacity Resources and New Import Capacity Resources in the Forward Capacity Market

ISO-NE Tariff – MR1. Section III, 13.1.2.3.1., Static De-List Bids and Export Bids, Permanent De-List Bids, and Retirement De-List Bids at or Above the Dynamic De-List Bid Threshold.

NYISO MST, Section 23.4.5. Installed Capacity Market Mitigation Measures

PJM OATT, Attachment DD Section 6.3 Market Structure Test

PJM OATT, Attachment DD Section 6.4 Market Seller Offer Caps

[42] PJM enforces a must offer obligation on resources eligible to sell capacity into Base Residual Auctions, with limited exceptions: *PJM OATT, Attachment DD, Offer Requirement for Capacity Resources.*

NYISO identifies pivotal suppliers in mitigated capacity zones and places a must-offer obligation into ICAP Spot Market Auctions for pivotal suppliers' Mitigated UCAP, which is the unforced capacity under control of pivotal suppliers in Mitigated Capacity Zones: *NYISO MST, Section 23.4.5.4 and 23.4.5.6.*

ISO-NE automatically includes de-list bids in applicable Forward Capacity Auctions: *ISO-NE Tariff – Market Rule 1, Section III.13.2.3.2(b)* market power may hold out for compensation at the soft offer cap which is based on the *full* going forward fixed costs of a reference unit, plus a 20% adder, *and* allows the resource to retain market revenues. Furthermore, if RMR compensation is more attractive to a resource owner, the resource owner has the option to decline a CPM offer.

The CAISO's current RMR compensation can create inefficient investment signals and decisions.

Since the CAISO's current compensation for RMR Condition 2 units covers all sunk costs, this sends an inefficient investment signal for longer term substitutes. Specifically, paying a generating resource based on its sunk costs creates the incentive to build new supply or transmission capacity which would have an annualized cost greater than the RMR resource's going forward costs, but less than the resource's RMR payment (which includes both going forward and sunk costs). Investing in the new capacity would be inefficient if this cost was less than the going forward costs of the existing RMR resource. In a prior filing with the Commission, DMM provided an empirical example of this inefficiency based on approximate values of the actual going forward and sunk costs of the Metcalf Energy Center, which received an RMR designation for 2018.[43]

The CAISO's Market Surveillance Committee agrees that "paying of full cost-of-service (including a return on sunk investment costs) could potentially create distortions in investment if … the full RMR payment is used as the

[43] *Motion to Intervene and Protest of the Department of Market Monitoring of the California Independent System Operator*, ER-641-000, February 2, 2018, pp. 10-11. http://www.caiso.com/Documents/Feb2_2018_DMMIntervention_Protest-RORCPM_ER18-641.pdf

benchmark cost of generation against which to compare alternative non-generation solutions to the reliability problem."[44] As the MSC explains:

> Because that going-forward cost [of an RMR unit] may be different from the full cost, situations are possible in which a transmission investment that removes the need for RMR status would be less expensive than the cost of service based RMR compensation, but more costly than the RMR generator's going forward costs.

In addition to transmission alternatives, new generation options may also have costs that are lower than an RMR unit's cost of service but which are higher than the RMR generator's actual going forward costs.[45] The MSC offers a potential solution to this issue, but this is not incorporated in the CAISO proposal.[46]

Traditional cost-of-service definitions are not consistent with units operating under market based rates before and/or after operating as RMR units.

On the issue of RMR compensation, the CAISO's Market Surveillance Committee states that:[47]

> Some stakeholders, such as the CPUC, object to paying full cost-of-service rates to RMR plants … from an efficiency perspective, there is no single "right" payment between the full cost-of-service and the going-forward cost (including new capital costs) of the plant, but there is a long-standing tradition of paying

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[44] MSC opinion, p.15.

[45] Following Calpine's RMR designations in 2017, the CPUC issued a Resolution authorizing PG&E, the impacted transmission owner, to procure energy storage or preferred resources to address local capacity deficiencies and "obviate the need for RMR contracts for the aforementioned plants." The CPUC directed PG&E to consider the costs of the RMR contracts in its evaluation of project costs: "It is reasonable to require that resources procured in this solicitation be at a reasonable cost to ratepayers, taking into consideration the cost and value to PG&E, previous solicitations in which PG&E has awarded contracts to similar resources, *the cost of the specific RMR contracts*, with adjustments for contract terms such as contract length and expedited delivery date. [emphasis added]" See *CPUC Resolution E-4909*, January 11, 2018, p. 7: http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M200/K602/200602742.PDF

[46] MSC opinion, p.4, pp.16-17.

[47] MSC opinion, p.14.

> plants offering a regulated service their full cost of that service and of capping the revenues of resources possessing market power based on a regulated rate of return.

The tradition of cost-of-service regulation referenced by the MSC was developed based on resources that were under regulated cost-of-service rates for all or most of their plant life. When applied to units consistently from year to year on a long term basis, the cost-of-service framework incorporated in the CAISO's tariff ensures recovery of fixed costs and a regulated return on this investment – but no more and no less.

As noted in the MSC's opinion, plants that have already operated in the market for a number of years may have already recovered and earned a return on investment (e.g through bilateral market revenues and market based rates in excess of costs of service).[48] However, such units may appear to have unrecovered investment under the CAISO's *pro forma* RMR contract simply because of financial depreciation accounting methods. In addition, after operating under market-based rates for a number of years, RMR units can receive this traditional cost-of-service compensation for a period of time and then switch back to market based rates.

Thus, in practice, the cost-of-service construct around which the CAISO's RMR compensation is based is not consistent with either traditional cost of service rate making or the actual cost of service of resources which operate under market based rates in years before or after operating as an RMR unit.

[48] MSC opinion, p. 14.

Ensuring recovery of going forward costs plus a reasonable profit would provide fair compensation to resources needed for backstop capacity

Ensuring recovery of going forward costs plus a reasonable profit would provide fair compensation to resources needed for backstop capacity. If a unit needed for reliability would truly retire or mothball if not contracted by the CAISO, then such compensation would be more profitable and provide more recovery of sunk costs than if the unit was retired or mothballed. Such compensation approaches could be designed to avoid creating incentives for units to seek RMR contracts rather than to participate in the state's bilateral market for capacity needed by LSEs to meet resource adequacy requirements. In addition, alternate RMR compensation approaches could avoid inefficient transmission and generation investment signals that the CAISO's current RMR provisions can create, as previously discussed in these comments.

Other ISO tariffs do not require or guarantee RMR units to be compensated based on traditional cost-of-service rates.

The CAISO indicates it will not consider modifying its current RMR compensation due to FERC precedent indicating that if an RMR designation is mandatory for a resource, an ISO must pay the resource's full cost of service.[49] The prior Commission orders cited by the CAISO both involve cases involving RMR compensation provisions that were initially designed to allow units to cover going forward costs, but allowed little or no contribution to sunk fixed cost or a return on this investment. In these cases, the Commission clearly indicated that RMR units cannot be limited to going forward costs and must be allowed the opportunity to earn a

[49] Transmittal letter, p. 10.

contribution toward fixed cost up to their full cost of service (including recovery and a return on non-depreciated capital).

However, in both these cases, the two ISOs ultimately adopted RMR regimes which are voluntary and include compensation approaches which simply provide generators needed for reliability with the ability to seek approval for a range of RMR compensation levels, ranging from going forward costs (plus some contribution to sunk costs) up to a maximum rate which includes recovery and a return on all sunk fixed costs.[50] In fact, no other ISO appears to have RMR provisions which require that units needed for system reliability be paid the type of prescriptive full cost of

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[50] Under the NYISO tariff, a resource decision to retire, remove or de-rate capacity must initiate a determination of RMR Avoidable Costs. The NYISO then uses resource cost and revenue submissions to develop resource-specific RMR Avoidable Costs and ultimately develop a resource Availability and Performance Rate. *See NYISO OATT, Attachment FF Generator Deactivation Process, Section 38.8 and Appendix C, Article 4.*

Upon offer of RMR service, a supplier has the option to accept the NYISO's Availability and Performance Rate, or file with the Commission for an Owner Developed Rate. The supplier's Owner Developed Rate may be up to, but cannot exceed a resource's full cost of service. See *NYISO OATT, Attachment FF Generator Deactivation Process, Section 38.9*.4.

In MISO, the market participant will be compensated for only costs incurred for the extended operation as an System Support Resource (SSR) Unit that *do not exceed* the full cost-of-service (including the fixed cost of existing plant). [emphasis added]"

MISO allows suppliers to file with the Commission for additional costs that "should evaluate, at a minimum, the following factors in *negotiating* compensation for an SSR Unit (1) operations and maintenance labor expenses directly related to the SSR Unit; (2) administrative expenses directly related to employees at the SSR Unit, including employee expenses environmental fees, safety and operator training, office supplies, communications, and plant inspection/testing expenses; (3) non-labor maintenance expenses, including chemical and materials consumed during maintenance of the SSR Unit and rental expenses for maintenance equipment used to maintain the SSR Unit; (4) taxes, permit and licensing fees, site security expenses, and insurance; (5) carrying charges, including charges for maintaining reasonable levels of inventories of fuel and spare parts that result from short-term operating unit decisions based on Good Utility Practice; (6) corporate expenses, including those incurred for legal services, environmental reporting, and procurement; (7) costs associated with capitalized projects; (8) depreciation, and (9) return on the undepreciated plant costs for the SSR Unit. [emphasis added]" *See MISO Tariff Module C, Section 38.2.79(j)(i) SSR Unit Compensatio*n, service compensation specified in the CAISO *pro forma* RMR contract. All other ISOs appear to provide generators with the ability to seek approval for a range of RMR compensation levels, ranging from going forward costs (plus some contribution to sunk costs) up to a maximum rate which includes recovery and a return on all sunk fixed costs.[51]

It would be beneficial for the Commission to provide direction on whether the CAISO may modify its RMR compensation as part of more comprehensive and holistic changes in its backstop procurement mechanisms.

The CAISO has indicated it will not consider modification of its current RMR compensation due to prior FERC guidance suggesting that when acceptance of a backstop procurement offer is mandatory, the ISO must pay the resource this full cost of service rate, as currently defined under the CAISO tariff. However, as explained in these comments, the RMR compensation currently required under the CAISO tariff may distort bilateral capacity markets and provide inefficient signals for investment in new generation or transmission options. These market distortions may be limited in the case of older highly depreciated RMR units nearing retirement. However, these distortions can be significant for newer RMR units (with relatively

[51] Upon notification to deactivate a generating unit, PJM's Market Monitoring Unit and the resource owner must attempt to agree on a Deactivation Avoidable Cost Credit. However, the resource owner has the option to submit a cost of service filing at the Commission as an alternative to the Deactivation Avoidable Cost Credit. *See PJM OATT, Attachment M, Section IV Deactivation Rates and PJM OATT, Section V.113.2 Notice of Reliability Impact.*

ISO-NE's Internal Market Monitor reviews de-list bids (bids of resources seeking to exit the market) above a competitive offer threshold (and all Permanent and Retirement de-list bids that exceed 20 MW). Suppliers work with the market monitor to establish de-list bids. Resources that do not clear capacity auction and are needed for reliability are offered their de-list bid price with option to submit a cost-of-service filing at the Commission. *See ISO-NE Tariff – Market Rule 1. Section III, 13.1.2.3.2.1* (*Static De-List Bids and Export Bids, Permanent De-List Bids, and Retirement De-List Bids at or Above the Dynamic De-List Bid Threshold) and 13.2.5.2.5.1 (Compensation for Bids Rejected for Reliability Reasons).*

high undepreciated capital costs) indicating they may be mothballed and which may later return to operate under market based rates.

There is clearly a wide spectrum of options that would provide RMR units with compensation greater than going forward costs, but which may fall somewhat below the CAISO definition of full cost of service.[52] As noted in CAISO's transmittal letter, "the Commission has recognized that each market is different, and thus there is no "one size fits all" approach to appropriate RMR regimes."[53] Thus, as the CAISO moves forward to consider further changes in its CPM and RMR backstop procurement framework, it would be beneficial for the CAISO and its stakeholders to have more clarity on the degree to which CAISO may modify these current RMR tariff provisions as part of a more comprehensive package of changes to make the CAISO's CPM and RMR framework more consistent and efficient.

[52] For example, in the stakeholder process, DMM has suggested two approaches which ensured recovery of going forward fixed costs (GFFC) plus a reasonable profit. (1) Provide fixed compensation based on GFFC plus a reasonable fixed profit, and credit net market revenues back to ratepayers; or (2) provide fixed compensation based on GFFC and allow the unit to keep net market revenues. *Comments on Reliability Must Run and Capacity Procurement Mechanism Enhancements Revised Straw Proposal*, Department of Market Monitoring. October 23, 2018, pp.3-4:

http://www.caiso.com/Documents/DMMComments-ReliabilityMust-RunandCapacityProcurementMechanismEnhancements-RevisedStrawProposal.pdf

[53] Transmittal letter, p. 166 citing PJM Interconnection. LLC 107 FERC 61,112 at P. 15 (2004)

III. CONCLUSION

DMM supports most measures filed by the CAISO in this proceeding as incremental enhancements to the RMR backstop procurement framework. However, as explained in these comments, DMM believes more extensive evaluation of the CPM and RMR pricing and market competitiveness is necessary to fully address inefficiencies with the overall backstop procurement design.

DMM respectfully requests that the Commission afford due consideration to these comments as it evaluates the proposed tariff provisions before it.

Respectfully submitted,

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Dated: May 21, 2019

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service lists in the above-referenced proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 21st day of May, 2019.

/s/ Anna Pascuzzo
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