



must offer requirement must be established for all units under both Condition 1 and Condition 2 of the CAISO's RMR tariff and contract provisions.

## **I. MOTION TO INTERVENE**

DMM respectfully requests that the Commission afford due consideration to this protest and motion to intervene, and afford DMM full rights as a party to this proceeding. The mission of DMM – like that of all Independent Market Monitors -- 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.<sup>1</sup>

The CAISO tariff 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.”<sup>2</sup> As this proceeding involves flawed RMR contract provisions which are inefficient, distort overall market prices, undermine the CAISO's automated market power mitigation procedures, and are unjust and unreasonable for consumers, it implicates matters within DMM's purview.

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<sup>1</sup> CAISO Tariff Appendix P, Section 1.2.

[http://www.caiso.com/Documents/AppendixP\\_CAISODepartmentOfMarketMonitoring\\_asof\\_Apr1\\_2017.pdf](http://www.caiso.com/Documents/AppendixP_CAISODepartmentOfMarketMonitoring_asof_Apr1_2017.pdf).

See also FERC Order 719, at p. 188, where the functions of a Market Monitor include: “evaluating existing and proposed market rules, tariff provisions and market design elements, and recommending proposed rule and tariff changes not only to the RTO or ISO, but also to the Commission's Office of Energy Market Regulation staff and to other interested entities ...”

<sup>2</sup> CAISO Tariff Appendix P, Section 5.1.

## II. PROTEST

### **Provisions requiring Condition 2 units to be held from the market create market inefficiency, distort market prices, and are unjust and reasonable.**

On March 16, 2017, the CAISO Board of Governors approved CAISO management's request to designate Yuba City and Feather River for reliability must-run service and to negotiate a reliability must-run contract with their owner, Gilroy Energy Center LLC ("GEC"), with rates, terms and conditions acceptable to CAISO management. DMM does not contest the CAISO's finding that Yuba City is required to meet local capacity requirements and Feather River is needed for voltage support. On the contrary, the CAISO's findings clearly confirm that Yuba City and Feather River possess unilateral local market power and are pivotal in terms of being needed to meet local area capacity requirements and ensure reliability.

DMM believes that GEC's selection of Condition 2 of the RMR agreement is likely to result in significant inefficiencies and price distortions in the CAISO's energy market and will result in unjust and unreasonable rates for consumers. Under Condition 2 of the RMR contract, GEC would receive Annual Fixed Revenue Requirements (AFRR) for the facilities, including depreciation expenses and capital cost recovery. However, RMR units under Condition 2 can only be committed to operate manually by CAISO operators and dispatched for energy under very limited conditions.<sup>3</sup> A Condition

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<sup>3</sup> See, ISO Tariff, Appendix G, Section 3.1 (ii), "A Unit under Condition 2 shall not participate in a Market Transaction when CAISO has not issued a Dispatch Notice for the Unit." Also, see Section 4.1 (b) "Dispatch Notices for Energy [...] shall be issued solely for purposes of meeting local reliability needs or managing congestion on non-competitive paths." And, according to the ISO Tariff, Section 41.9, Condition 2 two units can only be dispatched through Exceptional Dispatched if (1) the CAISO determines energy from the unit is required to meet system load forecast (e.g. under extremely high load conditions) or (2) to manage congestion when "no other Generating Unit that is available is capable of meeting the identified requirement". Also according to Section 41.9.1, Condition 2 units are also subject to Annual Service limits on the number of start-ups, service hours and total energy.

2 resource can only be bid into the CAISO market if the units have already been committed to operate manually by CAISO operators.<sup>4</sup> Thus, Condition 2 units are likely to be withheld from the market during many – if not most hours – even though consumers bear the full fixed and variable costs of these resources. This is economically inefficient, artificially inflates overall market prices, and is unjust and unreasonable for consumers.

**RMR units under Condition 1 and Condition 2 do not have any must-offer requirement that is needed to mitigate local market power.**

Condition 2 units only have a must-offer requirement during hours when the units have already been dispatched manually to operate by the CAISO under the very limited conditions specified in the RMR tariff and contract provisions.<sup>5</sup> Moreover, while Condition 1 units are not prohibited from scheduling or offering capacity in the CAISO's markets, Condition 1 units have no must-offer obligation akin to other gas-fired capacity procured under the CAISO's Resource Adequacy program or Capacity Procurement Mechanism ("CPM"). Thus, even under Condition 1, when RMR units are not needed for must-run service they can be withheld from the market and undermine the effectiveness of the CAISO's automated local market power mitigation procedures.

For the CAISO's bid mitigation procedures to effectively mitigate local market power, units must be offered into the CAISO day-ahead and real-time markets. Units that may be designated RMR are located in areas with limited transmission and supply.

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<sup>4</sup> Appendix G, 3.1 (ii). See footnote 4 above for a description of the limited conditions under which RMR dispatches can be issued.

<sup>5</sup> Appendix G, 6.1 (b).

If RMR capacity is not offered into the CAISO markets, prices may be set by higher cost supply even when the CAISO's bid mitigation procedures are triggered by congestion on non-competitive constraints. Thus, to ensure mitigation of local market power, all RMR units must be subject to that same must-offer requirement that is applied to capacity procured through the Resource Adequacy program and Capacity Procurement Mechanism.

**Withholding of capacity currently applying for Condition 2 could have a significant impact on the market**

Since 2011, power plants contracted for RMR service have been limited to a very small amount of the oldest and least efficient capacity within the CAISO system. In fact, the only plants contracted for RMR over this time period capable of producing energy in the CAISO markets have been the 39-year old Oakland generating units.<sup>6</sup> The 165 MW of RMR capacity from those peaking units is needed to ensure local reliability during periods of peak demand and/or contingencies that limit available supply. This 165 MW of capacity is needed for local reliability but would otherwise rarely be economic to operate.

However, resources now seeking to operate under Condition 2 represent a much newer and more significant and efficient portion of the gas fleet within the CAISO. In addition to the 94 MW of capacity of Yuba City and Feather River, an additional 593 MW of peaking capacity owned by the Metcalf Energy Center is seeking to operate

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<sup>6</sup> From 2014 through its scheduled release at the end of 2017, the ISO has also had an RMR agreement with the Huntington Beach synchronous condenser facility. That agreement is for voltage support and the facility is only capable of producing MVARs, not MWs.

under Condition 2 – making a total of 687 MW of gas-fired capacity in the CAISO’s northern zone (NP15).

Table 1 below summarizes the operational characteristics and historical operating levels of the relatively new and efficient resources that have already applied for Condition 2 RMR contracts in 2018. All data in Table 1 are derived from RMR filings which have been submitted to the Commission.<sup>7</sup> Under the provisions of Condition 2, these relatively efficient and flexible resources would be withheld from the market at a time when the CAISO’s overall needs for flexible gas-fired resources is becoming more critical for overall system reliability and market efficiency.

**Table 1. Potential RMR Condition 2 Resources**

| Unit      | MW  | Incremental Heat Rate (Btu/kWh) | Annual MWh | Annual Service Hours | Annual Start-ups | Load Factor | Operating hours |
|-----------|-----|---------------------------------|------------|----------------------|------------------|-------------|-----------------|
| Metcalf   | 593 | 7,395-7,761                     | 2,819,714  | 6,711                | 281              | 55%         | 77%             |
| Yuba City | 47  | 7,857                           | 33,167     | 1,346                | 191              | 8%          | 15%             |
| Bogue     | 47  | 8,379                           | 27,660     | 922                  | 235              | 7%          | 11%             |

**Withholding of additional capacity under RMR contracts could have a significant impact on the market**

DMM is also concerned about the potential for additional capacity to be withheld from the CAISO market as a result of flaws in current RMR contract provisions

<sup>7</sup> Schedule A and Schedule C of unexecuted Must-Run Service Agreement between Metcalf Energy Center LLC and California Independent System Operator (included as Attachment A to November 2, 2017 RMR filing); and

Schedule A and Schedule C of unexecuted Must-Run Service Agreement between Gilroy Energy Center LLC and California Independent System Operator (included as Attachment A to November 2, 2017 RMR filing).

Incremental heat rates, load factors and operating hours (percent) calculated from data in Schedule A and Schedule C.

described above. Specifically, the most recent report on Resource Adequacy showings for 2018 issued by the CAISO indicates that the need to rely on RMR contracts could increase significantly.<sup>8</sup> Based on Resource Adequacy submitted by November 1, 2017, insufficient capacity had been procured to meet Local Resource Adequacy requirements in all three of the CAISO's major areas:

- In the Pacific Gas & Electric (PG&E) area, there is a total of 1,072 MW of deficiency. This deficiency exists after accounting for the capacity in the Metcalf and Gilroy RMR agreements. This is an increase from 835 MW at this point last year.
- In the Southern California Edison (SCE) area there is a deficiency of 317 MW, compared to 28 MW at this time last year.
- In the San Diego Gas & Electric (SDG&E) area there is a total of 560 MW of deficiency, compared to 0 MW last year.

The CAISO tariff provides an opportunity for Load Serving Entities to cure individual and collective deficiencies before the CAISO can seek to engage in any backstop procurement under the Capacity Procurement Mechanism (CPM).

**Key flaws in RMR provisions must be addressed on a more expedited basis than broader capacity procurement reforms.**

This case highlights numerous gaps and flaws in the CAISO's overall process for meeting local capacity needs and mitigating local market power of suppliers who are

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<sup>8</sup> *Evaluation Report of Load Serving Entities' Compliance with 2018 Local and System Resource Adequacy Requirements*, California Independent System Operator, November 13, 2017. [http://www.caiso.com/Documents/EvaluationReport\\_LoadServingEntitiesCompliance\\_2018Local\\_SystemResourceAdequacyRequirements.pdf](http://www.caiso.com/Documents/EvaluationReport_LoadServingEntitiesCompliance_2018Local_SystemResourceAdequacyRequirements.pdf)

pivotal in terms of the supply capacity needed to meet local capacity requirements.

These include – but are not limited to -- the following:

- The timeline of the resource adequacy program and the Capacity Procurement Mechanism process must be moved back to accommodate the actual timeline needed to make decisions about resource retirements and potential alternatives for meeting local needs.<sup>9</sup>
- Local capacity requirements used in the resource adequacy program do not include the sub-area requirements set by the CAISO. Therefore, even if Load Serving Entities procure enough capacity to meet resource adequacy requirements, the CAISO may need to procure additional capacity from suppliers with local market power to meet reliability requirements.
- The CAISO's first option for procuring additional capacity needed to meet reliability requirements – the capacity procurement mechanism – is voluntary and can be declined by suppliers with local market power.
- The CAISO's ultimate mechanism for back stop procurement – Reliability Must Run designation – does not include a must offer requirement and even prohibits capacity under Condition 2 from being offered in the CAISO's energy market under most conditions.

The CAISO has indicated it will initiate another stakeholder process in 2018 to begin to address these issues. However, prior experience with similar CAISO initiatives clearly indicates such a process may take significant time to complete and implement.

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<sup>9</sup> As noted on page 3 of GEC's RMR filing, "Calpine indicated that it would not pursue a designation under the Capacity Procurement Mechanism ("CPM") because the CPM process did not allow a sufficient planning period or assurance of compensation to support continued operations."

And regardless of the outcome of this process, several key flaws in the Reliability Must Run provisions of the CAISO tariff must be addressed. DMM believes these basic flaws and the changes needed to address them are clear:

- The prohibition on RMR capacity under Condition 2 from being offered in the CAISO's energy market under most conditions must be removed.
- RMR resources on Condition 1 and Condition 2 must be subject to the same must-offer requirement that units are subject to under the Resource Adequacy program and Capacity Procurement Mechanism.

These two changes are needed to address the key flaws in the RMR provisions of the CAISO tariff and must be addressed on a separate and more expedited basis than the more comprehensive changes that may be made to the Resource Adequacy program and Capacity Procurement Mechanism.

**The key flaws of RMR Condition 2 provisions are well known and must now be addressed.**

The flaws of RMR Condition 2 contracts are well known and must now be addressed. Condition 2 of the RMR contract provisions was established over 17 years ago as part of a contentious settlement reached during the ISO's second year of operation. The CAISO and the state's investor owned utilities and state regulators agreed to the 1999 settlement to ensure reliability and improve the efficiency of California's nascent electricity market when compared to prior RMR contract provisions in effect at that time.<sup>10</sup> The CAISO supported the settlement to avoid "costly litigation"

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<sup>10</sup> *Initial Comments of the California Independent System Operator in Support of Offer of Settlement*, ER98-495-000, April 19, 1999.

and “regulatory uncertainty” and “promote administrative efficiency.”<sup>11</sup> However, support for the 1999 settlement by the CAISO and the state’s investor owned utilities and state regulators was explicitly conditioned on the expectation that the amount of generation under Condition 2 would be very limited.

Expert witnesses for all these parties testified that the prohibitions of participation in the market by resources selecting Condition 2 could create significant market distortions and raise energy prices, and should be re-visited if a significant amount of capacity selected Condition 2. As noted in the CAISO’s 1999 filing in support of the settlement:

The need to offer the type of contract represented by Condition 2 stems from the potential that some generating units which are needed for system reliability would be unable to cover variable and fixed operating costs without additional payment received through RMR contracts, and could therefore be shut down and unavailable for use in maintaining system reliability. [T]he basic rationale for needing to offer Condition 2 can be eliminated if the fixed option payment under Condition 1 includes a component based on the type “net-of-market” calculation described above.<sup>12</sup>

The CAISO’s 1999 filing also went on to caution against the potential for significant market distortions that could result from the option to select Condition 2:

If RMR unit owners are allowed to select between Condition 1 and Condition 2 of the new contract, each owner will select whichever contract option provides the greatest perceived benefit in terms of return on investment, taking into account the risk associated with the uncertainty surrounding market outcomes. For instance, financial payments associated with Condition 2 are highly predictable, while returns under Condition 1 depend on uncertain market outcomes. If the level (or formula) of fixed option payments to units under Condition 1 are such that a significant amount of RMR capacity would opt to select Condition 2 of the

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<sup>11</sup> Ibid, p. 3.

<sup>12</sup> *Statement on Partial Settlement Filing*, Eric Hildebrandt, p. 9 (affidavit submitted as attachment to the CAISO’s Initial Comments of the California Independent System Operator in Support of Offer of Settlement, ER98-495-000, April 19, 1999).

contract, overall market participation by RMR units would be significantly reduced, with the result being higher prices in both energy and Ancillary Services markets. Thus, fixed option payment under Condition 1 and Condition 2 must be carefully structured in order to avoid having a significant amount of capacity under Condition 2 of the new contract. Applying a “net-of-market” approach to the calculation of the appropriate payment to units operating under either Condition would accomplish this objective.<sup>13</sup>

A series of other expert witnesses all made similar warnings and recommendations on the potential adverse market impacts of Condition 2 provisions. Professor Paul Joskow noted that:

The terms of Condition 2 may make sense for generating units that cannot economically supply energy to the market, except during time periods when they are also needed to provide RMR services, but must remain open and available to the ISO for reliability purposes. However, because of the restrictions Condition 2 places on voluntary market sales, there could be adverse effects on the markets for energy and ancillary services *if* a significant amount of RMR capacity which can make economical sales of energy and ancillary services during hours when the ISO does not require the units to operate, were to choose to supply under Condition 2. This would reduce supplies of energy available to the market and increase prices for energy and ancillary services.<sup>14</sup>

Similarly, Dr. Joe D. Pace explained that “the Condition 2 RMR contract is intended for high-cost units that seldom are expected to run at market prices” and that the selection of Condition 2 by units that could operate economically could lead to significant market distortions:<sup>15</sup>

Units that operate under Condition 2 are not allowed, under the terms of the contract, to bid into the market when they have not received an RMR call. Consequently, during times when such units could have economically provided energy or ancillary services but were not called upon by the ISO,

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<sup>13</sup> Ibid p. 9.

<sup>14</sup> *Prepared Direct Testimony of Professor Paul L. Joskow*, Docket Nos. ER98-496-000, ER98-2160-000, December 22, 1999, p. 18. See also pp. 60-61.

<sup>15</sup> *Prepared Direct Testimony of Dr. Joe D. Pace on Behalf of Pacific Gas and Electric Company*, Docket Nos. ER98-496-000, ER98-2160-000, December 22, 1999, p. 4.

supplies will be lower and market-clearing prices will be higher as a result of the Condition 2 limitations.<sup>16</sup>

Dr. Pace went on to note that:

[T]he April 2, 1999, settlement among the parties in this proceeding includes provisions which anticipate the possibility that the settlement could result in market distortions or harm to consumers. . . . Consequently, if the effects of adverse Condition 2 selection are considered significant, the structure of the RMR contract may be opened to review and potential modification by the Commission.<sup>17</sup>

Additional testimony by Dr. Larry E. Ruff cautioned that the ability for units to self-select between Condition 1 and Condition 2 may create some inefficiencies and gaming opportunities:

Under a Condition 2 contract . . . a unit owner is assured full recovery of its AFRR – the stipulated annual fixed revenue requirement - even if the unit would not make this much money operating in the market without an RMR contract. There is no economic justification for paying an RMR unit more than it would make without the RMR contract. But as long as Condition 2 contracts do so, any RMR unit that does not expect to be able to earn enough from market operations to cover its full AFRR will presumably opt for Condition 2 rather than Condition 1. This raises the possibility that an RMR unit that could make money in the market will nonetheless opt for Condition 2 and make more from ISO RMR payments than it could make in the market. This also raises the possibility that RMR owners who could do better under Condition 1 will threaten to choose Condition 2 anyway, purely as a lever to negotiate larger FOP and cost sharing payments and hence make even more money under Condition 1. If enough capacity were to transfer to Condition 2 and therefore not be offered into the energy market, the result could be higher prices in the energy market.<sup>18</sup>

Dr. Ruff went on to note that:

It may have been necessary to offer the Condition 2 option as part of the recent settlement agreement, but under the principles I have stated above

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<sup>16</sup> Ibid, p.11.

<sup>17</sup> Ibid, p. 12.

<sup>18</sup> *Initial Direct Testimony of Larry E. Ruff*, Docket Nos. ER98-496-000, ER98-2160-000, December 22, 1999, pp 16.

there is no economic reason to pay any generator its full AFRR if this amount exceeds what it would earn in the market without the RMR contract. If there is too much switching from Condition 1 to Condition 2 contracts, it is the Condition 2 contracts that should be reconsidered.<sup>19</sup>

As the CAISO developed the nodal market that was implemented in 2009, the flaws of the Condition 2 option were again highlighted by experts engaged by the CAISO to review and comment on the CAISO's nodal market design.<sup>20</sup> As noted by Harvey, Pope and Hogan:

... the question should be asked of why it is appropriate to artificially withhold Condition 2 RMR units from the market, even if there is no congestion. The initial answer might be that this withholding is required by the terms of the RMR contracts, but how can there be a FERC approved contract that requires physical withholding of available infra-marginal capacity merely because a particular transmission constraint is not binding?

If an RMR condition 2 unit is the least-cost method of meeting load, then it should be committed in [the ISO market run]. These units are effectively earning a regulated rate of return and should be committed like a regulated unit, when the market price exceeds their cost, regardless of whether the market price is high due to local congestion, congestion on competitive constraints, or westwide shortage conditions. An apparent requirement that all non-RMR generation be dispatched before RMR condition 2 units appears problematic, even absent any market power. Why should prices be potentially set by a high heat rate, high emissions cost unit when load could be met at lower cost by a more efficient RMR condition 2 unit all of whose fixed operating costs are being borne by consumers?

The eligibility of condition 2 units for commitment and dispatch would benefit consumers because the RMR condition 2 unit would be committed and dispatched only if it were lower cost than the alternative. If the resource owner were allowed to keep any profits arising from such dispatches, both consumers and the owner would be better off from relaxing this restriction.

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<sup>19</sup> Ibid, p. 17.

<sup>20</sup> *Comments on the California ISO MRTU LMP Market Design*, Scott M. Harvey, Susan L. Pope, and William W. Hogan, Prepared for California Independent System Operator, February 23, 2005, footnote 269 p.83. Submitted as Attachment C to *Further Amendments to Amended Comprehensive Market Design Proposal*, California Independent System Operator, Docket No. ER02-1656-026, May 13, 2005.

While the FERC's July 8, 2004 order on amendment 60 expresses some concerns regarding the dispatch of RMR condition 2 units, it appears that these concerns arise from the context in which RMR condition 2 units would be dispatched out-of-merit and would not set the market price. It does not appear that the FERC would be opposed to procedures that allowed RMR condition 2 units to be dispatched and set the LMP price like any other unit based on their contractual dispatch price. Indeed, FERC appears to have just the concern expressed here, that this restriction could prevent units that are high cost, but lower cost than the alternatives, from being used to meet load.

### **The CAISO tariff provides for implementation of special measures to mitigate local market power and withholding.**

The express intent of mitigation measures in Section 39 of the CAISO tariff is "to provide the means for the CAISO to mitigate the market effects of any conduct that would substantially distort competitive outcomes in the CAISO Markets while avoiding unnecessary interference with competitive price signals."<sup>21</sup> Section 39.1 requires that:

... [T]he CAISO shall monitor the markets it administers for conduct that it determines constitutes an abuse of market power but is not addressed by the market power mitigation procedures specified below. If the CAISO identifies any such conduct, it shall make a filing under Section 205 of the Federal Power Act, 16 U.S.C. § 824d, with FERC requesting authorization to apply appropriate mitigation measures.

Section 39.3.2 of the tariff provides that:

Mitigation Measures may also be imposed to mitigate the market effects of a rule, standard, procedure, design feature, or known software imperfection of a CAISO Market that allows a Market Participant to manipulate market prices or otherwise impair the efficient operation of that market, pending the revision of such rule, standard, procedure, design feature, or software defect to preclude such manipulation of prices or impairment of efficiency.

Section 39.5 indicates that:

In addition to any mitigation measures specified above, the CAISO shall administer, and apply when appropriate in accordance with their terms, such other mitigation measures as it may be directed to implement by order of the FERC

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<sup>21</sup> CAISO Tariff, Section 39.1, [http://www.caiso.com/Documents/Section39\\_MarketPowerMitigationProcedures\\_asof\\_May2\\_2017.pdf](http://www.caiso.com/Documents/Section39_MarketPowerMitigationProcedures_asof_May2_2017.pdf)

Pursuant to Section 39 of the CAISO tariff, the CAISO and Commission should implement measures to address flaws in the RMR contracts needed to ensure effective mitigation of local market power for both capacity and energy, and avoid inefficiencies and distortions in the CAISO's broader energy markets.

The CAISO tariff also requires that "DMM is to make a referral to FERC in all instances where it has reason to believe market design flaws exist that it believes could effectively be remedied by rule or tariff changes."<sup>22</sup> Pursuant to these provisions of the CAISO tariff, DMM is also notifying the Commission's Office of Energy Market Regulation of the flaws in RMR tariff and contract provisions identified in this filing.

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<sup>22</sup> CAISO Tariff Appendix P, Section 12. See also FERC Order 719, at p.189, where the functions of a Market Monitor include: "identifying and notifying the Commission's Office of Enforcement staff of instances in which a market participant's behavior, or that of the RTO or ISO, may require investigation ..."

### **III. CONCLUSION**

To ensure mitigation of local market power and avoid artificial inflation of overall market prices, the limits on market participation by Condition 2 units must be removed and a must offer requirement must be established for all units under Condition 1 and Condition 2 of the CAISO's RMR tariff and contract provisions.

Respectfully submitted,

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Independent Market Monitor for the California  
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Dated: November 22, 2017

## 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 Washington, DC this 22<sup>nd</sup> day of November, 2017.

*/s/ Daniel Klein*  
Daniel Klein