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June 27, 2008

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

**Re: California Independent System Operator Corporation  
Docket No. ER08-\_\_\_\_ - 000  
Amendment to Revise Exceptional Dispatch Provisions of the  
MRTU Tariff**

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act ("FPA"), 16 U.S.C. § 824d, and Section 35.13 of the regulations of the Federal Energy Regulatory Commission ("Commission"), 18 C.F.R. § 35.13, the California Independent System Operator Corporation ("CAISO") respectfully submits for filing an original and five copies of an amendment ("Amendment") to the CAISO's Market Redesign and Technology ("MRTU") Tariff.<sup>1</sup> This Amendment proposes revisions to the MRTU Tariff in two respects that both relate to Exceptional Dispatch.

First, the CAISO proposes to apply market power Mitigation Measures to Exceptional Dispatches issued in certain specified circumstances when resources could exercise local market power. Applying these Mitigation Measures will result in a reduction of the Settlement amounts that would otherwise be paid to such resources that receive an Exceptional Dispatch Instruction. Under the Mitigation Measures, mitigated resources that are not

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<sup>1</sup> Capitalized terms not otherwise defined herein have the meanings set forth in the Master Definitions Supplement, Appendix A to the MRTU Tariff (also known as the CAISO Tariff), and in the CAISO tariff amendment described in footnote 8 below. Although the Commission has approved the current MRTU Tariff, the CAISO has not yet implemented MRTU and therefore the MRTU Tariff is not yet in effect. The CAISO anticipates that it will implement MRTU in the fall of 2008, though the specific date has not been definitively determined.

Resource Adequacy ("RA") Resources, are not designated as Interim Capacity Procurement Mechanism ("ICPM") Capacity, and are not Reliability Must-Run ("RMR") Units, and that also meet certain other criteria, will be eligible to receive supplemental revenues to offset their reduced Settlement amounts; these supplemental revenues will be capped over a 30-day period, starting from when the Exceptional Dispatch is issued, at the level of the monthly ICPM Capacity Payment (but not adjusted for actual availability) for which the mitigated resources would be eligible if they had been designated as ICPM Capacity. As discussed below, these Mitigation Measures are designed to prevent suppliers from exercising local market power when they anticipate that their Bids might be subject to Exceptional Dispatch. These provisions also balance the need for market power mitigation with the interests of suppliers in recovering their costs by providing mitigated resources that do not have a capacity contract or designation with an additional mechanism for fixed-cost recovery. These provisions are appropriate because they will ensure just and reasonable prices when the CAISO issues an Exceptional Dispatch Instruction.

The CAISO also proposes to amend the MRTU Tariff to clarify a number of the existing MRTU Tariff provisions concerning Exceptional Dispatch. The CAISO respectfully requests that the Commission approve the Amendment to be effective upon implementation of MRTU subject to the further explanation in Section VI below.

Two extra copies of this filing are also enclosed. Please stamp these copies with the date and time filed and return them to the messenger.

## **I. BACKGROUND**

The Exceptional Dispatch provisions in Section 34.9 of the current MRTU Tariff authorize the CAISO to manually commit and/or dispatch resources that are not cleared through the MRTU market software, in order to maintain reliable grid operations and to address a variety of other situations that require a resource to be dispatched outside of a market schedule.<sup>2</sup> An Exceptional

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<sup>2</sup> The purposes for which the CAISO may issue an Exceptional Dispatch include the following: to address an existing System Emergency; to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the Real-Time Market ("RTM") optimization and system modeling; to avoid a Market Interruption; to perform Ancillary Services testing; to perform pre-commercial operation testing for Generating Units; to avoid Overgeneration conditions; to provide for Black Start; to provide for Voltage Support; to accommodate Transmission Ownership Right ("TOR") or Existing Transmission Contract ("ETC") Self-Schedule changes after the Market Close of the Hour-Ahead Scheduling Process ("HASP"); to reverse a commitment instruction issued through the Integrated Forward Market ("IFM") that is no longer optimal as determined through Residual Unit Commitment ("RUC"); to address transmission related modeling limitations in the Full Network Model ("FNM"); or to address system conditions for which the timing of the RTM optimization and system modeling are either too slow or incapable of bringing the CAISO Controlled Grid back to reliable operations in an appropriate

Dispatch Instruction can be for forced Start-Up, forced Shut-Down, operation at its minimum operating level ("Pmin"), incremental Energy, or decremental Energy.<sup>3</sup> The CAISO may issue Exceptional Dispatches to all types of resources.<sup>4</sup>

The CAISO settles Exceptional Dispatch Energy pursuant to Section 11.5.6 of the MRTU Tariff. Under the current version of this provision, when the CAISO issues an Exceptional Dispatch to a resource that has submitted an Energy Bid into the CAISO Markets, that resource is paid the higher of (a) its Energy Bid price (*i.e.*, its offer price), (b) the Default Energy Bid ("DEB") price for the resource, or (c) the Resource-Specific Settlement Interval Locational Marginal Price ("LMP") at the resource's PNode for the Energy the resource delivers pursuant to the Exceptional Dispatch. Similarly, when the CAISO issues an Exceptional Dispatch to a resource that has not submitted an Energy Bid into the CAISO Markets, that resource is paid the higher of (a) the DEB price for the resource or (b) the Resource-Specific Settlement Interval LMP for the Energy the resource delivers pursuant to the Exceptional Dispatch.<sup>5</sup> These "higher of" pricing rules are needed because of the manual nature of Exceptional Dispatch, pursuant to which the CAISO may be required to dispatch a resource with an Energy Bid price or a DEB price that is higher than the prevailing LMP.

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time-frame based on the timing and physical characteristics of resources available to the CAISO. MRTU Tariff, §§ 34.9.1, 34.9.2, 34.9.3, and 11.5.6.1. As discussed in Section V of this transmittal letter, the CAISO is also proposing to clarify the definitions of "Market Interruption" and "Exceptional Dispatch" to be consistent with the definition of "Market Disruption" and to clarify Section 34.9 authority to utilize Exceptional Dispatch consistent with Section 11.5.6.1 and Section 7.7.1.5. Section 7.7.1.5, currently pending Commission review as part of the CAISO's compliance filing submitted on May 19, 2008 in Docket Nos. ER06-615 and ER07-1257 ("May 19 Compliance Filing") provides that the CAISO can utilize Exceptional Dispatch in the event of a Market Disruption, to prevent a Market Disruption, or to minimize a Market Disruption. The Commission accepted these tariff revisions in its orders issued in the MRTU proceedings on September 21, 2006, June 25, 2007, and June 20, 2008. See *California Independent System Operator Corp.*, 116 FERC ¶ 61,274, at PP 266-69 (2006) ("September 2006 Order"); *California Independent System Operator Corp.*, 119 FERC ¶ 61,313, at P 443 (2007); *California Independent System Operator Corp.*, 123 FERC ¶ 61,285, at P 300 (2008).

<sup>3</sup> See MRTU Tariff, §§ 11.5.6.1, 34.9.

<sup>4</sup> These types of resources include Generating Units, System Units, Participating Loads, Dynamic System Resources, Non-Dynamic System Resources, and Condition 2 Reliability Must-Run ("RMR") Units. See MRTU Tariff, §§ 34.9.1, 34.9.2, 34.9.3. For ease of reference, this Amendment refers to the various types of resources to which the CAISO may issue Exceptional Dispatches as "resources" (when referred to collectively) or as a "resource" (when referred to individually). This is also how they are referred to in a number of the MRTU Tariff provisions concerning Exceptional Dispatch (*e.g.*, Sections 34.9.2 and 34.9.3) and in the proposed revisions to the MRTU Tariff attached hereto.

<sup>5</sup> See, *e.g.*, MRTU Tariff, § 11.5.6.1. Bids taken for Exceptional Dispatch do not set LMPs and Energy from Exceptional Dispatches does not set any Dispatch Interval LMP. MRTU Tariff, § 34.9; MRTU Tariff, Appendix A (definition of "Exceptional Dispatch").

As discussed in Section IV below, the CAISO's Department of Market Monitoring identified a concern that suppliers may be able to exercise local market power when they reasonably anticipate receiving an Exceptional Dispatch Instruction. The CAISO anticipates that Exceptional Dispatches will typically be required to address a transmission constraint or generation unit operating constraint that was not captured in the models used in the Integrated Forward Market ("IFM"), the Reliability Unit Commitment ("RUC") or the Real-Time Market ("RTM"). The CAISO's market software is unable to dispatch a particular needed resource in such circumstances and instead, the CAISO dispatchers manually send a Dispatch Instruction, which is then incorporated in the MRTU software for the dispatch interval. As such, under the current MRTU Tariff provisions, a resource that receives an Exceptional Dispatch Instruction would not be subject to the Market Power Mitigation and Reliability Requirement Determination ("MPM-RRD") process, which is the process by which the CAISO mitigates the potential exercise of local market power in its IFM and RTM. Further, as discussed in Section IV, there may be other circumstances under the current MRTU Tariff provisions in which Exceptional Dispatch would result in market power that would not necessarily have been identified using the MPM-RRD. Due to the CAISO's analysis of the potential for market power, as well as other considerations such as incentives for non-RA Resources to accept ICPM designations, the proposed tariff modifications contained in this Amendment define mitigation rules for Bids used in Exceptional Dispatch. Moreover, the bidding limitations that apply to Bids generally apply to Exceptional Dispatches also, because in both cases the CAISO considers the same set of market Bids.<sup>6</sup>

Besides Exceptional Dispatch, the MRTU Tariff includes three other mechanisms (accepted by the Commission or pending) to be used to ensure reliable grid operations: tariff provisions concerning (1) RA<sup>7</sup> and (2) the ICPM,<sup>8</sup>

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<sup>6</sup> See MRTU Tariff, §§ 39.6.1.1, 39.6.1.4 (concerning Energy Bid limitations); MRTU Tariff, § 39.6.1.6 (concerning limitations on maximum Start-Up Cost and Minimum Load Cost values). The Commission conditionally accepted the CAISO's proposal to mitigate the market power potential of Start-Up and Minimum Load Bids under the Registered Cost option in *California Independent System Operator Corporation*, 123 FERC ¶ 61,288, at PP 23-29 (2008).

<sup>7</sup> The purpose of RA is to ensure the availability of an adequate supply of generation or demand-responsive resources to support safe and reliable operation of the grid, including resources needed for local reliability. The RA provisions of the MRTU Tariff, together with the California Public Utilities Commission's ("CPUC") RA requirements and the provisions of California law applicable to Load Serving Entities ("LSEs") not under CPUC jurisdiction, establish a process intended to ensure that sufficient capacity will be available when and where it is needed to operate the power system reliably. Resource adequacy requirements mandate that LSEs secure sufficient resources of their own or through contracts to meet their customers' demands and include a requirement to procure local capacity pursuant to the CAISO's annual local reliability studies. *California Independent System Operator Corp.*, 122 FERC ¶ 61,017, at P 3 (2008) (conditionally approving RA provisions of the MRTU Tariff).

<sup>8</sup> The purpose of the ICPM is to secure capacity as a backstop to LSEs' procurement of RA capacity under MRTU. *Id.* at P 128. The Commission has not yet issued an order regarding the ICPM provisions of the MRTU Tariff, which the CAISO proposed in a filing submitted on

both of which entail a must-offer requirement to provide capacity into the IFM,<sup>9</sup> as well as (3) tariff provisions concerning RMR, including the *pro forma* RMR Contract.<sup>10</sup> The resources that are subject to these three sets of tariff provisions (*i.e.*, RA Resources, resources designated as ICPM Capacity, and RMR Units, respectively) all provide capacity pursuant to contractual or tariff obligations and therefore include a mechanism to provide for fixed cost recovery. Other resources that do not have capacity contracts or ICPM revenues may not have the same ability to recover fixed costs in addition to their market revenues. Because Exceptional Dispatch may suppress energy market prices (*i.e.*, Locational Marginal Prices (LMPs)) to some degree, and mitigated resources may as a result only recover their short-term variable costs when subject to Exceptional Dispatch, the CAISO proposes to provide the opportunity to recover additional revenues up to a backstop capacity payment amount for resources without a capacity contract.

The CAISO's proposal is thus designed to address the potential for suppliers that receive Exceptional Dispatches to exercise local market power while taking into account the existing mechanisms that provide some, but not all, potentially mitigated resources with additional means of recovering fixed costs.

## II. THE PROPOSED EXCEPTIONAL DISPATCH MITIGATION MEASURES

The Mitigation Measures proposed in this Amendment are based on the Exceptional Dispatch mitigation methodology contained in the CAISO's "Final Proposal on Exceptional Dispatch: Market Power Mitigation and Supplemental Pricing" ("Final Proposal"), which was posted on the CAISO Website on May 13, 2008.<sup>11</sup> As explained in Section IV below and in the Final Proposal, the CAISO's analysis of market impacts indicated the possibility that resources may exercise locational market power in some circumstances and thus receive excessive payment under the existing Exceptional Dispatch tariff provisions.<sup>12</sup> The

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February 8, 2008 in Docket Nos. ER06-615 and ER08-556 ("ICPM Tariff Amendment"). Further discussion of the ICPM and of the relationship between Exceptional Dispatch and the ICPM is provided in Section IV.B below.

<sup>9</sup> This must-offer requirement to provide capacity into the IFM should not be confused with the Commission's must-offer obligation, which is currently in effect but will end when MRTU is implemented. See *California Independent System Operator Corp.*, 121 FERC ¶ 61,193, at P 2 (2007).

<sup>10</sup> The CAISO procures RMR capacity to address local reliability requirements utilizing the same annual studies utilized for the RA program. This was explained in the CAISO's August 3, 2007 compliance filing submitted in Docket Nos. ER06-615 and ER07-1257, and accepted in the Commission's order issued on June 20, 2008, 123 FERC ¶ 61,285 (2008).

<sup>11</sup> Except as otherwise noted below, all of background materials on Exceptional Dispatch relating to this Amendment, including the Final Proposal, various other papers, Market Notices, presentations, stakeholder comments, and draft MRTU Tariff language, are posted on the CAISO Website at <http://www.aiso.com/1c89/1c89d76950e00.html>. The Final Proposal is also provided as Attachment C hereto.

<sup>12</sup> Final Proposal at 11.

CAISO's Exceptional Dispatch mitigation proposal has several main components: (1) it sets forth the circumstances in which the CAISO will apply Mitigation Measures to Exceptional Dispatches of resources; and (2) it establishes a mechanism for resources that are subject to Exceptional Dispatch mitigation but that do not have capacity contracts or designations potentially to receive supplemental revenues that will contribute to the fixed cost recovery of these resources.

**A. The Circumstances in Which the CAISO Will Apply Mitigation Measures to Exceptional Dispatches of Resources**

Pursuant to this Amendment, the CAISO will apply Mitigation Measures to Exceptional Dispatches that are issued to resources for any of the following three purposes: (1) to address reliability requirements related to non-competitive transmission constraints;<sup>13</sup> (2) to ramp units from minimum operating levels to minimum dispatchable levels in order to protect against reliability contingencies that are not directly incorporated or sufficiently met by the MRTU software; or (3) to address other special unit-specific operating or environmental constraints not incorporated in the MRTU model.<sup>14</sup> Additional detail on these situations is provided in Section IV. The CAISO determined that it should apply Mitigation Measures for these three purposes based on input from CAISO operations staff concerning the potential reasons that Exceptional Dispatches may be issued under MRTU and the ability of CAISO operators to identify and log the reasons for Exceptional Dispatches into various categories. The rationale underlying this approach is that Mitigation Measures should be applied to Exceptional Dispatches in conditions in which there is a high potential for market power to be exercised due to highly localized or unit-specific constraints, and other reliability requirements that are not subject to the automated Local Market Power Mitigation ("LMPM") provisions incorporated in the MRTU software.<sup>15</sup> As that software has been developed and the CAISO has gained experience with MRTU market simulations, the CAISO has become aware that Exceptional Dispatch may be required more frequently than previously expected, especially during the first few months of operations under MRTU. Just as it is appropriate for the CAISO to apply the LMPM provisions to address the exercise of locational market power by resources that are dispatched through the MRTU market software, it is also appropriate for the CAISO to develop and apply Mitigation

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<sup>13</sup> In this regard, a DMM presentation on Competitive Path Assessment is available on the CAISO Website at <http://www.caiso.com/1f52/1f52bd74746f0.pdf>.

<sup>14</sup> Final Proposal at 12. Section IV.A below provides additional discussion concerning Exceptional Dispatch for these three purposes. For ease of reference, in this Amendment the CAISO uses the term "mitigated resource" to refer to a resource to which the CAISO applies Mitigation Measures for any of the three purposes. These same three purposes were listed in the DMM's "Revised Proposal for Mitigation of Potential Market Power Under MRTU Exceptional Dispatch Provisions" ("January 17 Proposal"), which was posted on the CAISO Website on January 17, 2008.

<sup>15</sup> Final Proposal at 12.

Measures to Exceptional Dispatches of resources that have the ability to exercise locational market power,

The CAISO is obligated by Section 34.9 of the MRTU Tariff to record the reasons for any Exceptional Dispatch. In addition, the September 2006 Order directed the CAISO to publish all instances of Exceptional Dispatch, including total hourly volumes and hourly weighted average prices by transmission operator service territory, on the CAISO's Open Access Same-Time Information System ("OASIS").<sup>16</sup> The CAISO will create an automated posting process with regard to the information required by the September 2006 Order, and will publish summary reports on the CAISO website concerning the reasons why it has conducted Exceptional Dispatches in each month approximately 30 days after the month is over. Although such publicly posted information will likely need to be aggregated at some level (e.g., by the various categories established for logging Exceptional Dispatches), the CAISO believes this information will provide a high level of transparency to Market Participants concerning the frequency, volume, costs, causes, and degree of mitigation of Exceptional Dispatches.

Commission approval of the CAISO mitigation proposal described above would be consistent with the authorization the Commission has given to other ISOs and RTOs to apply Mitigation Measures to manual dispatches issued to resources that have locational market power. For example, many of the market power mitigation provisions incorporated into the CAISO's MRTU market design are based on the "direct mitigation" approach employed by PJM Interconnection, L.L.C. ("PJM"). The Commission-approved PJM Operating Agreement authorizes PJM to mitigate the bids for generation resources dispatched out of economic merit order in order to "maintain system reliability as a result of limits on transmission capability."<sup>17</sup> Based on discussions with PJM's market monitor, the CAISO's understanding is that, pursuant to this authority, PJM applies the same local market power mitigation provisions to market bids for all dispatches, including dispatches made to meet constraints in PJM's main network and market software, as well as any additional dispatches that may be made based on other reliability criteria or analyses. Any such additional dispatches – which are akin to the CAISO's Exceptional Dispatches – are subject to the same local market power mitigation provisions that PJM applies to dispatches using its main market software.<sup>18</sup> As was the case with PJM, the Commission should find that mitigating payments to resolve reliability issues will prevent generators from

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<sup>16</sup> September 2006 Order at P 267.

<sup>17</sup> PJM Operating Agreement, Schedule 1, § 6.4.

<sup>18</sup> Specifically, under PJM's local market power mitigation provisions, a resource's market bid curve may be replaced with a mitigated bid curve if the resource is needed to relieve a constraint and fails to pass the three-pivotal supplier test that PJM uses to determine market competitiveness. See PJM Operating Agreement, Schedule 1, §§ 6.4.1(e), (f). Since PJM is able to apply such mitigation prior to the final market run, mitigated bids may end up setting or affecting LMPs, but only at levels which are akin to the Default Energy Bids (DEBs) that resources may receive under the CAISO's Exceptional Dispatch mitigation methodology.

"exercising the market power that comes with owning a necessary resource, and charging an unreasonably high price for it."<sup>19</sup> Although the CAISO has concluded that specific Mitigation Measures applicable to resources receiving Exceptional Dispatches are appropriate under the MRTU market design, the principle that applies to PJM – that resources receiving supplemental dispatch instructions should be subject to appropriate mitigation of market power – also applies to the CAISO's proposal.

Moreover, based on the CAISO's research and discussions it has had with the market monitors of the New York Independent System Operator, Inc. ("NYISO") and of ISO New England Inc. ("ISO-NE"), the CAISO's understanding is that, although those ISOs/RTOs employ different types of local market power mitigation than the CAISO and PJM, any supplemental dispatches they make to address reliability constraints are nevertheless subject to essentially the same local market power mitigation as dispatches they make using their main market software.<sup>20</sup> Further, the Midwest Independent Transmission System Operator, Inc. ("MISO") recently submitted a compliance filing to the Commission to apply the MISO mitigation plan to manual redispatches (which are conducted for reliability purposes) under the MISO tariff; Commission action on that compliance filing is pending.<sup>21</sup> In sum, the CAISO's understanding is that all other ISOs and RTOs issue manual dispatch instructions for reliability purposes and apply (or propose to apply) local market power mitigation rules to those dispatch instructions. The Commission should accept the CAISO's proposal in this Amendment to do the same.

## **B. The Settlement Provisions Applicable to Exceptional Dispatches of Mitigated Resources**

As explained below, the CAISO's Exceptional Dispatch mitigation proposal incorporates Mitigation Measures that (a) apply to all resources (in the

<sup>19</sup> *PJM Interconnection, L.L.C.*, 96 FERC ¶ 61,233, at 61,934 (2001).

<sup>20</sup> See NYISO Market Services Tariff, Attachment H, §§ 3.1.2(b)(2), 3.2.1 (stating that resources in a constrained area receiving supplemental dispatches are subject to a conduct test for energy bids and a market impact test for overall daily revenue guarantee payments); ISO-NE Transmission, Markets & Services Tariff, Market Rule 1, Appendix A, § III.A.5.3 (Sheet Nos. 7423-7424) and Exhibit 1 (Sheet Nos. 7449-7450) (stating that ISO-NE operators may manually commit or dispatch resources to address local reliability issues that are not resolved through market software in the day-ahead and real-time markets, and applying the same local market power mitigation tests to resources receiving supplemental dispatches).

<sup>21</sup> See Compliance Filing of the Midwest Independent Transmission System Operator, Inc. re Manual Redispatch, Docket No. ER08-416-001 (Mar. 25, 2008). The MISO submitted that filing to comply with *Midwest Independent Transmission System Operator, Inc.*, 122 FERC ¶ 61,198 (2008), in which the Commission (at P 51) directed the MISO in relevant part to "clarify its plan to monitor and, if appropriate, mitigate the MRD MWP [the MISO's manual redispatch make-whole payment]."

circumstances when mitigation applies at all) and (b) also provide contributions to fixed-cost recovery to mitigated resources that are not RA, RMR or ICPM resources under certain circumstances. These contributions to fixed-cost recovery are called "Exceptional Dispatch supplemental revenues." The supplemental revenues that eligible mitigated resources will receive will vary based on the competitiveness of their Bids compared to other resources available for Exceptional Dispatch.

Under the Final Proposal, the general rule is that a resource that is subject to an Exceptional Dispatch for the reasons set forth in Section II.A above will receive the higher of (a) the DEB price or (b) the Resource-Specific Settlement Interval LMP.<sup>22</sup> This amount of mitigated payment closely mirrors the market result that would occur if the reliability requirement creating the need for the Exceptional Dispatch were incorporated in the MRTU software.<sup>23</sup>

As noted above, the CAISO proposes additional mitigation rules that potentially enhance the payments to mitigated resources if they are eligible for the supplemental revenues. Such eligibility is contingent upon a resource meeting all of the following four criteria: (1) the resource has received an Exceptional Dispatch that is subject to mitigation; (2) the resource is of a type that is eligible for Exceptional Dispatch supplemental revenues (*i.e.*, the resource is not under an RMR Contract, not designated as ICPM Capacity, and not an RA Resource, or is a Partial RA Resource and its non-RA capacity is needed); (3) the resource has a Bid in the appropriate CAISO Markets; and (4) the resource has not reached the level of a specified monthly cap on the amount of Exceptional Dispatch supplemental revenues that each resource can receive. The amount of Exceptional Dispatch supplemental revenues that a resource that meets these four criteria will receive differs based on whether the CAISO issues an Exceptional Dispatch to that resource within the first four months of MRTU operations or after the first four months of MRTU operations. These features of the CAISO's proposal are discussed below.

Moreover, notwithstanding the general rule for mitigating Exceptional Dispatches, or the eligibility of mitigated resources to receive Exceptional Dispatch supplemental revenues, in any case where the Energy Bid price for a mitigated resource is lower than the DEB price for the resource, and the Resource-Specific Settlement Interval LMP is lower than both the Energy Bid price for the resource and the DEB price for the resource, the CAISO proposes to settle the Exceptional Dispatch at the Energy Bid price for the resource. This exception is consistent with the general Settlement rule for market power mitigation in the current MRTU Tariff.<sup>24</sup>

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<sup>22</sup> Final Proposal at 11-12.

<sup>23</sup> Final Proposal at 12.

<sup>24</sup> Final Proposal at 18 (citing MRTU Tariff, § 31.2.2.2, 33.4).

**1. The Types of Mitigated Resources that are Eligible to Receive Exceptional Dispatch Supplemental Revenues**

During the stakeholder process described in Section IV.C below, the CAISO worked with stakeholders to determine which situations (if any) justified contributions to fixed-cost recovery by resources. Over the course of these stakeholder discussions, the CAISO noted that the use of Exceptional Dispatch to support reliability will take place during many different market and system conditions. In some circumstances, such as outages or de-ratings of large generators or transmission facilities, LMPs should be high enough to provide appropriate market compensation and coverage of fixed costs even with mitigation. Further, the CAISO will be introducing scarcity pricing shortly after MRTU start-up, which will further increase LMPs at those times when Exceptional Dispatch commitments will be more likely utilized for reliability purposes.

However, the CAISO also agreed with certain stakeholders that Exceptional Dispatch could at times suppress LMPs. This price suppression could occur because additional incremental Energy delivered by resources pursuant to Exceptional Dispatches, which is settled out-of-market, will be considered in the RTM effectively as Energy with a price of zero, thus effectively shifting the Bid stack to the right and lowering LMPs. In general, resources with capacity contracts – *i.e.*, RMR Units, and resources designated as ICPM Capacity, and RA Resources – receive under their capacity contracts guaranteed contributions to fixed-cost recovery and therefore should be less susceptible than resources without capacity contracts to the impact on market revenues caused by infrequent Exceptional Dispatches.<sup>25</sup> In contrast, for resources without capacity contracts, mitigation to short-term variable cost combined with suppressed LMPs could affect recovery of fixed costs when such resources are infrequently dispatched or often subject to mitigation while also being the marginal price-setting unit.<sup>26</sup>

Based on this reasoning, the CAISO determined that the types of resources that should be eligible to receive Exceptional Dispatch supplemental revenues pursuant to the Final Proposal are those resources that do not have an RMR or RA Contract and those that have not been designated as ICPM Capacity.<sup>27</sup> Further, since RA Resources should not be eligible to receive Exceptional Dispatch supplemental revenues, the portion of the capacity of Partial RA Resources that is RA Capacity should similarly not be eligible to receive Exceptional Dispatch supplemental revenues.

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<sup>25</sup> Final Proposal at 13.

<sup>26</sup> Final Proposal at 13-14.

<sup>27</sup> See Final Proposal at 15.

**2. The Requirement that the Mitigated Resource Must Have a Bid in the Appropriate CAISO Markets in Order to Be Eligible to Receive Exceptional Dispatch Supplemental Revenues**

In order to receive Exceptional Dispatch supplemental revenues under the CAISO's proposal, an eligible mitigated resource must have a Bid in the IFM, HASP, and RTM for the applicable Operating Day or Operating Hour in which the resource is committed or dispatched under Exceptional Dispatch. This eligibility requirement is necessary because otherwise the CAISO would have to provide supplemental revenues to resources that do not have Bids in the market, which would create an incentive for resources to exit the market either in anticipation of an Exceptional Dispatch or to force the CAISO to issue an Exceptional Dispatch that will provide the resource with a supplemental payment. In contrast, the requirement to provide a Bid in the CAISO Markets described above as a basis for accruing supplemental revenues gives a resource an incentive to continue to participate in the market while ensuring that if the resource chooses otherwise, it will still be compensated as described above at the higher of the DEB price or the Resource-Specific Settlement Interval LMP.<sup>28</sup>

**3. The Two Methodologies for Determining the Amount of Exceptional Dispatch Supplemental Revenues that an Eligible Mitigated Resource Will Receive**

Having determined the types of mitigated resources that should be eligible to receive contributions to fixed-cost recovery when issued Exceptional Dispatches, the CAISO needed to decide on a methodology (or methodologies) for calculating the amount of Exceptional Dispatch supplemental revenues those eligible mitigated resources should potentially receive and the period over which they would be accrued. The CAISO used a number of evaluation criteria in making this determination. The criteria the CAISO considered were the needs to: (1) provide eligible resources with a reasonable opportunity to obtain revenues that contribute to fixed-cost recovery; (2) provide incentives for eligible resources to offer those resources into the MRTU markets (in addition to the Bid requirement); (3) provide incentives for eligible resources to make those resources available for designation as ICPM Capacity or RA Resources; (4) mitigate local market power through bid caps and/or revenue caps; and (5) minimize administrative costs and implementation issues.<sup>29</sup>

The CAISO anticipates that Exceptional Dispatches will need to be issued more frequently in the early years of MRTU than during subsequent periods, and,

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<sup>28</sup> Final Proposal at 15. Note that a unit that does not have a Bid in the HASP/RTM in the first hour that it is subject to Exceptional Dispatch could submit a Bid into the subsequent hours of the HASP/RTM. *Id.*

<sup>29</sup> Final Proposal at 14.

specifically, more frequently during the first few months of implementation.<sup>30</sup> Therefore, the CAISO proposes to use two different methodologies for determining the amount of Exceptional Dispatch supplemental revenues that an eligible mitigated resource should receive based on when Exceptional Dispatches are made. The first of these methodologies will apply from the date that MRTU is implemented until the end of the fourth month of MRTU operations, at which point it will be superseded by a different methodology.<sup>31</sup> Under each of these methodologies, the amount of Exceptional Dispatch supplemental revenues that an eligible mitigated resource will receive will be limited by a cap.<sup>32</sup> Once the cap is reached, the resource will be treated like other mitigated resources and be paid the higher of the LMP or its DEB price. However, the methodology used in the first four months provides a greater safeguard to the market to ensure that Exceptional Dispatch supplemental revenues will not accrue at an excessive rate due to software issues. The Table below summarizes the two methodologies.

For the first four months of MRTU operations, the CAISO proposes that mitigated resources eligible to receive supplemental revenues will be settled at the higher of: (a) the DEB price plus a \$24/MWh adder or (b) the Resource-Specific Settlement Interval LMP, up to a certain revenue cap, as discussed in Section II.B.4 below. For purposes of this methodology, "supplemental revenue" amounts are defined as the higher of: (a) the Resource-Specific Settlement Interval LMP minus the DEB price for the resource or (b) the DEB plus a \$24/MWh adder, minus the DEB price for the resource, multiplied by the amount of Energy provided by the resource under Exceptional Dispatch. This methodology is the same as the Mitigation Measures contained in the CAISO's January 17 Proposal discussed in Section IV below (*i.e.*, payment to a mitigated resource of the higher of the DEB price or the Resource-Specific Settlement Interval LMP), except for the component of the adder to the DEB price. The CAISO proposes to employ a \$24/MWh adder because that is the level of the Bid Adder that applies under the existing MRTU Tariff to certain resources that are not designated as ICPM Capacity or as RA Resources, for purposes of applying the CAISO's market power Mitigation Measures to Frequently Mitigated Units ("FMUs"). This adder was explicitly tied to going-forward fixed-cost

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<sup>30</sup> Final Proposal at 19.

<sup>31</sup> In the Final Proposal posted prior to this filing, the CAISO proposed that the first of the methodologies described above should apply during the first two (rather than four) months after MRTU was implemented and that the second of the methodologies described above would apply following the first two months of MRTU implementation. In this Amendment, the CAISO proposes to apply the first methodology during the first four months of MRTU implementation in order to better ensure that resources do not receive extraordinarily large amounts of revenues from Exceptional Dispatch during the time period that any initial MRTU software issues are still being resolved.

<sup>32</sup> In the Final Proposal, the Mitigation Measure of providing Exceptional Dispatch supplemental revenues to an eligible mitigated resource, subject to a cap, is often referred to as "relaxed" mitigation.

recovery by FMUs,<sup>33</sup> and hence is reasonable to use during the first four months of MRTU operations as a safeguard measure that still provides a contribution to fixed costs. The methodology described above for determining Exceptional Dispatch supplemental revenues will terminate once the first four months of MRTU operations are completed.<sup>34</sup>

Starting at the beginning of the fifth month of MRTU operations, the CAISO proposes that mitigated resources eligible to receive supplemental revenues be settled at the higher of (a) the resource's Energy Bid price or (b) the Resource-Specific Settlement Interval LMP, up to the level of a cap as discussed in Section II.B.4 below. The Energy Bid price is only bounded by the "safety net" Bid cap, which will be \$500/MWh in the first year of operations under MRTU and will increase thereafter.<sup>35</sup> For purposes of this methodology, "supplemental revenue" amounts are defined as the higher of (a) the Energy Bid price for the resource minus the DEB price for the resource or (b) the Resource-Specific Settlement Interval LMP, minus the Default Energy Bid price for the resource, multiplied by the amount of Energy provided by the resource under Exceptional Dispatch. The application of this methodology to two cases or scenarios – (1) a case in which the Bid price is greater than the LMP and (2) a case in which the reverse is true – is illustrated in Figure 1 below. The advantage of this methodology is that it will allow eligible mitigated resources more flexibility to recover fixed costs by allowing supplemental revenues potentially to accrue in a smaller number of hours than the \$24/MWh adder would allow for. Once the cap is reached, the resource would be paid the higher of the LMP or its DEB until the next 30-day period is triggered.

The CAISO recognizes that a possible disadvantage of this methodology is that uncertainty remains about how often Exceptional Dispatch will be required and therefore, under some circumstances, it is possible that an eligible mitigated resource quite rapidly could reach the level of the cap discussed in Section II.B.4 below, and thus in effect would have a limited license to exercise market power. Another concern is that a resource might decline an ICPM designation because receiving that designation would make it ineligible for supplemental revenues.<sup>36</sup> In most cases of Exceptional Dispatch, uncertainty about the duration of the Exceptional Dispatch and potential competition with other suppliers would likely

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<sup>33</sup> September 2006 Order at P 1069 ("We accept the CAISO's proposed \$24/MWh bid adder for FMUs as reasonable."); *California Independent System Operator Corp.*, 112 FERC ¶ 61,013, at P 144 (2005) ("We find that the CAISO's proposal to compensate FMUs through the use of a bid adder is a reasonable approach that provides these units with certainty that they will have an opportunity to recover their fixed costs for serving a local reliability need under MRTU.")

<sup>34</sup> Final Proposal at 19, 22 (citing MRTU Tariff, § 39.8.3). The CAISO notes that ICPM designations will be available in the first four months after MRTU implementation for any Significant Events that warrant backstop capacity procurement from non-RA and non-RMR resources. See Final Proposal at 19.

<sup>35</sup> MRTU Tariff, § 39.6.1.1.

<sup>36</sup> See *supra* Section II.B.1.

create an incentive for a non-RA resource to accept an ICPM designation. However, in at least some cases, when a resource has a clear locational reliability benefit and an ICPM offer of designation is forthcoming, a resource could reject the ICPM offer in order to receive Exceptional Dispatch supplemental revenues until the revenue cap is accrued, and then accept the ICPM designation later if the offer is still available. This could lead to a double payment of the ICPM Capacity Payment in little more than 30 days.

On balance, however, the CAISO has determined that the benefits of the methodology outweigh the potential disadvantages, particularly given that most Exceptional Dispatches will be of RA Resources, supplemental revenues are capped in most cases at the ICPM level, and the double-payment scenario is unlikely to occur.<sup>37</sup> In addition, as discussed extensively in Section IV.B, this pricing methodology provides an appropriate approach to balancing stakeholder interests by, on the one hand, providing backstop capacity payments when appropriate for reliability support, and by, on the other hand, not triggering ICPM designations with every Exceptional Dispatch of resources that lack capacity contracts.

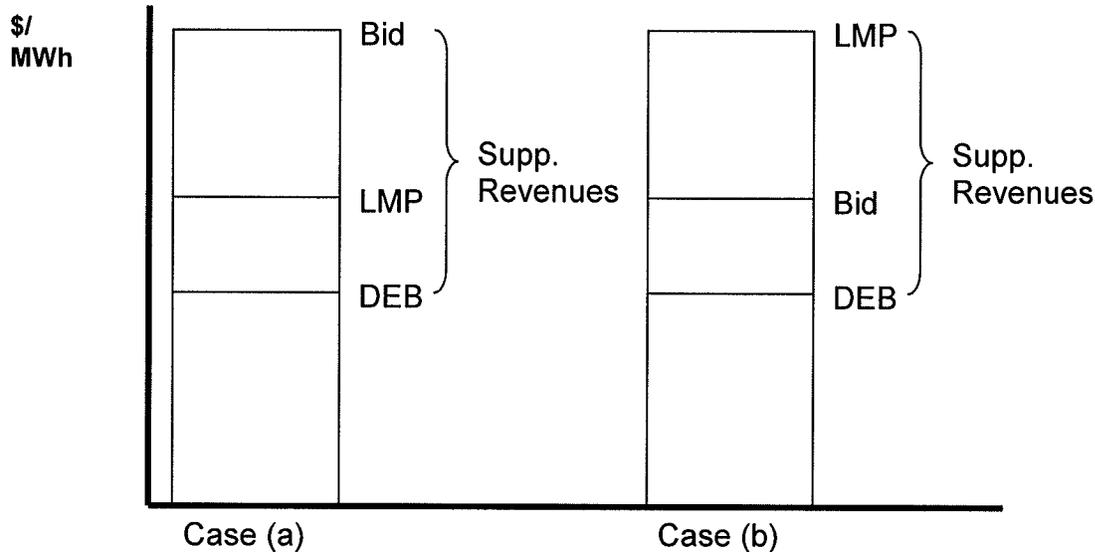
**Table – Summary of Settlement Rules for Exceptional Dispatch**

	<b>Settlement Rule prior to Supplemental Revenue Cap (for each MWh)</b>	<b>Calculation of Supplemental Revenue for hour of Exceptional Dispatch</b>	<b>Settlement Rule after Supplemental Revenue Cap (for each MWh)</b>
<b>First 4 months of MRTU operations</b>	Higher of (a) LMP or (b) DEB + \$24/MWh	[Higher of (a) LMP or (b) DEB + \$24/MWh] – [DEB]	Higher of (a) LMP or (b) DEB
<b>Fifth month of MRTU operations until Sunset Date</b>	Higher of (a) LMP or (b) Unmitigated Bid	[Higher of (a) LMP or (b) Unmitigated Bid] – [DEB]	Higher of (a) LMP or (b) DEB

<sup>37</sup>

Figure 1

**Exceptional Dispatch Payments and Calculation of Supplemental Revenues in Two Cases (Starting in the Fifth Month of MRTU Operations)**



**4. The Cap on the Amount of Exceptional Dispatch Supplemental Revenues that an Eligible Mitigated Resource Will Receive**

As part of the process of determining that eligible mitigated resources should be settled in a manner so as to receive supplemental revenues, the CAISO, in consultation with stakeholders, considered: (i) whether or not such revenues should be capped, and (ii) if such revenues should be capped, what the level of the cap should be. The CAISO ultimately determined that Exceptional Dispatch supplemental revenues should be capped in order to eliminate the possibility that eligible mitigated resources could receive excessive rents due to being issued Exceptional Dispatches. The CAISO notes that, even with the cap in place, resources will always keep any market revenues earned from LMPs at their locations; thus, the capped Exceptional Dispatch supplemental revenues they receive will allow these resources to augment the market revenues they would have earned while subject to mitigation.<sup>38</sup>

<sup>38</sup> Final Proposal at 16.

Having determined that Exceptional Dispatch supplemental revenues should be capped, the CAISO decided that the level of the cap should be based on the Commission-adopted (once it is approved) monthly payment for ICPM Capacity, because the monthly ICPM Capacity payment serves as a reasonable benchmark for a monthly capacity payment and also reflects known RA contract price levels.<sup>39</sup> Under the Final Proposal, the same cap applies to Exceptional Dispatch supplemental revenues calculated under each of the two methodologies described above. The cap is applied in the following way. The CAISO will track the amount of Exceptional Dispatch supplemental revenues that a mitigated resource receives in any 30-day period that starts with the first Exceptional Dispatch of the resource and re-sets with the first Exceptional Dispatch after any 30-day period. Within each such 30-day period, a mitigated resource will be eligible to receive Exceptional Dispatch supplemental revenues so long as the resource has not accrued an amount of Exceptional Dispatch supplemental revenues that is equal to or greater than the monthly ICPM Capacity Payment for which the mitigated resource would be eligible if the mitigated resource had been designated as ICPM Capacity.<sup>40</sup> The primary difference between this calculation and the proposed calculation of the monthly payment to a resource designated as ICPM Capacity is that the latter calculation will be adjusted based on the actual availability of the ICPM resource, whereas the Exceptional Dispatch supplemental revenue cap calculation will not include such an adjustment.<sup>41</sup> When the mitigated resource accrues that amount of Exceptional Dispatch supplemental revenues, it has reached the level of the cap. Once the level of the cap has been reached, the mitigated resource ceases to be eligible to receive Exceptional Dispatch supplemental revenues for the rest of that 30-day period and any Exceptional Dispatches that it receives during the remainder of this period that are subject to mitigation will be settled pursuant to the general rule as

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<sup>39</sup> Final Proposal at 22. See also Section IV.B below regarding the relationship between Exceptional Dispatch and the ICPM.

<sup>40</sup> The cap is not subject to a Peak Energy Rent ("PER") deduction. Final Proposal at 16. Although the CAISO will determine the monthly ICPM Capacity Payment for which a mitigated resource would be eligible if it had been designated as ICPM Capacity pursuant to the MRTU Tariff, it will never be the case that a mitigated resource that obtains Exceptional Dispatch supplemental revenues has actually been designated as ICPM Capacity. This is because a resource that is designated as ICPM Capacity is no longer eligible to receive Exceptional Dispatch supplemental revenues. See *supra* Section II.B.1.

<sup>41</sup> As proposed in the ICPM Tariff Amendment, the ICPM payment will be made pursuant to a must-offer requirement for the subsequent month. Hence, a resource's actual availability will influence the final payment. In contrast, under Exceptional Dispatch, the resource must be available to respond to the Dispatch Instruction, or make itself available as appropriate, and hence availability is not determined *ex post*. Moreover, responding to an Exceptional Dispatch and collecting supplemental revenues do not create an obligation to offer into the market. For those reasons, the CAISO does not propose to adjust the Exceptional Dispatch supplemental revenue cap based on a resource's actual availability over each 30-day period.

set forth above, *i.e.*, the higher of (a) the DEB price or (b) the Resource-Specific Settlement Interval LMP.<sup>42</sup>

### **C. Sunset Date of the Mitigation Measures Contained in the CAISO's Proposal**

The Tariff provisions submitted in this filing expressly state that the Exceptional Dispatch Mitigation Measures will terminate 24 months after the implementation of MRTU. The CAISO proposes this termination date due to the uncertainties surrounding the frequency and predictability of Exceptional Dispatch and the nature of ICPM designations, along with the ongoing evolution of the Resource Adequacy program. The CAISO would retain all rights pursuant to Section 205 of the FPA with regard to the Mitigation Measures.<sup>43</sup> If, at the end of this 24 month period, actual experience indicated that market power issues associated with Exceptional Dispatch are still frequent enough to warrant maintaining the mitigation then the CAISO will file either an extension of the mitigation provisions or revised mitigation provisions that reflect the CAISO's initial experience with Exceptional Dispatch under MRTU.

### **D. Market Monitoring**

The use of the Mitigation Measures described in the Final Proposal will be subject to ongoing monitoring and review by the DMM after MRTU has been implemented and potential reconsideration by the CAISO regarding whether to file tariff revisions with the Commission to modify the Mitigation Measures.<sup>44</sup>

## **III. THE PROPOSED MRTU TARIFF CHANGES TO IMPLEMENT THE EXCEPTIONAL DISPATCH MITIGATION MEASURES**

In this Amendment, the CAISO proposes revisions to the MRTU Tariff to implement the proposals described in Section II above.

The CAISO has added Section 39.10 to state that the CAISO will apply Mitigation Measures when the CAISO issues Exceptional Dispatches for any of the three purposes specified in the Final Proposal.<sup>45</sup>

With regard to the time period that begins at the start of the fifth month after MRTU is implemented, the CAISO has added Sections 39.10.1.1, 39.10.1.2

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<sup>42</sup> Final Proposal at 16-17. An example of the application of the cap described above is provided on page 17 of the Final Proposal.

<sup>43</sup> Final Proposal at 19.

<sup>44</sup> Final Proposal at 19.

<sup>45</sup> See *supra* Section II.A.

and 39.10.1.3, and 39.10.1.4 to provide the four criteria that a resource must meet in order to receive Exceptional Dispatch supplemental revenues, the methodology for calculating Exceptional Dispatch supplemental revenues and the cap on such revenues, the methodology for calculating the amount that a mitigated resource will receive if it is not eligible for Exceptional Dispatch supplemental revenues, and cross-references to new provisions in Section 11.5.6 that explain the Settlement of a mitigated resource. The new Settlement provisions are contained in Sections 11.5.6.7.1, 11.5.6.7.2, and 11.5.6.7.4.<sup>46</sup>

With regard to the time period that begins upon the start of MRTU operations and ends four months later, the CAISO has added Sections 39.10.2.1, 39.10.2.2, 39.10.2.3, and 39.10.2.4 to provide the four criteria that a resource must meet in order to receive Exceptional Dispatch supplemental revenues, the methodology for calculating Exceptional Dispatch supplemental revenues and the cap on such revenues, the methodology for calculating the amount that a mitigated resource will receive if it is not eligible for Exceptional Dispatch supplemental revenues, and cross-references to new provisions in Section 11.5.6 that explain the Settlement of a mitigated resource. The new Settlement provisions are contained in Sections 11.5.6.7.2, 11.5.6.7.3, and 11.5.6.7.4.<sup>47</sup>

The CAISO has included language in Section 39.10, and has added Sections 11.5.6.7, 39.10.1, and 39.10.2, to specify when the proposals contained in the Final Proposal will become effective and when those proposals will terminate.<sup>48</sup>

The CAISO has added language to existing Section 11.5.6 to state that, notwithstanding any other provisions in Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable where the CAISO applies Mitigation Measures to the Exceptional Dispatch of resources pursuant to Section 39.10 will be calculated as set forth in Section 11.5.6.7.<sup>49</sup>

#### **IV. THE NEED FOR THE PROPOSED TARIFF REVISIONS CONCERNING EXCEPTIONAL DISPATCH MITIGATION MEASURES AND OVERVIEW OF THE STAKEHOLDER PROCESS**

In the fall of 2007, the CAISO Department of Market Monitoring (“DMM”) determined that it may be necessary to impose Mitigation Measures on resources paid as-bid under the Exceptional Dispatch tariff provisions and initiated a stakeholder process that resulted in the Mitigation Measures proposed in this Amendment. At the same time, the CAISO’s Department of Market and Product Development (“MPD”) was developing its ICPM proposal and

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<sup>46</sup> See *supra* Section II.B.

<sup>47</sup> See *supra* Section II.B.

<sup>48</sup> See *supra* Sections II.B and II.C.

<sup>49</sup> See *supra* Section II.B.

considering the relationship between the ICPM and Exceptional Dispatch. MPD initiated a second phase of stakeholder discussions, which resulted in the proposal in this Amendment to pay supplemental revenues to resources that do not have an RA or RMR contract or ICPM designation and that meet the other criteria specified in this Amendment.<sup>50</sup> The rationale for imposing Mitigation Measures with regard to Exceptional Dispatch, and the relationship between Exceptional Dispatch and the ICPM (as well as the Transitional Capacity Procurement Mechanism ("TCPM")), are discussed below.

#### **A. The Potential for the Exercise of Local Market Power**

The CAISO's goal is for Exceptional Dispatch to be a rare and infrequent event to address reliability constraints. Nevertheless, the CAISO is concerned that it may have to issue Exceptional Dispatches more frequently to address local reliability issues that are not modeled in the FNM incorporated into the CAISO's IFM and HASP/RTM software, particularly during the first two years of operations under MRTU. There are two types of situations of particular concern, which are discussed below.

The first type of situation occurs when a forced transmission or generation outage or de-rate may require the CAISO to issue an Exceptional Dispatch. Ideally, the CAISO would be able to incorporate an outage or de-rate into the FNM within one to 24 hours, thus allowing for a return to reliance on market mechanisms to establish schedules with little if any opportunity for Market Participants to adjust their bidding practices. While this is the ideal, it will not always be possible to update the FNM so quickly and certainly will not likely be the norm during the first two years of operations under MRTU. Market Participants could exercise local market power by submitting extremely high Energy Bids and be paid as-bid knowing, after one Exceptional Dispatch, that their resources were needed but that the MRTU software would be unable to dispatch them.

The second type of problematic situation occurs when the reliability constraint is not modeled or not fully modeled in the FNM. For example, one well-known constraint that is not modeled in the FNM relates to the need for unloaded capacity to be available to address 30-minute contingencies on Path 26, a transmission path within the CAISO that often experiences congestion in the current zonal market design.<sup>51</sup> Under the CAISO's current operating practices, resources are committed pursuant to the Commission's must-offer obligation to ensure that sufficient 30-minute dispatchable resources are available at Path 26 and then dispatched above their Pmin levels up to their

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<sup>50</sup> Further background information regarding the CAISO's decision and the stakeholder process is provided in Section IV.C below.

<sup>51</sup> See *California Independent System Operator Corp.*, 119 FERC ¶ 61,076, at P 184 n.200 (2007).

minimum dispatchable operating levels.<sup>52</sup> The current MRTU Tariff provisions concerning Exceptional Dispatch would permit a resource that is expecting to be dispatched up to its minimum dispatchable operating level to submit extremely high Energy Bid prices into the RTM.

The Path 26 constraint is not modeled in the FNM due to the constraint's complexity. Nevertheless, the CAISO anticipates that this reliability requirement will likely be indirectly met as a result of other constraints incorporated into the FNM and by market schedules resulting from the IFM and, therefore, the frequency of today's must-offer commitments for Path 26 is not likely to be any indication of the frequency of Exceptional Dispatches under MRTU.<sup>53</sup> In addition, although voltage support and stability constraints are also not modeled explicitly in the FNM, they may in some cases be converted into and modeled as flow-based constraints. Similarly, some contingency constraints may also be converted into and modeled as flow-based constraints, including perhaps Path 26. In addition, there will certainly be modeling limitations that will only become apparent after implementation of MRTU through experience with actual MRTU market operations. Moreover, other temporary conditions are sure to arise that will not warrant FNM changes or be so complex that they cannot be modeled. One example is the San Francisco Bay Area Delta Dispatch, which is only in place for a few weeks in the spring and summer.<sup>54</sup>

Both of the types of situations described above can present the opportunity to exercise local market power. Consistent with the current MRTU Tariff and the MPM-RRD automated process for mitigating local market power, Bids from these resources should be mitigated as well, particularly in the first two years of operations under MRTU, when the CAISO is concerned that Exceptional

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<sup>52</sup> See *supra* note 9.

<sup>53</sup> Some Market Participants have argued that the CAISO should procure additional 10-minute Operating Reserve to address 30-minute contingences rather than utilize Exceptional Dispatch. See, e.g., Dynegy Comments on Exceptional Dispatch White Paper (Apr. 4, 2008), at 2-3, available at <http://www.aiso.com/1c89/1c89d76950e00.html>. The CAISO does not believe that it is appropriate to procure additional 10-minute capacity to meet a 30-minute contingency. The CAISO does agree that it may be necessary to procure 10-minute Operating Reserve within Sub-Regions and will do so, but only when sub-regional 10-minute Operating Reserve is necessary to meet a contingency that must be addressed within 10 minutes. The CAISO believes it is very possible that, under MRTU, Exceptional Dispatch will not need to be relied upon, over and above the rare and infrequent use, to address Path 26 constraints. If Exceptional Dispatch is needed more frequently to address Path 26 constraints, that need might help to justify the creation of a new 20-minute Operating Reserve product. However, only actual experience under MRTU will show whether such a need exists.

<sup>54</sup> Delta Dispatch is an environmental restriction that affects the operation of specific Generating Units in the Sacramento Delta area during a limited period in the Spring and Summer, which limits the usage of resources and requires different combinations of resources to be utilized in certain circumstances.

See Answer of the California Independent System Operator Corporation to the Motion to Supplement Motion for Clarification of the Williams Company, Inc., Docket No. EL05-146-004 (Nov. 15, 2007) at 6-7 (discussing Delta Dispatch).

Dispatch may not be as rare and as infrequent as it is expected to be subsequently. Actual experience under MRTU will provide empirical evidence to indicate whether the FNM can or should be enhanced or whether, as in the case of Path 26, a new 20-minute Operating Reserve product should be created, or whether the need for Exceptional Dispatch for a particular constraint is, in fact, rare and infrequent.

**B. The Need to Provide Supplemental Revenues for Certain Mitigated Resources and the Relationship with ICPM Issues**

As discussed below, suppliers have raised concerns about revenue and price impacts of the proposed Exceptional Dispatch mitigation. The CAISO recognizes that its decision to establish Mitigation Measures for Exceptional Dispatches could eliminate an opportunity for resources that do not have capacity contracts to earn revenues that would offset the resource's fixed costs. Because an ICPM designation may not be appropriate, as discussed below, the CAISO proposes to ensure that Exceptional Dispatch provides the potential for resources without RA contracts, etc. to earn capacity rents by providing supplemental revenues for Exceptional Dispatch, up to the level of a revenue cap based on monthly ICPM Capacity Payment calculations, when a resource without a capacity contract is subject to the Mitigation Measures proposed in this Amendment. The CAISO believes that this approach provides adequate compensation for Exceptional Dispatches and that a monthly ICPM payment should not be triggered by Exceptional Dispatch.

The ICPM is the CAISO's proposed mechanism under MRTU for the procurement of backstop capacity from resources that are not already RA Resources or RMR Units. The ICPM features two types of procurement: Type 1 procurement, which will backstop the forward (bilateral) RA market; and Type 2 procurement, which will be conducted in response to Significant Events, such as major generation or transmission outages, that take place in real-time operations and do not allow for all reliability criteria to be met with the available RA Resources. The CAISO has proposed to pay the same ICPM price for both types of procurements: the higher of \$41/kW-year or a \$/kW-year rate based on a unit's actual going-forward costs as filed with the Commission.

As the CAISO explained in the ICPM Tariff Amendment, it "does not want to have a prescriptive "hard trigger" for an ICPM Significant Event that does not allow it to exercise prudent judgment based on Good Utility Practice to avoid designations that are not required."<sup>55</sup> Similarly, the CAISO does not believe that Exceptional Dispatch should be used as such a hard trigger that would require ICPM designation. As discussed above, Exceptional Dispatch may be needed to address very short-term and transitory reliability requirements, many of which are

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<sup>55</sup> See Transmittal Letter for ICPM Tariff Amendment at 25.

likely to be due to market software limitations; if the need is transitory, then a monthly or multi-month ICPM designation would not appear to be proportional to the need. On the other hand, a major reliability event, such as loss of a transmission line for an extended period would be deemed a Significant Event and should lead to the offer of an ICPM designation.

Under the ICPM Tariff Amendment, an ICPM designation is for a minimum of one month and requires the designated resource to offer into the MRTU markets for the period of designation. However, there should not be a one-month payment for each Exceptional Dispatch. It may have made some sense to have a hard trigger for a backstop capacity payment under the current market design, because the Commission's must-offer obligation is still in place. Further, as discussed in the next paragraph, this trigger for a capacity payment has now been updated under the TCPM that will be in effect until MRTU start-up. But because the must-offer obligation will end when MRTU is implemented and designation as ICPM is voluntary, including a hard trigger in Exceptional Dispatch could create perverse incentives for resources to force an Exceptional Dispatch in order to obtain an ICPM designation. Further, the Bid-based payment for accruing Exceptional Dispatch supplemental revenues under the MRTU bid caps<sup>56</sup> would allow a resource to accrue the one-month ICPM equivalent payment (*i.e.*, not adjusted for availability) in as little as seven or eight hours. Therefore, a greatly needed resource that uniquely meets the reliability need could receive the equivalent of a monthly ICPM payment in well less than a single day.

In addition, the CAISO seeks to promote market competition wherever possible. Therefore, the CAISO should allow the resource's Bids to be considered in each situation that requires Exceptional Dispatch because the CAISO anticipates that there may be many situations where two or more resources available to dispatchers for Exceptional Dispatch, including RA and non-RA Resources, can solve the reliability need. For example, the current LCR indicates that six of the ten load pockets are in surplus, and thus there may be more than one resource that can solve an operational problem in such areas. In such a situation, the CAISO should select the lowest-price resource on a Bid basis, regardless of whether it is an RA Resource. For a non-RA Resource in this situation, its Bid price can indicate whether it needs an ICPM equivalent payment in a few hours to respond to the Exceptional Dispatch and the CAISO will only issue an Exceptional Dispatch to it on the basis of accepting that Bid.

The Commission's recent order conditionally accepting the CAISO's proposed TCPM<sup>57</sup> addresses a similar set of issues but, again, in a very different market and tariff environment. As such, the TCPM Order is in no way

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<sup>56</sup> See *supra* note 6 and accompanying text.

<sup>57</sup> *California Independent System Operator Corp.*, 123 FERC ¶ 61,229 (2008) ("TCPM Order").

inconsistent with the CAISO's commitment to avoiding the use of Exceptional Dispatch as a hard trigger that would require ICPM designation. In the TCPM Order, the Commission "require[d] the designation of a TCPM capacity resource for a (minimum) 30-day period upon the first commitment, *i.e.*, must-offer waiver denial, of a resource under the must-offer obligation," and directed that this first commitment under the must-offer obligation would trigger a minimum 30-day TCPM payment.<sup>58</sup> But the TCPM Order also recognized that the ICPM differs in important ways from the TCPM: "[t]he ICPM differs from the RCST and TCPM, however, in that it is designated to work under the new MRTU market paradigm, which includes locational marginal pricing and scarcity pricing components, but, significantly, no must-offer obligation."<sup>59</sup>

Not only is the ICPM different from the TCPM, as the Commission recognizes, but an Exceptional Dispatch Instruction is quite different from a must-offer waiver denial. Exceptional Dispatches are fundamentally no different than the out-of-sequence ("OOS") and out-of-market ("OOM") dispatches which the CAISO has the authority to perform under its current market design.<sup>60</sup> The CAISO anticipates that Exceptional Dispatch will be needed primarily to address OOS-type situations due to the fact that resources needed for local reliability are identified through annual local capacity studies. Moreover, because all RA Resources will have a must-offer requirement under MRTU, the CAISO expects that the bulk of the circumstances in which it will need to apply Mitigation Measures to Exceptional Dispatches will involve RA Resources that the MRTU software cannot dispatch due to a modeling problem, outage, or de-rate not reflected in the FNM as discussed above. The CAISO believes that Exceptional Dispatch of a non-RA Resource for local needs would be a rare occurrence and should not automatically trigger use of the ICPM. As noted above, ICPM designations based on Type 2 procurement will be made appropriately when system conditions constitute defined Significant Events. The proposed Exceptional Dispatch supplemental revenue beginning in the fifth month of MRTU operations ensures that, even without an ICPM designation, a non-RA Resource dispatched for just a few hours that is providing reliability benefits that an RA or RMR Resource cannot provide can accrue the equivalent of a monthly ICPM payment over and above recovery of short-term variable costs in its DEB. Finally, the CAISO's mitigation proposal is limited—it does not apply to Exceptional Dispatches other than those needed for (1) to address reliability requirements related to non-competitive transmission constraints;<sup>61</sup> (2) to ramp units from minimum operating levels to minimum dispatchable levels in order to protect against reliability contingencies that are not directly incorporated or sufficiently met by the MRTU software; or (3) to address other special unit-

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<sup>58</sup> TCPM Order at PP 32 and 37, and note 35.

<sup>59</sup> TCPM Order at P 9.

<sup>60</sup> See September 2006 Order at P 254.

<sup>61</sup> In this regard, a DMM presentation on Competitive Path Assessment is available on the CAISO Website at <http://www.caiso.com/1f52/1f52bd74746f0.pdf>.

specific operating or environmental constraints not incorporated in the MRTU model. Exceptional Dispatches will be paid if the dispatch is required for system needs regardless of whether it has a capacity contract.

### **C. Stakeholder Process Concerning the Mitigation Measures Proposed in this Amendment**

The tariff modifications proposed in this Amendment were the result of an extensive stakeholder process that included two successive stages: (1) during the time period from October 2007 to January 2008, the CAISO identified the need for and discussed with stakeholders an initial proposal to revise the MRTU Tariff to mitigate Exceptional Dispatches made for certain reasons; and (2) during the time period from January 2008 to June 2008, the CAISO, based on stakeholder input and its own analysis, modified its initial proposal by adding a further component – the eligibility for payment of supplemental revenues to resources whose Exceptional Dispatch payments are mitigated for the reasons described in the initial proposal and who meet the specified criteria discussed above. In addition, during the stakeholder process the CAISO identified a number of clarifications that need to be made to the existing provisions of the CAISO Tariff concerning Exceptional Dispatch.

#### **1. The Initial Proposal**

During a conference call held by the CAISO's MPD on October 18, 2007 as part of the ICPM stakeholder process, stakeholders asked how the pricing and designation incentives under the proposed ICPM would interact with the existing pricing rules for Exceptional Dispatch. In response to these stakeholders, the CAISO's MPD group issued a discussion paper on October 22, 2007 that provided an overview of the issue and information concerning the current Exceptional Dispatch provisions of the MRTU Tariff.<sup>62</sup>

On December 3, 2007, the CAISO issued a Market Notice stating that, although the CAISO expected Exceptional Dispatches to be infrequent under MRTU, the CAISO's DMM believed it prudent for the CAISO to determine whether it should adopt a market power mitigation rule for resources receiving Exceptional Dispatches to address reliability constraints not incorporated into the FNM. The Market Notice also stated that DMM had posted on the CAISO Website a white paper discussing the potential rule and sought stakeholder comment. Stakeholders provided written comments on the DMM white paper by December 12, 2007. On January 3, 2008 DMM posted on the CAISO Website its

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<sup>62</sup> This discussion paper is available on the CAISO Website at <http://www.caiso.com/1c7f/1c7fe9985c80.pdf>.

initial responses to the stakeholders' written comments and further discussion of the potential rule.

On January 7, 2008, DMM held a conference call on which it discussed issues relating to the potential rule and responded to stakeholder questions. Pursuant to the conference call, stakeholders provided written comments by January 14, 2008. Based on the discussions, stakeholder comments, and consultation between DMM and CAISO operations personnel and management, DMM proposed a revised version of the market power mitigation rule in the January 17 Proposal.

The January 17 Proposal narrowed and specifically defined criteria that had been discussed earlier in the stakeholder process for determining when Exceptional Dispatches of resources would be subject to Mitigation Measures. Under the January 17 Proposal, the CAISO would apply Mitigation Measures to Exceptional Dispatches that are issued to resources for any of the three specified purposes described in Section II.A above.<sup>63</sup>

## **2. Modification of the Initial Proposal**

Some stakeholders raised concerns that the Mitigation Measures in the January 17 Proposal (*i.e.*, the payment to all mitigated resources of the higher of the DEB price or the Resource-Specific Settlement Interval LMP) would not provide sufficient compensation to some mitigated resources. These stakeholders argued in relevant part that under the January 17 Proposal the CAISO would mitigate bids to variable costs in all cases, thereby leaving certain mitigated resources unable to recover annual fixed costs, especially resources lacking capacity contracts. The CAISO, in response to these concerns, initiated a further stakeholder process to examine whether modifications to the January 17 Proposal were appropriate. In particular, the CAISO examined whether the Mitigation Measures contained in the January 17 Proposal needed to be modified to include mechanisms for providing contributions to fixed-cost recovery by mitigated resources in some situations.

At the meeting of the CAISO Governing Board ("Board") held on January 28-29, 2008, DMM briefed the Board on the January 17 Proposal and informed the Board that the CAISO would conduct a further stakeholder process.<sup>64</sup> On

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<sup>63</sup> January 17 Proposal at 1-2. These three specified purposes were not subsequently modified in the stakeholder process.

<sup>64</sup> DMM also provided the Board with documents concerning the January 17 Proposal and stakeholder response to that proposal. These documents are available on the CAISO Website at <http://www.aiso.com/1f52/1f52eaf245d80.html>. As reflected in the documents, the CAISO originally intended to seek Board approval at the January 28-29, 2008 meeting to submit a tariff amendment that was based on the January 17 Proposal. However, as discussed above, the CAISO instead decided that it should conduct a further stakeholder process to address stakeholder concerns that the January 17 Proposal should be supplemented.

March 21, 2008, the CAISO posted on its Website a white paper that included straw proposals for providing compensation toward fixed-cost recovery by mitigated resources in some situations. The CAISO held a conference call on March 28, 2008 to discuss the white paper with stakeholders, and stakeholders provided written comments on the white paper by April 4, 2008. In response to the stakeholders' written comments, the CAISO posted on its Website a revised version of the white paper on April 14, 2008 and held a conference call with stakeholders on April 15, 2008 to discuss the revised white paper. Stakeholders provided written comments on the revised white paper by April 22, 2008.

The CAISO also obtained the opinion of the CAISO's Market Surveillance Committee ("MSC") regarding the entirety of the CAISO's Exceptional Dispatch mitigation proposal. The MSC held a stakeholder meeting to discuss the proposal on April 11, 2008 and a conference call with the MSC Chair to discuss the proposal on April 17, 2008. The MSC posted its draft opinion on the CAISO Website on May 1, 2008, held a conference call to adopt the MSC opinion on May 5, 2008, and submitted the adopted MSC opinion to the CAISO on May 8, 2008. The adopted MSC opinion supported the mitigation proposal, as did the DMM in its monthly Market Monitoring Report. The adopted MSC opinion is provided as Attachment D to the instant filing.

The CAISO posted the Final Proposal on the CAISO Website on May 13, 2008.<sup>65</sup> The Board approved the Final Proposal at its May 21-22, 2008 Board meeting and authorized CAISO management to file an amendment to the MRTU Tariff to implement the Final Proposal. A copy of the memorandum to the CAISO Governing Board is provided at Attachment E to the instant filing.

On June 3, 2008, the CAISO posted on its website draft revisions to the MRTU Tariff to implement the Final Proposal, and stakeholders provided written comments on the draft MRTU Tariff revisions by June 13, 2008. The CAISO held a conference call with stakeholders on June 17, 2008 to discuss the draft MRTU Tariff language. The CAISO then finalized this Amendment.

## **V. THE PROPOSED MRTU TARIFF CHANGES TO CLARIFY THE EXCEPTIONAL DISPATCH PROVISIONS**

In addition to the changes to the MRTU Tariff described above regarding the application of Mitigation Measures to Exceptional Dispatches, this Amendment includes a number of proposed clarifications of the existing MRTU Tariff provisions concerning Exceptional Dispatch.

The CAISO has revised the definition of an Exceptional Dispatch contained in Appendix A to the MRTU Tariff to eliminate language stating that an

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Exceptional Dispatch will be issued to avoid a Market Interruption. The deleted language would require too narrow a definition of an Exceptional Dispatch. Moreover, as a result of further review of the definitions of Market Interruption and Market Disruption and of the tariff provisions in Section 7.7.15<sup>66</sup> concerning the CAISO's authority to utilize tools, including Exceptional Dispatch, in the event or, to prevent or to minimize a Market Disruption, the CAISO found it necessary to modify Section 34.9.2 and Sections 11.5.6.1 and 11.5.6.1.1 and the definition of Market Interruption to be consistent.<sup>67</sup> In the May 19 Compliance Filing, the CAISO defined Market Disruption as "an action or event that causes a failure of the normal operation of any of the CAISO Markets." As a result of these modifications, the term Market Interruption as defined in the current version of the MRTU Tariff became largely redundant, unnecessary, and confusing. Therefore, the CAISO is proposing to modify the definition of Market Interruption to refer to those actions taken by the CAISO outside of the normal market operation of any of its markets in the event of a Market Disruption, to prevent a Market Disruption, or minimize the extent of a Market Disruption as provided in Section 7.7.15 and 34.9. These changes do not modify in any way the substance of the CAISO's authority, but merely clarify the MRTU Tariff so as to avoid any confusion associated with overlapping terminology.

In addition, the CAISO added PMax<sup>68</sup> testing as an additional reason for issuing Exceptional Dispatches and added language to Section 11.5.6 to clarify that, except for Exceptional Dispatches to perform Ancillary Services testing, to perform pre-commercial operation testing for Generating Units, to perform PMax testing, or for Voltage Support or Black Start from a Generating Unit under a contract to provide service, Exceptional Dispatches issued pursuant to Section 34.9.2 will be settled in the same manner as provided in Section 11.5.6.1. The CAISO has also added language to Section 11.5.6 to clarify that, except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, PMax testing, and pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. In addition, the CAISO has clarified in Section 11.5.6.4 that the Exceptional Dispatch Settlement price for incremental IIE that is consumed or delivered as a result of an Exceptional Dispatch for purposes of Ancillary Services testing,

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<sup>66</sup> The CAISO proposed the language in Section 7.7.15 in the May 19 Compliance Filing, and this provision is currently pending Commission review.

<sup>67</sup> Although the CAISO discussed the overlap between the definitions of Market Disruption and Market Interruption in its June 24, 2008 answer to comments and protests regarding the May 19 Compliance Filing, upon further reflection, the CAISO believes that that discussion did not adequately address the confusion associated with these two terms. The CAISO believes that the solution proposed in the present filing best addresses and resolves this confusion, and the CAISO will file an addendum to its response to comments and protests on the May 19 Compliance Filing consistent with the instant filing.

<sup>68</sup> Pre-Commercial Operations testing would certainly include PMax testing but might not encompass PMax testing that may be necessary or appropriate in other circumstances, such as a technology upgrade that could increase the PMax.

PMax testing, or pre-commercial operation testing for Generating Units is the maximum of the Resource-Specific Settlement Interval LMP or the Default Energy Bid. These changes are necessary as such dispatches are not Bid based – they are scheduled based on mutual convenience of the CAISO and the resource owner – and, therefore, should not be paid as bid.

Similarly, the CAISO has added to the sequential rules contained in Section 11.8.4.1.1 for determining the Real-Time Market Start-Up Cost the following rule in new Section 11.8.4.1.1(c): the Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.9.2 to (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing. Further, the CAISO has clarified in Section 11.8.4.1.2 that the RTM Minimum Load Cost for any Settlement Interval is zero if, as relevant here, the Bid Cost Recovery Eligible Resource is committed through Section 34.9.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. This change is similar to the clarification above concerning whether Exceptional Dispatches to perform Ancillary Services testing, pre-commercial operation testing or PMax testing should be paid their Bid price for Energy. Since such dispatches are not Bid based, they should not be paid as Bid and, similarly, should not be eligible for Bid Cost Recovery for Start-Up and Minimum Load.

The CAISO has deleted the section heading for Section 11.5.6.2.1 (entitled “Exceptional Dispatches Not Associated with an Energy Bid for Transmission-Related Modeling Limitations”) and has deleted the entirety of Section 11.5.6.2.1 (entitled “Exceptional Dispatches Associated with an Energy Bid for Transmission-Related Modeling Limitations”) as an unnecessary duplication of tariff language in Section 11.5.6.2.

The CAISO has clarified in Section 34.9 that, except as provided elsewhere in Section 34.9, the CAISO will consider the effectiveness of the resource along with Start-Up Costs and Minimum Load Costs when issuing Exceptional Dispatches to commit a resource to operate at Minimum Load. Even though the resources may have Energy Bids in the Day Ahead Market, the CAISO will only be looking at commitment costs in the event it is using its Exceptional Dispatch authority to commit a resource. Further, the CAISO has clarified in Section 34.9 that, when it issues Exceptional Dispatches for Energy, it will also consider Energy Bids if available and as appropriate. Further, Section 34.9 has been clarified to state that the goal of the CAISO will be to issue Exceptional Dispatches on a least-cost basis.

The CAISO has also clarified Section 34.9.2 to state that if it dispatches a Generating Unit for Voltage Support or Black Start, and the Generating Unit is

under an RMR Contract, Voltage Support contract, or Black Start contract, the Generating Unit will be compensated under its contract and not as an Exceptional Dispatch under the MRTU Tariff. Further, the CAISO has clarified Section 34.9.2 to state that it will not consider Start-Up Costs, Minimum Load Costs, or Energy Bids in connection with the issuance of Exceptional Dispatches to perform Ancillary Services testing, PMax testing, or pre-commercial operation testing for Generating Units for the reason that such dispatches are not based on costs or bids.

## **VI. EFFECTIVE DATE AND INITIAL IMPLEMENTATION OF EXCEPTIONAL DISPATCH MITIGATION**

The CAISO requests that the Commission approve the changes in this Amendment to be effective upon implementation of MRTU. As discussed in the monthly status reports the CAISO has submitted in Docket No. ER06-615, the CAISO will not be able to announce a new proposed implementation date for MRTU until the CAISO is confident that the MRTU software is operating successfully.<sup>69</sup> Accordingly, the CAISO is filing clean MRTU Tariff sheets without indicating a proposed effective date and therefore requests waiver of Order No. 614<sup>70</sup> and applicable provisions of Section 35.9 of the Commission's regulations.<sup>71</sup>

Depending on the actual implementation date of MRTU, the CAISO may not have the automated process in place to implement the settlements provisions proposed in this tariff amendment. In this event, the CAISO settlements statements would be initially based on the outcome of the automated settlement systems consistent with currently filed tariff and then adjusted after the fact. For example, Bids may not get automatically mitigated as of day one MRTU. Instead, through a manual process, the CAISO would track the settlements information against payments that would be required under the tariff and then make adjustments on future settlements statements and similarly adjust any cost allocation. The CAISO will be able to provide additional information concerning how it will implement these tariff revisions once an MRTU Go Live date has been determined.

The CAISO understands that in the absence of a proposed effective date the Commission is not compelled to take any action within the 60-day timeframe prescribed by the Federal Power Act. Although the Commission is not compelled to take action within any prescribed timeframe, the CAISO requests that the Commission issue an order regarding the changes to the MRTU Tariff contained in this Amendment within 60 days or as soon thereafter as possible. A timely

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<sup>69</sup> Based on the current status of MRTU readiness, however, the CAISO does anticipate a fall 2009 MRTU Go Live date.

<sup>70</sup> Designation of Electric Rate Schedule Sheets, FERC Stats. & Regs. ¶ 31,096 (2000).

<sup>71</sup> 18 C.F.R. § 35.9.

order will allow a more orderly transition to MRTU for the CAISO and its Market Participants.

Because the exact date of MRTU implementation is unknown at this time, the CAISO, pursuant to Section 35.11 of the Commission's regulations,<sup>72</sup> also requests waiver, if necessary, of Section 35.3 of the Commission's regulations,<sup>73</sup> 18 C.F.R. § 35.3, in order to permit the clean MRTU Tariff sheets contained in this Amendment to become effective more than 120 days after the date this Amendment was filed. Making the filing at this time hopefully will permit the CAISO, Market Participants, state authorities, and the Commission to resolve the issues discussed herein prior to the implementation of MRTU and provide greater certainty to the CAISO Markets. Granting a waiver in this instance would be consistent with the similar waivers of Section 35.3 that the Commission has granted for other MRTU Tariff filings.

## VII. COMMUNICATIONS

Communications regarding this filing should be addressed to the following individuals, whose names should be placed on the official service list established by the Secretary with respect to this submittal:

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## VIII. SERVICE

The CAISO has served copies of this transmittal letter, and all attachments, on the California Public Utilities Commission, the California Energy Commission, and all parties with effective Scheduling Coordinator Service Agreements under the MRTU Tariff. In addition, the CAISO is posting this transmittal letter and all attachments on the ISO Website.

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<sup>72</sup> 18 C.F.R. § 35.11.

<sup>73</sup> 18 C.F.R. § 35.3.

**IX. ATTACHMENTS**

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

- |              |   |
|--------------|---|
| Attachment A | Revised MRTU Tariff sheets that incorporate this Amendment  |
| Attachment B | The revisions described in Attachment A hereto, provided in black-line format   |
| Attachment C | CAISO's "Final Proposal on Exceptional Dispatch: Market Power Mitigation and Supplemental Pricing" (May 13, 2008)                           |
| Attachment D | Adopted MSC Opinion Entitled "'Exceptional Dispatch: Options for Market Power Mitigation and Supplemental Pricing under MRTU" (May 7, 2008) |
| Attachment E | May 13, 2008 Memorandum to the CAISO Board of Governors on Exceptional Dispatch Proposal  |

**X. CONCLUSION**

For all the foregoing reasons, the Commission should approve this Amendment as filed. Please feel free to contact the undersigned if you have any questions concerning this matter.

Respectfully submitted,



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**Attachment A – Clean Sheets**  
**Exceptional Dispatch Amendment Filing**  
**4<sup>th</sup> Replacement CAISO Tariff (MRTU)**

11.5.7.2. For Scheduling Coordinators for MSS Operators regardless of whether the MSS Operator has elected gross or net Settlement, the CAISO will allocate the Real-Time Congestion Offset based on the MSS Aggregation Net Total Non-ETC/TOR Measured Demand. To the extent that the sum of the Settlement amounts for IIE, UIE, and UFE, less Real-Time Congestion Offset, does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that are not Load following MSSs and have elected gross Settlement, based on a pro rata share of their Measured Demand for the relevant Settlement Interval. For Scheduling Coordinators for MSS Operators that have elected Load following or net Settlement, or both, the CAISO will assess charges or make payments for the resulting non-zero differences of the sum of the Settlement amounts for IIE, UIE, and UFE, less Real-Time Congestion Offset based on their MSS Aggregation Net Measured Demand.

**11.5.5 Settlement Amount for Residual Imbalance Energy.**

For each Settlement Interval, Residual Imbalance Energy Settlement amounts shall be the product of the MWh of Residual Imbalance Energy for that Settlement Interval and the Bid that led to the Residual Imbalance Energy from the relevant Dispatch Interval in which the resource was dispatched. For MSS Operators the Settlement for Residual Imbalance Energy is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC).

**11.5.6 Settlement Amounts for IIE from Exceptional Dispatch.**

For each Settlement Interval, the IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.9 is calculated as the sum of the products of the relevant IIE quantity for the Dispatch Interval and the relevant Settlement price for the Dispatch Interval for each type of Exceptional Dispatch as further described in this Section 11.5.6. For MSS Operators the Settlement for IIE from Exceptional Dispatches is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for Exceptional Dispatches to perform Ancillary Services testing, to perform pre-commercial operation testing for Generating Units, to perform PMax testing, or for Voltage Support or Black Start from a Generating Unit under a contract to provide service, Exceptional Dispatches issued pursuant to Section 34.9.2 shall be settled in the same manner as provided in Section 11.5.6.1. Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.10 shall be calculated as set forth in Section 11.5.6.7.

**11.5.6.1 Settlement for IIE from Exceptional Dispatches used for System Emergency Conditions, for a Market Interruption, to Mitigate Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies.**

The Exceptional Dispatch Settlement price for incremental IIE that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Interruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) Resource-Specific Settlement Interval LMP, (b) the Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the incremental Energy Bid Cost in excess of the applicable LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental IIE not associated with an Energy Bid that is delivered as a result of an Exceptional Dispatch Instruction for a Market Interruption, or to prevent or relieve a System Emergency is the minimum of the Resource-Specific Settlement Interval LMP, the Energy Bid price, or the negotiated price, if applicable and the Energy does not have an Energy Bid price. All Energy costs for decremental IIE associated with this type of Exceptional Dispatch are included in the total IIE Settlement Amount described in Section 11.5.1.1.

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

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Interruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to

Section 11.5.6.1 for the applicable Exceptional Dispatch at the Resource-Specific Settlement Interval LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost, (2) the Default Energy Bid cost, or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

**11.5.6.2 Settlement of IIE from Exceptional Dispatches Caused by Modeling Limitations.**

The Exceptional Dispatch Settlement price for IIE that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.9.3 is the maximum of (a) the Resource-Specific Settlement Interval LMP, (b) the Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental IIE for this type of Exceptional Dispatch is the minimum of (a) the Resource-Specific Settlement Interval LMP, (b) the Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for decremental IIE associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

**11.5.6.2.2 [NOT USED]**

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

The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.9.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2.1 or 11.5.6.2.2 for the applicable delivered Exceptional Dispatch quantity at the Resource-Specific Settlement Interval LMP and one of the following three costs: (1) the resource's Energy Bid Cost, 2) the Default Energy Bid cost, or 3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

**11.5.6.4 Settlement of IIE from Exceptional Dispatches Used for Ancillary Services Testing, PMax Testing and Pre-Commercial Operation Testing for Generating Units.**

The Exceptional Dispatch Settlement price for incremental IIE that is consumed or delivered as a result of an Exceptional Dispatch for purposes of Ancillary Services testing, PMax testing, or pre-commercial operation testing for Generating Units is the maximum of the Resource-Specific Settlement Interval LMP or the Default Energy Bid price. All Energy costs for these types of Exceptional Dispatch will be included in the IIE Settlement Amount described in Section 11.5.1.1.

**11.5.6.5 Settlement of IIE from Black Start and Voltage Support.**

All IIE Settlement Amounts associated with Black Start and Voltage Support are derived pursuant to Section 11.10.

**11.5.6.6 Settlement of IIE from Exceptional Dispatches for HASP and Real-Time ETC and TOR Self-Schedules.**

The Exceptional Dispatch Settlement price for IIE from HASP and Real-Time ETC and TOR Self-Schedules shall be the Resource-Specific Settlement Interval LMP. The IIE Settlement Amount for this type of Exceptional Dispatch shall be calculated as the product of the sum of all of these types of Energy and the Resource-Specific Settlement Interval LMP. All Energy costs for these types of Exceptional Dispatches will be included in the IIE Settlement Amount described in Section 11.5.1.1.

**11.5.6.7 Settlement of Exceptional Dispatch Energy from Exceptional Dispatches of Resources Mitigated Pursuant to Section 39.10.**

This entire Section 11.5.6.7, except for Section 11.5.6.7.3 as described therein, shall be effective until the end of the 24<sup>th</sup> month following the effective date of this Section 11.5.6.7, after which date this entire Section 11.5.6.7 shall no longer apply.

**11.5.6.7.1 Settlement of Exceptional Dispatch Energy from Exceptional Dispatches of Resources Eligible for Supplemental Revenues.**

Except as specified in Section 11.5.6.7.4, the Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.1.1 shall be the higher of (a) the resource's Energy Bid price or (b) the Resource-Specific Settlement Interval LMP.

**11.5.6.7.2 Settlement of Exceptional Dispatch Energy from Exceptional Dispatches of Resources Not Eligible for Supplemental Revenues.**

Except as specified in Section 11.5.6.7.4, the Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in either Section 39.10.1.2 or Section 39.10.2.2 shall be the higher of (a) the Default Energy Bid price or (b) the Resource-Specific Settlement Interval LMP.

**11.5.6.7.3 Settlement of Exceptional Dispatch Energy from Exceptional Dispatches of Resources Eligible for Supplemental Revenues Due to an Adder to the Default Energy Bid Price.**

Except as specified in Section 11.5.6.7.4, the Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.2.1 shall be the higher of (a) the Default Energy Bid price plus a \$24/MWh adder or (b) the Resource-Specific Settlement Interval LMP. This Section 11.5.6.7.3 shall be effective until the last calendar day of the fourth calendar month following the effective date of Section 11.5.6.7, after which date it shall no longer apply.

**11.5.6.7.4 Exception to the Other Provisions of Section 11.5.6.7.**

Notwithstanding any other provisions of this Section 11.5.6.7, if the Energy Bid price for a resource that satisfies all of the criteria set forth in Sections 39.10.1.1, 39.10.1.2, 39.10.2.1, or 39.10.2.2 is lower than the Default Energy Bid price for the resource, and the Resource-Specific Settlement Interval LMP is lower than both the Energy Bid price for the resource and the Default Energy Bid price for the resource, the Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by the resource shall be the Energy Bid price for the resource.

**11.5.7 HASP and RTM Congestion Credit and Marginal Cost of Losses Credit for Eligible TOR Self-Schedules.**

**11.5.7.1 HASP and RTM Congestion Credit for ETCs and TORs.**

The CAISO shall not apply charges or payments to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules. The balanced portion will be based on the difference between: (1) minimum of the metered CAISO Demand, ETC or TOR Self-Schedule submitted in the HASP, or the Existing Contract maximum capacity as specified in the TRTC Instructions; and (2) the Day-Ahead Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the

**11.8.4.1 RTM Bid Cost Calculation.**

For each Settlement Interval, the CAISO shall calculate RTM Bid Cost for each Bid Cost Recovery Eligible Resource, as the algebraic sum of the RTM Start-Up Cost, RTM Minimum Load Cost, RTM Pump Shut-Down Cost, RTM Energy Bid Cost, RTM Pumping Cost and RTM AS Bid Cost.

**11.8.4.1.1 RTM Start-Up Cost.**

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

- (a) The Real-Time Market Start-Up Cost is zero if there is a Real-Time Market Self-Commitment Period within the Real-Time Market Commitment Period.
- (b) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource has been manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule or Real-Time Market anywhere within that Real-Time Market Commitment Period.
- (c) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.9.2 to (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.
- (d) The Real-Time Market Start-Up Cost is zero if there is no Real-Time Market Start-Up at the start of that Real-Time Market Commitment Period because the Real-Time Market Commitment Period is the continuation of an IFM or RUC Commitment Period from the previous Trading Day.

- (e) If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable Real-Time Market Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the Real-Time Market Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.
- (f) The Real-Time Market Start-Up Cost shall be qualified if an actual Start-Up occurs within that Real-Time Market Commitment Period.
- (g) The Real-Time Market Start-Up Cost for a Real-Time Market Commitment Period shall be qualified if an actual Start-Up occurs earlier than the start of the Real-Time Market Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the Real-Time Market Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period.

**11.8.4.1.2 RTM Minimum Load Cost.**

The RTM Minimum Load Cost is the Minimum Load Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM

Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under an RMR Contract or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) the Bid Cost Recovery Eligible Resource is not actually On in that Settlement Interval; (4) that Settlement Interval is included in an IFM or RUC Commitment Period; or (5) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.9.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. For the purposes of RTM Minimum Load Cost, a Bid Cost Recovery Eligible Resource is determined to not actually be On if the metered Energy in that Settlement Interval is less than the Tolerance Band referenced by the Minimum Load Energy.

**11.8.4.1.3 RTM Pump Shut-Down Cost.**

The RTM Pump Shut-Down Cost is the relevant Pump Shut-Down Cost submitted by the Scheduling Coordinator for Pumped-Storage Hydro Units and Participating Load committed by the Real-Time Market to stop pumping and serving Load and actually does not operate in pumping mode or serve Load in that Settlement Interval, divided by the number of Settlement Intervals in a Trading Hour.

**11.8.4.1.4 RTM Pumping Bid Cost.**

For Pumped-Storage Hydro Units and Participating Load only, the RTM Pumping Bid Cost for the applicable Settlement Interval shall be the Pumping Cost submitted to the CAISO in the HASP or RTM divided by the number of Settlement Intervals in a Trading Hour. The Pumping Cost is negative since it represents the amount the entity is willing to pay to pump or serve Load. The Pumping Cost is included in RTM Bid Cost computation for a Pumped-Storage Hydro Unit and Participating Load committed by the Real-Time Market to pump or serve Load, if it actually operates in pumping mode or serves Load in that Settlement Interval. The RTM Energy Bid Cost for a Participating Load for any Settlement Interval is set to zero for any Energy consumed in excess of instructed Energy.

**34.9 Exceptional Dispatch.**

The CAISO may issue Exceptional Dispatches for the circumstances described in this Section 34.9, which may require the issuance of forced Shut-Downs or forced Start-Ups and shall be consistent with Good Utility Practice. Dispatch Instructions issued pursuant to Exceptional Dispatches shall be entered manually by the CAISO Operator into the RTM optimization software so that they will be accounted for and included in the communication of Dispatch Instructions to Scheduling Coordinators. Exceptional Dispatches are not derived through the use of the RTM optimization software and are not used to establish the LMP at the applicable PNode. The CAISO will record the circumstances that have led to the Exceptional Dispatch. Except as provided in this Section 34.9, the CAISO shall consider the effectiveness of the resource along with Start-Up Costs and Minimum Load Costs when issuing Exceptional Dispatches to commit a resource to operate at Minimum Load. When the CAISO issues Exceptional Dispatches for Energy, the CAISO shall also consider Energy Bids, if available and as appropriate. The goal of the CAISO will be to issue Exceptional Dispatches on a least-cost basis. Imbalance Energy delivered or consumed pursuant to the various types of Exceptional Dispatch is settled according to the provisions in Section 11.5.6.

**34.9.1 System Reliability Exceptional Dispatches.**

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

### **34.9.2 Other Exceptional Dispatch.**

The CAISO may also issue manual Exceptional Dispatches for resources in addition to or instead of resources dispatched by the RTM optimization software to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; (3) perform PMax testing; (4) mitigate for Overgeneration; (5) provide for Black Start; (6) provide for Voltage Support; (7) accommodate TOR or ETC Self-Schedule changes after the Market Close of the HASP; (8) reverse a commitment instruction issued through the IFM that is no longer optimal as determined through RUC; or (9) in the event of a Market Disruption, to prevent a Market Disruption, or to minimize the extent of a Market Disruption. If the CAISO dispatches a Generating Unit for Voltage Support or Black Start, and the Generating Unit is under an RMR Contract, Voltage Support contract or Black Start contract, the Generating Unit will be compensated under its contract and not as an Exceptional Dispatch under the CAISO Tariff. The CAISO will not consider Start-Up Costs, Minimum Load Costs, or Energy Bids in connection with the issuance of Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, or to perform pre-commercial operation testing for Generating Units.

### **34.9.3 Transmission-Related Modeling Limitations.**

The CAISO may also manually Dispatch resources in addition to or instead of resources dispatched by the RTM optimization software, during or prior to the Real-Time as appropriate, to address transmission-related modeling limitations in the Full Network Model. Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of Voltage Support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating TOs have primary responsibility. The CAISO shall also manually Dispatch resources under this Section 34.9.3 in response to system conditions including threatened or imminent reliability conditions for which the timing of the Real-Time Market optimization and system modeling are either too slow or incapable of bringing the CAISO Controlled Grid back to reliable operations in an appropriate time-frame based on the timing and physical characteristics of available resources to the CAISO.

**39.9 CRR Monitoring and Affiliate Disclosure Requirements.**

The CAISO will monitor the CRR holdings and CAISO Markets activity for anomalous market behavior, gaming, or exercise of market power resulting from CRR ownership concentrations that are not aligned with actual transmission usage as a result of secondary market auction outcomes. If the CAISO identifies such behavior it may seek FERC approval to impose position limits on the total number or MW quantity of CRRs that may be held by any single entity and its Affiliates. Each CRR Holder or Candidate CRR Holder must notify the CAISO of all entities that are Affiliates or become Affiliates of the CRR Holder or Candidate CRR Holder.

**39.10 Mitigation of Exceptional Dispatches of Resources.**

The CAISO shall apply Mitigation Measures to Exceptional Dispatches of resources when such resources are committed or dispatched under Exceptional Dispatch for purposes of: (1) addressing reliability requirements related to transmission Constraints not modeled in the Competitive Constraints Run of the MPM-RRD; (2) Ramping units up from Minimum Load to minimum dispatchable levels in order to protect against reliability Contingencies that are not directly incorporated into the Full Network Model or sufficiently met by the CAISO's market software; or (3) addressing other special unit-specific operating or environmental Constraints not incorporated into the Full Network Model or the CAISO's market software. This entire Section 39.10, except for Section 39.10.2 as described therein, and the entirety of related Section 11.5.6.7, except for Section 11.5.6.7.3 as described therein, shall be effective until the end of the 24<sup>th</sup> month following the effective date of this Section 39.10, after which date this entire Section 39.10 and the entirety of related Section 11.5.6.7, except for Section 11.5.6.7.3 as described therein, shall no longer apply.

**39.10.1 Application of Mitigation Measures to Exceptional Dispatches of Resources.**

This Section 39.10.1 shall become effective on the first day of the fifth calendar month following the effective date of Section 39.10.

**39.10.1.1 Application of Mitigation Measures to Exceptional Dispatches of Resources Eligible for Supplemental Revenues.**

In all cases where a resource is committed or dispatched under Exceptional Dispatch for any of the purposes set forth in Section 39.10, and the resource is eligible for supplemental revenues pursuant to Section 39.10.1.3, Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.1 or Section 11.5.6.7.4, whichever is applicable.

**39.10.1.2 Application of Mitigation Measures to Exceptional Dispatches of Resources Not Eligible for Supplemental Revenues.**

In all cases where a resource is committed or dispatched under Exceptional Dispatch for any of the purposes set forth in Section 39.10, and the resource is not eligible for supplemental revenues pursuant to Section 39.10.1.3, Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.2 or Section 11.5.6.7.4, whichever is applicable.

**39.10.1.3 Eligibility for Supplemental Revenues.**

A resource that is committed or dispatched under Exceptional Dispatch shall be eligible for supplemental revenues only during such times that the resource meets all of the following criteria:

- (i) the resource has been mitigated for one of the purposes set forth in Section 39.10;
- (ii) the resource is not under an RMR Contract, is not designated as ICPM Capacity, and is not a Resource Adequacy Resource, unless the resource is a Partial Resource Adequacy Resource or a partial ICPM resource, and the Exceptional Dispatch requires non-RA Capacity or non-ICPM Capacity, in which case only the capacity not committed as Resource Adequacy Capacity or ICPM Capacity is eligible for supplemental revenues;

- (iii) the resource has a Bid in the IFM, HASP, and RTM for the applicable Operating Day or Operating Hour in which the resource is committed or dispatched under Exceptional Dispatch; and
- (iv) the resource has not accrued an amount of Exceptional Dispatch supplemental revenues within a 30-day period (this 30-day period begins on the day of the first Exceptional Dispatch of the resource and re-starts on the day of the first Exceptional Dispatch of the resource following the end of any prior 30-day period) equal to or greater than the monthly ICPM Capacity Payment, without any ICPM Availability Factor adjustment, for which the resource would be eligible pursuant to Section 43.6 had it been designated as an ICPM resource.

**39.10.1.4 Calculation of Exceptional Dispatch Supplemental Revenues Within a 30-Day Period.**

The amount of Exceptional Dispatch supplemental revenues accrued by a resource within any 30-day period as defined in Section 39.10.1.3(iv) shall be a running total of the sum of supplemental revenues received during that 30-day period. The calculation of supplemental revenues accrued by a resource within a 30-day period is based on the higher of (a) the Energy Bid price for the resource minus the Default Energy Bid price for the resource or (b) the Resource-Specific Settlement Interval LMP minus the Default Energy Bid price for the resource. The greater of (a) or (b) is multiplied by the amount of Energy provided by the resource under Exceptional Dispatch, and the results of that multiplication are summed across the successive hours of the 30-day period. Once the resource has accrued an amount of supplemental revenues within the 30-day period, based on the calculation above, that equals the monthly ICPM Capacity Payment, without any ICPM Availability Factor adjustment, for which the resource would be eligible pursuant to Section 43.6 had it been designated as an ICPM resource, then the Settlement for the resource will be as provided in Section 11.5.6.7.2 and the resource will not be eligible for additional supplemental revenues for the rest of the 30-day period.

**39.10.2 Interim Rules for Application of Mitigation Measures to Exceptional Dispatches of Resources.**

This Section 39.10.2 shall be effective until the last calendar day of the fourth calendar month following the effective date of Section 39.10, after which date it shall no longer apply.

**39.10.2.1 Interim Rules for Application of Mitigation Measures to Exceptional Dispatches of Resources Eligible for an Adder to the Default Energy Bid Price.**

In all cases where a resource is committed or dispatched under Exceptional Dispatch for any of the purposes set forth in Section 39.10, and the resource is eligible for an adder to the Default Energy Bid price pursuant to Section 39.10.2.3, Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.3 or Section 11.5.6.7.4, whichever is applicable.

**39.10.2.2 Interim Rules for Application of Mitigation Measures to Exceptional Dispatches of Resources Not Eligible for an Adder to the Default Energy Bid Price.**

In all cases where a resource is committed or dispatched under Exceptional Dispatch for any of the purposes set forth in Section 39.10, and the resource is not eligible for an adder to the Default Energy Bid price pursuant to Section 39.10.2.3, Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.2 or Section 11.5.6.7.4, whichever is applicable.

**39.10.2.3 Interim Requirements to Be Eligible for an Adder to the Default Energy Bid Price.**

A resource that is committed or dispatched under Exceptional Dispatch shall be eligible for an adder to the Default Energy Bid price only during such times that the resource meets all of the following criteria:

- (i) the resource has been mitigated for one of the purposes set forth in Section 39.10;
- (ii) the resource is not under an RMR Contract, is not designated as ICPM Capacity, and is not a Resource Adequacy Resource, unless the resource is a Partial Resource Adequacy Resource or a partial ICPM resource, and the Exceptional Dispatch requires non-RA Capacity or non-ICPM Capacity, in which case only the capacity not committed as Resource Adequacy Capacity or ICPM Capacity is eligible for an adder to the Default Energy Bid price;

- (iii) the resource has a Bid in the IFM, HASP, and RTM for the applicable Operating Day or Operating Hour in which the resource is committed or dispatched under Exceptional Dispatch; and
- (iv) the resource has not accrued an amount of Exceptional Dispatch supplemental revenues within a 30-day period (this 30-day period begins on the day of the first Exceptional Dispatch and re-sets on the day of the first Exceptional Dispatch of the resource following the end of any prior 30-day period) equal to or greater than the monthly ICPM Capacity Payment, without any ICPM Availability Factor adjustment, for which the resource would be eligible pursuant to Section 43.6 had it been designated as an ICPM resource.

**39.10.2.4 Interim Calculation of Exceptional Dispatch Supplemental Revenues Within a 30-Day Period.**

The amount of Exceptional Dispatch supplemental revenues accrued by a resource within any 30-day period as defined in Section 39.10.2.3(iv) shall be a running total of the sum of supplemental revenues received during that 30-day period. The calculation of supplemental revenues accrued by a resource within a 30-day period is based on the higher of (a) the Resource-Specific Settlement Interval LMP minus the Default Energy Bid price for the resource or (b) the Default Energy Bid price plus a \$24/MWh adder minus the Default Energy Bid price for the resource. The greater of (a) or (b) is multiplied by the amount of Energy provided by the resource under Exceptional Dispatch, and the results of that multiplication are summed across the successive hours of the 30-day period. Once the resource has accrued an amount of supplemental revenues within the 30-day period, based on the calculation above, that equals the monthly ICPM Capacity Payment, without any ICPM Availability Factor adjustment, for which the resource would be eligible pursuant to Section 43.6 had it been designated as an ICPM resource, then the Settlement for the resource will be as provided in Section 11.5.6.7.2 and the resource will not be eligible for additional supplemental revenues for the rest of the 30-day period.

<b>ERA</b>	Energy Resource Area
<b>Estimated Aggregate Liability</b>	The sum of a Market Participant's or CRR Holder's known and reasonably estimated potential liabilities for a specified time period arising from charges described in the CAISO Tariff, as provided for in Section 12.
<b>Estimated RMR Invoice</b>	The monthly invoice issued by the RMR Owner to the CAISO for estimated RMR Payments or RMR Refunds pursuant to the RMR Contract.
<b>E-Tag</b>	An electronic tag associated with an Interchange schedule in accordance with the requirements of WECC.
<b>ETC</b>	Existing Transmission Contract
<b>ETC Self-Schedule</b>	A Self-Schedule submitted by a Scheduling Coordinator pursuant to Existing Rights as reflected in the TRTC Instructions.
<b>Exceptional Dispatch</b>	A Dispatch Instruction issued for the purposes specified in Section 34.9. Energy from Exceptional Dispatches shall not set any Dispatch Interval LMP.
<b>Exceptional Dispatch Energy</b>	Extra-marginal IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, MSS Load Following Energy, Real-Time Minimum Load Energy, and Derate Energy, produced or consumed due to Exceptional Dispatch Instructions that are binding in the relevant Dispatch Interval. Without MSS Load following, Exceptional Dispatch Energy is produced above the LMP index and below the lower of the Dispatch Operating Point or the Exceptional Dispatch Instruction, or consumed below the LMP index and above the higher of the Dispatch Operating Point or the Exceptional Dispatch Instruction. The LMP index is the capacity in the relevant Energy Bid that corresponds to a Bid price equal to the relevant LMP. Exceptional Dispatch Energy does not overlap with Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, Real-Time Minimum Load Energy, Derate Energy, or Optimal Energy, but it may overlap with Day-Ahead Scheduled Energy, HASP Scheduled Energy, and MSS Load Following Energy. Exceptional Dispatch Energy is settled as described in Section 11.5.6, and it is not included in BCR as described in Section 11.8.4.

<b>Market Interruption</b>	Actions taken by the CAISO outside of the normal market operation of any of the CAISO Markets in the event of a Market Disruption, to prevent a Market Disruption, or minimize the extent of a Market Disruption as provided in Sections 7.7.15 and 34.9.
<b>Market Intervention</b>	An action taken by the CAISO to override or augment the operation of a CAISO Market.
<b>Market Manipulation</b>	Has the meaning set forth in Section 37.7.
<b>Market Monitoring Unit</b>	The component of the CAISO organization (currently the “Department of Market Monitoring”) that is assigned responsibility in the first instance for the functions of a Market Monitoring Unit, as that term is used in Docket No. EL01-118.

**Attachment B – Blacklines**  
**Exceptional Dispatch Amendment Filing**  
**4<sup>th</sup> Replacement CAISO Tariff (MRTU)**

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### **11.5.6 Settlement Amounts for IIE from Exceptional Dispatch.**

For each Settlement Interval, the IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.9 is calculated as the sum of the products of the relevant IIE quantity for the Dispatch Interval and the relevant Settlement price for the Dispatch Interval for each type of Exceptional Dispatch as further described below in this Section 11.5.6. For MSS Operators the ~~s~~Settlement for IIE from Exceptional Dispatches is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for Exceptional Dispatches to perform Ancillary Services testing, to perform pre-commercial operation testing for Generating Units, to perform PMax testing, or for Voltage Support or Black Start from a Generating Unit under a contract to provide service, Exceptional Dispatches issued pursuant to Section 34.9.2 shall be settled in the same manner as provided in Section 11.5.6.1. Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.10 shall be calculated as set forth in Section 11.5.6.7.

#### **11.5.6.1 Settlement for IIE from Exceptional Dispatches used for System Emergency Conditions, ~~to Avoid for a Market Interruption, to Mitigate Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies.~~**

The Exceptional Dispatch Settlement price for incremental IIE that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, ~~to avoid for a Market Interruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs,~~ is the higher of the (a) Resource-Specific Settlement Interval LMP, (b) the Energy Bid ~~P~~price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP

and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the incremental Energy Bid Cost in excess of the applicable LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental IIE not associated with an Energy Bid that is delivered as a result of an Exceptional Dispatch ~~instruction to avoid~~for a Market Interruption, or to prevent or relieve a System Emergency is the minimum of the Resource-Specific Settlement Interval LMP, the Energy Bid price, or the negotiated price, if applicable and the Energy ~~that~~ does not have an Energy Bid price. All Energy costs for decremental IIE associated with this type of Exceptional Dispatch are included in the total IIE Settlement Amount described in Section 11.5.1.1.

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

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

**11.5.6.2 Settlement of IIE from Exceptional Dispatches Caused by Modeling Limitations.**

**~~11.5.6.2.1 Exceptional Dispatches Not Associated with an Energy Bid for Transmission-Related Modeling Limitations.~~**

The Exceptional Dispatch Settlement price for IIE ~~not associated with an Energy Bid~~ that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.9.3 is the maximum of ~~the~~ (a) the Resource-Specific Settlement Interval LMP, (b) the Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount

described in Section 11.5.1.1; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. -The Exceptional Dispatch Settlement price for decremental IIE for this type of Exceptional Dispatch is the minimum of ~~the~~ (a) the Resource-Specific Settlement Interval LMP, (b) the Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM-RRD and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. Costs for decremental IIE associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

**11.5.6.2.2 ~~[NOT USED]Exceptional Dispatches Associated with an Energy Bid for Transmission-Related Modeling Limitations.~~**

~~The Exceptional Dispatch Settlement price for incremental IIE associated with an Energy Bid that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the CAISO FNM as described in Section 34.9.3 is the maximum of the Resource-Specific Settlement Interval LMP or the Energy Bid price. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental IIE for this type of Exceptional Dispatch is the minimum of the Resource-Specific Settlement Interval LMP or the Energy Bid price. Costs for decremental IIE associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) the decremental Energy Bid Costs in excess of the applicable LMP at the relevant Location is settled per Section 11.5.6.2.3.~~

\* \* \*

**11.5.6.4 Settlement of IIE from Exceptional Dispatches ~~Used~~ for Ancillary Services Testing, PMax Testing and Pre-Commercial Operations Testing ~~For~~ Generating Units.**

The Exceptional Dispatch Settlement price for incremental IIE that is consumed or delivered as a result of an Exceptional Dispatch for purposes of Ancillary Services testing, PMax testing, or pre-commercial operations testing for Generating Units is the maximum of the Resource-Specific Settlement Interval LMP or the Default Energy Bid Price, ~~if Energy is associated with an Energy Bid~~. All Energy costs for these types of Exceptional Dispatch will be included in the IIE Settlement Amount described in Section 11.5.1.1.

\* \* \*

**11.5.6.7 Settlement of Exceptional Dispatch Energy from Exceptional Dispatches of Resources Mitigated Pursuant to Section 39.10.**

This entire Section 11.5.6.7, except for Section 11.5.6.7.3 as described therein, shall be effective until the end of the 24<sup>th</sup> month following the effective date of this Section 11.5.6.7, after which date this entire Section 11.5.6.7 shall no longer apply.

**11.5.6.7.1 Settlement of Exceptional Dispatch Energy from Exceptional Dispatches of Resources Eligible for Supplemental Revenues.**

Except as specified in Section 11.5.6.7.4, the Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.1.1 shall be the higher of (a) the resource's Energy Bid price or (b) the Resource-Specific Settlement Interval LMP.

**11.5.6.7.2 Settlement of Exceptional Dispatch Energy from Exceptional Dispatches of Resources Not Eligible for Supplemental Revenues.**

Except as specified in Section 11.5.6.7.4, the Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in either Section 39.10.1.2 or Section 39.10.2.2 shall be the higher of (a) the Default Energy Bid price or (b) the Resource-Specific Settlement Interval LMP.

**11.5.6.7.3 Settlement of Exceptional Dispatch Energy from Exceptional Dispatches of Resources Eligible for Supplemental Revenues Due to an Adder to the Default Energy Bid Price.**

Except as specified in Section 11.5.6.7.4, the Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.2.1 shall

be the higher of (a) the Default Energy Bid price plus a \$24/MWh adder or (b) the Resource-Specific Settlement Interval LMP. This Section 11.5.6.7.3 shall be effective until the last calendar day of the fourth calendar month following the effective date of Section 11.5.6.7, after which date it shall no longer apply.

**11.5.6.7.4 Exception to the Other Provisions of Section 11.5.6.7.**

Notwithstanding any other provisions of this Section 11.5.6.7, if the Energy Bid price for a resource that satisfies all of the criteria set forth in Sections 39.10.1.1, 39.10.1.2, 39.10.2.1, or 39.10.2.2 is lower than the Default Energy Bid price for the resource, and the Resource-Specific Settlement Interval LMP is lower than both the Energy Bid price for the resource and the Default Energy Bid price for the resource, the Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by the resource shall be the Energy Bid price for the resource.

\* \* \*

**11.8.4.1.1 RTM Start-Up Cost.**

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

- (a) The Real-Time Market Start-Up Cost is zero if there is a Real-Time Market Self-Commitment Period within the Real-Time Market Commitment Period.
- (b) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource has been manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule or Real-Time Market anywhere within that Real-Time Market Commitment Period.
- (c) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to

an Exceptional Dispatch issued in accordance with Section 34.9.2 to (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.

(de) The Real-Time Market Start-Up Cost is zero if there is no Real-Time Market Start-Up at the start of that Real-Time Market Commitment Period because the Real-Time Market Commitment Period is the continuation of an IFM or RUC Commitment Period from the previous Trading Day.

(ed) If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable Real-Time Market Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the Real-Time Market Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.

(fe) The Real-Time Market Start-Up Cost shall be qualified if an actual Start-Up occurs within that Real-Time Market Commitment Period.

(gf) The Real-Time Market Start-Up Cost for a Real-Time Market Commitment Period shall be qualified if an actual Start-Up occurs earlier than the start of the Real-Time Market Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the Real-Time Market Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period.

#### **11.8.4.1.2 RTM Minimum Load Cost.**

The RTM Minimum Load Cost is the Minimum Load Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost -for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid

Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under an RMR Contract or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) the Bid Cost Recovery Eligible Resource is not actually On in that Settlement Interval; ~~or~~ (4) that Settlement Interval is included in an IFM or RUC Commitment Period; or (5) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.9.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. For the purposes of RTM Minimum Load Cost, a Bid Cost Recovery Eligible Resource is determined to not actually be On if the metered Energy in that Settlement Interval is less than the Tolerance Band referenced by the Minimum Load Energy.

\* \* \*

### **34.9 Exceptional Dispatch.**

The CAISO may ~~perform~~ issue Exceptional Dispatches for the circumstances described in this Section 34.9, which may require the issuance of forced Shut-Downs or forced Start-Ups and. ~~The CAISO shall conduct all Exceptional Dispatches~~ be consistent with Good Utility Practice. Dispatch Instructions issued pursuant to Exceptional Dispatches shall be entered manually by the CAISO Operator into the RTM optimization software so that they will be accounted for and included in the communication of Dispatch Instructions to Scheduling Coordinators. Exceptional Dispatches are not derived through the use of the RTM optimization software and are not used to establish the LMP at the applicable PNode. The CAISO will record the circumstances that have led to the Exceptional Dispatch. Except as provided in this Section 34.9, the CAISO shall consider the effectiveness of the resource along with Start-Up Costs and Minimum Load Costs when issuing Exceptional Dispatches to commit a resource to operate at Minimum Load. When the CAISO issues Exceptional Dispatches for Energy, the CAISO shall also consider Energy Bids, if available and as appropriate. The goal of the CAISO will be to issue Exceptional Dispatches on a least-cost basis. Imbalance Energy delivered or consumed pursuant to the various types of Exceptional Dispatch is settled according to the provisions in Section 11.5.6.

#### **34.9.1 System Reliability Exceptional Dispatches.**

The CAISO may issue a manually Exceptional Dispatch for Generation Units, System Units, Participating Loads, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.9, in

addition to or instead of resources dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has submitted a Bid into the HASP.

### **34.9.2 Other Exceptional Dispatch.**

The CAISO may also issue manually Exceptional Dispatches for resources in addition to or instead of resources dispatched by the RTM optimization software to: (1) perform Ancillary Services testing; (2) perform pre-commercial operations testing for Generating Units; (3) perform PMax testing; (4) mitigate for Overgeneration; (54) provide for Black Start; (65) provide for Voltage Support; (76) accommodate TOR or ETC Self-Schedule changes after the Market Close of the HASP; ~~or (87) to reverse a commitment instruction issued through the IFM that is no longer optimal as determined through RUC; or~~ (9) in the event of a Market Disruption, to prevent a Market Disruption, or to minimize the extent of a Market Disruption. If the CAISO dispatches an ~~RMR~~ Generating Unit for Voltage Support or Black Start, and the ~~RMR~~ Generating Unit is under an RMR Contract, Voltage Support contract or Black Start contract, the Generating Unit will be compensated under its ~~RMR C~~ contract and not as an Exceptional Dispatch under the CAISO Tariff. The CAISO will not consider Start-Up Costs, Minimum Load Costs, or Energy Bids in connection with the issuance of Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, or to perform pre-commercial operation testing for Generating Units.

\* \* \*

### **39.10 Mitigation of Exceptional Dispatches of Resources.**

The CAISO shall apply Mitigation Measures to Exceptional Dispatches of resources when such resources are committed or dispatched under Exceptional Dispatch for purposes of: (1) addressing reliability requirements related to transmission Constraints not modeled in the Competitive Constraints Run of the MPM-RRD; (2) Ramping units up from Minimum Load to minimum dispatchable levels in order to protect against reliability Contingencies that are not directly incorporated into the Full Network Model or

sufficiently met by the CAISO's market software; or (3) addressing other special unit-specific operating or environmental Constraints not incorporated into the Full Network Model or the CAISO's market software.

This entire Section 39.10, except for Section 39.10.2 as described therein, and the entirety of related Section 11.5.6.7, except for Section 11.5.6.7.3 as described therein, shall be effective until the end of the 24<sup>th</sup> month following the effective date of this Section 39.10, after which date this entire Section 39.10 and the entirety of related Section 11.5.6.7, except for Section 11.5.6.7.3 as described therein, shall no longer apply.

**39.10.1 Application of Mitigation Measures to Exceptional Dispatches of Resources.**

This Section 39.10.1 shall become effective on the first day of the fifth calendar month following the effective date of Section 39.10.

**39.10.1.1 Application of Mitigation Measures to Exceptional Dispatches of Resources Eligible for Supplemental Revenues.**

In all cases where a resource is committed or dispatched under Exceptional Dispatch for any of the purposes set forth in Section 39.10, and the resource is eligible for supplemental revenues pursuant to Section 39.10.1.3, Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.1 or Section 11.5.6.7.4, whichever is applicable.

**39.10.1.2 Application of Mitigation Measures to Exceptional Dispatches of Resources Not Eligible for Supplemental Revenues.**

In all cases where a resource is committed or dispatched under Exceptional Dispatch for any of the purposes set forth in Section 39.10, and the resource is not eligible for supplemental revenues pursuant to Section 39.10.1.3, Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.2 or Section 11.5.6.7.4, whichever is applicable.

**39.10.1.3 Eligibility for Supplemental Revenues.**

A resource that is committed or dispatched under Exceptional Dispatch shall be eligible for supplemental revenues only during such times that the resource meets all of the following criteria:

- (i) the resource has been mitigated for one of the purposes set forth in Section 39.10;

- (ii) the resource is not under an RMR Contract, is not designated as ICPM Capacity, and is not a Resource Adequacy Resource, unless the resource is a Partial Resource Adequacy Resource or a partial ICPM resource, and the Exceptional Dispatch requires non-RA Capacity or non-ICPM Capacity, in which case only the capacity not committed as Resource Adequacy Capacity or ICPM Capacity is eligible for supplemental revenues;
- (iii) the resource has a Bid in the IFM, HASP, and RTM for the applicable Operating Day or Operating Hour in which the resource is committed or dispatched under Exceptional Dispatch; and
- (iv) the resource has not accrued an amount of Exceptional Dispatch supplemental revenues within a 30-day period (this 30-day period begins on the day of the first Exceptional Dispatch of the resource and re-starts on the day of the first Exceptional Dispatch of the resource following the end of any prior 30-day period) equal to or greater than the monthly ICPM Capacity Payment, without any ICPM Availability Factor adjustment, for which the resource would be eligible pursuant to Section 43.6 had it been designated as an ICPM resource.

**39.10.1.4 Calculation of Exceptional Dispatch Supplemental Revenues Within a 30-Day Period.**

The amount of Exceptional Dispatch supplemental revenues accrued by a resource within any 30-day period as defined in Section 39.10.1.3(iv) shall be a running total of the sum of supplemental revenues received during that 30-day period. The calculation of supplemental revenues accrued by a resource within a 30-day period is based on the higher of (a) the Energy Bid price for the resource minus the Default Energy Bid price for the resource or (b) the Resource-Specific Settlement Interval LMP minus the Default Energy Bid price for the resource. The greater of (a) or (b) is multiplied by the amount of Energy provided by the resource under Exceptional Dispatch, and the results of that multiplication are summed across the successive hours of the 30-day period. Once the resource has accrued an amount of supplemental revenues within the 30-day period, based on the calculation above, that equals the monthly ICPM Capacity Payment, without any ICPM Availability Factor adjustment, for which the resource would

be eligible pursuant to Section 43.6 had it been designated as an ICPM resource, then the Settlement for the resource will be as provided in Section 11.5.6.7.2 and the resource will not be eligible for additional supplemental revenues for the rest of the 30-day period.

**39.10.2 Interim Rules for Application of Mitigation Measures to Exceptional Dispatches of Resources.**

This Section 39.10.2 shall be effective until the last calendar day of the fourth calendar month following the effective date of Section 39.10, after which date it shall no longer apply.

**39.10.2.1 Interim Rules for Application of Mitigation Measures to Exceptional Dispatches of Resources Eligible for an Adder to the Default Energy Bid Price.**

In all cases where a resource is committed or dispatched under Exceptional Dispatch for any of the purposes set forth in Section 39.10, and the resource is eligible for an adder to the Default Energy Bid price pursuant to Section 39.10.2.3, Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.3 or Section 11.5.6.7.4, whichever is applicable.

**39.10.2.2 Interim Rules for Application of Mitigation Measures to Exceptional Dispatches of Resources Not Eligible for an Adder to the Default Energy Bid Price.**

In all cases where a resource is committed or dispatched under Exceptional Dispatch for any of the purposes set forth in Section 39.10, and the resource is not eligible for an adder to the Default Energy Bid price pursuant to Section 39.10.2.3, Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.2 or Section 11.5.6.7.4, whichever is applicable.

**39.10.2.3 Interim Requirements to Be Eligible for an Adder to the Default Energy Bid Price.**

A resource that is committed or dispatched under Exceptional Dispatch shall be eligible for an adder to the Default Energy Bid price only during such times that the resource meets all of the following criteria:

- (i) the resource has been mitigated for one of the purposes set forth in Section 39.10;
- (ii) the resource is not under an RMR Contract, is not designated as ICPM Capacity, and is not a Resource Adequacy Resource, unless the resource is a Partial Resource Adequacy Resource or a partial ICPM resource, and the Exceptional Dispatch requires non-RA Capacity or non-ICPM Capacity, in which case only

the capacity not committed as Resource Adequacy Capacity or ICPM Capacity is eligible for an adder to the Default Energy Bid price;

(iii) the resource has a Bid in the IFM, HASP, and RTM for the applicable Operating Day or Operating Hour in which the resource is committed or dispatched under Exceptional Dispatch; and

(iv) the resource has not accrued an amount of Exceptional Dispatch supplemental revenues within a 30-day period (this 30-day period begins on the day of the first Exceptional Dispatch and re-sets on the day of the first Exceptional Dispatch of the resource following the end of any prior 30-day period) equal to or greater than the monthly ICPM Capacity Payment, without any ICPM Availability Factor adjustment, for which the resource would be eligible pursuant to Section 43.6 had it been designated as an ICPM resource.

**39.10.2.4 Interim Calculation of Exceptional Dispatch Supplemental Revenues Within a 30-Day Period.**

The amount of Exceptional Dispatch supplemental revenues accrued by a resource within any 30-day period as defined in Section 39.10.2.3(iv) shall be a running total of the sum of supplemental revenues received during that 30-day period. The calculation of supplemental revenues accrued by a resource within a 30-day period is based on the higher of (a) the Resource-Specific Settlement Interval LMP minus the Default Energy Bid price for the resource or (b) the Default Energy Bid price plus a \$24/MWh adder minus the Default Energy Bid price for the resource. The greater of (a) or (b) is multiplied by the amount of Energy provided by the resource under Exceptional Dispatch, and the results of that multiplication are summed across the successive hours of the 30-day period. Once the resource has accrued an amount of supplemental revenues within the 30-day period, based on the calculation above, that equals the monthly ICPM Capacity Payment, without any ICPM Availability Factor adjustment, for which the resource would be eligible pursuant to Section 43.6 had it been designated as an ICPM resource, then the Settlement for the resource will be as provided in Section 11.5.6.7.2 and the resource will not be eligible for additional supplemental revenues for the rest of the 30-day period.

\* \* \*

## CAISO Tariff Appendix A

### Master Definitions Supplement

\* \* \*

#### Exceptional Dispatch

A Dispatch Instruction issued ~~to avoid a Market Interruption~~ for the purposes specified in Section 34.9. Energy from Exceptional Dispatches shall not set any Dispatch Interval LMP.

\* \* \*

#### Market Interruption

Actions taken by the CAISO outside of the normal market operation of any of the CAISO Markets in the event of a Market Disruption, to prevent a Market Disruption, or minimize the extent of a Market Disruption as provided in Sections 7.7.15 and 34.9.~~The disruption of the normal operations of a CAISO Market.~~

\* \* \*

## **Attachment C**



**California ISO**  
Your Link to Power

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**Final Proposal**

**Exceptional Dispatch:  
Market Power Mitigation and Supplemental Pricing**

**California Independent System Operator  
Posted May 13, 2008**

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# Final Proposal Exceptional Dispatch

## 1 Executive Summary

The purpose of this initiative is to propose modifications to the pricing rules for Exceptional Dispatch in the California Independent System Operator (CAISO) Market Redesign and Technology Upgrade (MRTU) Tariff. CAISO seeks to obtain Board of Governors and Federal Energy Regulatory Commission (FERC) approval for the proposed revisions. Under the current Tariff, units subject to Exceptional Dispatch would be paid the higher of their Bid or LMP, or the higher of their Default Energy Bid (DEB) or LMP if they did not have a Bid in the Markets. Issues associated with this rule for Exceptional Dispatch pricing became a higher priority for CAISO recently as a result of the stakeholder discussions over the proposed pricing rules for the Interim Capacity Procurement Mechanism (ICPM), which were filed with FERC in February 2008. One issue was whether resources receiving an (unmitigated) Bid offer price through Exceptional Dispatch would accept an ICPM designation. Those discussions lead to a re-examination of the local or temporal market power that could be exerted by resources subject to Exceptional Dispatch, and instigated a mitigation proposal by the CAISO Department of Market Monitoring (DMM). At the same time, suppliers have raised concerns about revenue and price impacts of the mitigation, including effects on forward Resource Adequacy (RA) procurement and the adequacy of fixed cost recovery by units without capacity contracts or designations (i.e., that do not hold contracts for RA or Reliability Must-Run (RMR) or an ICPM designation) and that are subject to both mitigation and Exceptional Dispatch.

In response to these stakeholder concerns, CAISO issued a White Paper and then a Straw Proposal that proposed that MRTU Tariff modifications could include both (a) market power mitigation of Exceptionally Dispatched resources under specific conditions, and (b) in some Exceptional Dispatch situations, supplemental payments, either directly via a Bid Adder or daily capacity payment, or indirectly through loosened or "relaxed" Bid mitigation, to resources subject to mitigation but that do not have capacity contracts/designations. Similarly to other provisions in the MRTU, such as the \$24/MWh Bid Adder for Frequently Mitigated Units (FMU) and the ability of non-RA resources to offer their capacity into the Reliability Unit Commitment (RUC) at an offer price up to \$250/MW, the supplemental payments under Exceptional Dispatch are justified for purposes of contribution to fixed cost recovery.

Based on additional stakeholder input and further internal review, in this Final Proposal, CAISO proposes an approach for achieving such supplemental payments that balances stakeholder views and is consistent with incentives to offer into the MRTU markets and voluntarily accept ICPM designations. Specifically, the CAISO proposes to relax the mitigation rule for Exceptionally Dispatched resources without capacity contracts. Bids submitted by such resources will not be subject to mitigation until their Exceptional Dispatch revenues in excess of short-term variable cost recovery, as reflected in the resource's Default Energy Bid (DEB) for the relevant

market and period, accrue up to a monthly revenue cap at the resource's monthly ICPM rate.

However, CAISO proposes that during the initial two months of MRTU, the CAISO use a more restrictive approach to providing supplemental payments to eligible resources, such that their Bids subject to mitigation will be augmented with a \$24/MWh Bid Adder which would allow supplemental revenues to accrue at a slower rate. After this initial time period, the relaxed mitigation will be implemented (and the Bid Adder removed). While the CAISO is committed to addressing modeling issues prior to start up, this phased approach will allow the CAISO to learn from actual market operations and to enhance the market models to minimize the need for Exceptional Dispatch. A two-month "grace period" will serve as a safeguard against extraordinary costs in the event of frequent Exceptional Dispatches during the initial two months of operations.

Finally, ICPM is due to expire in December 2010. Accordingly, CAISO proposes that the proposed rules for mitigation and supplemental pricing under Exceptional Dispatch also expire with ICPM and new rules, if needed, be considered on the basis of market experience at that time.

The CAISO's goal is to file the mitigation rules and relaxed mitigation under Exceptional Dispatch as proposed tariff revisions with FERC on June 6, 2008 (please see key milestones in the section below) and to propose an effective date coincident with the start of the MRTU markets. At the culmination of this stakeholder process, the proposal that is presented to the CAISO Board should be compatible with the MRTU market design, and strike a reasonable balance between the views of the CAISO stakeholders.

## **2 Process and Proposed Timetable**

The topic of Exceptional Dispatch pricing was discussed over several months during the end of 2007 and was also been raised by stakeholders in the ICPM proceeding before FERC. For information related to those prior discussions please refer to the documents posted on the CAISO website at:

<http://www.aiso.com/1c89/1c89d76950e00.html> and  
<http://www.aiso.com/1c7f/1c7fe9985c80.pdf>.

The timetable below provides an overview of the key milestones and associated dates in the current stakeholder process, including Market Surveillance Committee (MSC) review, Board review and filing with FERC.

### **Key Milestones for Exceptional Dispatch Process**

Stakeholder Review of Initial White Paper	
CAISO issues market notice announcing issue and first meeting	March 14, 2008
CAISO posts White Paper	March 21, 2008
CAISO posts conference call agenda	March 21, 2008

CAISO holds stakeholder conference call on White Paper	March 28, 2008
Stakeholders submit their written comments on White Paper	April 4, 2008
CAISO posts the written comments submitted on White Paper	April 7, 2008
<b>Second Review —Straw Proposal</b>	
Based on comments CAISO posts updated White Paper	April 14, 2008
Stakeholder meeting to discuss revised White Paper	April 15, 2008
Final set of comments due from Stakeholders	April 22, 2008
<b>Final Proposal</b>	
Based on stakeholder comments CAISO posts draft final proposal	May 6, 2008
<b>Develop MSC Opinion</b>	
MSC Stakeholder Meeting	April 11, 2008
Conference call with MSC Chair Frank Wolak	April 17, 2008
MSC posts the draft MSC Opinion	May 1, 2008
MSC holds a conference call to adopt the MSC Opinion	May 5, 2008
MSC submits to CAISO the adopted MSC Opinion	May 8, 2008
<b>Prepare Board Documents</b>	
Final Board documents to Legal	May 12, 2008
CAISO requests approval from Board to make tariff filing	May 22, 2008

The CAISO will send out a Market Notice once the Exceptional Dispatch draft tariff language is posted that will include the comment period and conference call information.

### **3 Overview of the Exceptional Dispatch Issue**

This section provides background on the current Tariff rules on Exceptional Dispatch and examines some of the potential market results depending on whether and how the current Tariff rules are modified. For purposes of convenience, the descriptive sections of this Straw Proposal (which builds on the prior White Paper) excerpt sections from the prior MPD discussion paper and DMM white papers, with attribution where appropriate.<sup>1</sup> In addition, the current Tariff language and excerpts from the FERC orders approving the tariff rules for Exceptional Dispatch and clarifying CAISO Exceptional Dispatch authority are in Attachment 1.

#### **3.1 Current Tariff Rules on Exceptional Dispatch**

Exceptional Dispatch provides the CAISO with the capability to manually commit and/or dispatch resources (generation and participating loads) that are not cleared through the market software to maintain reliable grid operations. Exceptional Dispatch also is used for various other functions that require a resource to be

<sup>1</sup> Papers and comments on Exceptional Dispatch can be found at <http://www.aiso.com/1c89/1c89d76950e00.html> and <http://www.aiso.com/1c7f/1c7fe9985c80.pdf>.

dispatched outside of a market schedule. The Exceptional Dispatch instruction can be for forced start-up, forced shut-down, operation at minimum operating level, incremental energy or decremental energy. Exceptional Dispatch can apply to all types of units in the CAISO system, including those with an RA contract or ICPM designation, and hence have a must-offer requirement into the MRTU Integrated Forward Market (IFM), RMR units, and resources that do not have any of those contracts or designations. Currently, the MRTU Tariff allows resources with offers in the markets to be paid the higher of their offer, Default Energy Bid (DEB) price or the LMP when Exceptionally Dispatched. Resources without offers in the market are paid the higher of their DEB or the LMP. Bids taken for Exceptional Dispatch do not set LMPs.

Exceptional Dispatch is also an action taken by operators for the following reasons (see Section 34.9 of the CAISO MRTU Tariff in Attachment 1):

- address transmission related modeling limitations,
- perform Ancillary Services testing,
- perform pre-commercial operations testing for Generating Units,
- mitigate for Over-generation,
- provide for Black Start,
- provide for Voltage Support,
- accommodate Transmission Ownership Rights (TOR) or Existing Transmission Contract (ETC) Self-Schedule changes after the Market Close of the Hour-Ahead Scheduling Procedure (HASP), and
- reverse a commitment instruction issued through the Integrated Forward Market (IFM) that is no longer optimal as determined through Residual Unit Commitment (RUC).

Under the current MRTU Tariff rules, resources dispatched under Exceptional Dispatch will be paid the higher of:

- their offer (Energy Bid price), whether submitted into the IFM, the RUC or the RTM,
- their Default Energy Bid price, if they have no offer in the markets, or
- the Locational Marginal Price (LMP) at their node.

This “higher of” pricing rule is needed because of the manual dispatch, under which the CAISO may be required to dispatch a resource with an offer price or DEB higher than the prevailing LMP.

Also, under the current MRTU Tariff rules, Exceptional Dispatch is not subject to the Market Power Mitigation and Reliability Requirement Determination process (“MPM-RRD”), which is the CAISO market power mitigation element to its Day-Ahead and Real-Time Market. However, Energy Bids are subject to the Bid caps; therefore, Exceptional Dispatch offer prices are capped at the same market offer caps that all resources are subject to.

### **3.2 Potential Market Impacts if Current Tariff Rules are not Modified**

CAISO has been evaluating the market impacts associated with the existing MRTU Tariff rules to determine whether MRTU Tariff revisions are necessary. This section examines the two primary market impacts considered so far: locational market power in energy and the incentive to accept voluntary designation as an ICPM resource.

#### **3.2.1 Locational Market Power in Energy**

CAISO expects the use of Exceptional Dispatch for reliability constraints to be extremely limited and most often to take place on an unpredictable basis, such that any resource that has offers in the market would have submitted those offers without expectation of additional post-IFM binding constraints that lead to locational market power. However, there is still uncertainty about the potential need to rely on Exceptional Dispatches and, as pointed out in the DMM White Paper<sup>2</sup>, the particular concern is primarily over localized constraints that are not modeled in the Full Network Model (FNM) incorporated in the CAISO’s IFM and HASP/RTM software. As noted in the MPD paper posted on October 22, 2007<sup>3</sup> there are two major potential reasons why Exceptional Dispatches may be needed for local reliability issues.

##### **3.2.1.1 Forced Transmission or Generation Outages**

Exceptional Dispatches may be triggered as a result of a forced transmission or generation outage. Under this scenario, the expectation is that within a short period, the CAISO will update the FNM to reflect the new situation, allowing for a return to reliance on market mechanisms to establish schedules. Specifically, the CAISO has indicated that forced transmission and generation outages or de-rates should be incorporated into the FNM within one hour to one day of occurrence. Presumably, if the FNM is updated within this time period, there would be limited potential for the exercise of locational market power under this scenario. However, since there is lack of experience with the MRTU software, at this time, CAISO cannot rule out the

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<sup>2</sup> DMM paper titled “Mitigation of Potential Market Power Under MRTU Exceptional Dispatch Provisions” located at: <http://caiso.com/1ca9/1ca98ee3221f0.pdf>

<sup>3</sup> MPD paper titled “Exceptional Dispatch and Proposed Interim Capacity Procurement Mechanism” located at: <http://caiso.com/1c7f/1c7fe9985c80.pdf>

potential for persistent local market power if FNM updates are not as timely as expected.

### **3.2.1.2 Local Reliability Constraints Not Modeled in Market Software**

In certain instances, it may also be possible that the FNM may not adequately model all local reliability constraints, leading to the need for Exceptional Dispatches to ensure local reliability.

For example, two specific examples of reliability constraints that are not modeled in the FNM include the following:

- **Voltage Stability Constraints.** Voltage support requirements can typically be met by dispatching a unit to operate at its Minimum Load level, so this type of constraint would not appear to require the use of Exceptional Dispatch for commitment but perhaps not for energy (above Minimum Load) at Bid prices that could significantly exceed competitive levels due to locational market power.
- **SP26 30-minute Dispatchable Energy Requirements.** Under current operating practices, units committed to ensure that sufficient 30-minute dispatchable capacity is online in SP26 are frequently dispatched in real time beyond their minimum operating levels (P-Min) up to their minimum dispatchable operating levels. Under current MRTU provisions for Exceptional Dispatch, a unit expecting to be dispatched up to its minimum dispatchable level could submit extremely high Energy Bid prices to the real time market. With the recent changes in the zonal RA requirements, effective for RA year 2008, there would likely be a reduction in the amount of non-RA resources committed for this particular reliability constraint. The Path26 allocation process was described in a market notice sent out by the CAISO on July 19, 2007 to Market Participants.<sup>4</sup>

In many or most cases, the CAISO expects that these reliability requirements are expected to be indirectly met as a result of other constraints incorporated in the FNM and market schedules resulting from the IFM. In addition, although voltage support and stability constraints are not modeled explicitly, these may in some cases be converted and modeled as flow based constraints. Similarly, some contingency constraints may also be converted and modeled as flow based constraints. Again, experience with MRTU market operations will clarify the market impact of the modeling of these transmission constraints, but evaluation at this time cannot rule out the potential for persistent local market power if Exceptional Dispatch is used more frequently than expected.

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<sup>4</sup> A copy of the market notice can be found at: <http://www.caiso.com/1c20/1c20ad8932cf2.html>

### 3.2.2 Exceptional Dispatch and Voluntary ICPM Designation

A second area of concern to CAISO and market participants is the relationship of Exceptional Dispatch and ICPM. The ICPM is CAISO's proposed mechanism for procurement of backstop capacity from resources that do not already have an RA or RMR contract under MRTU.<sup>5</sup> ICPM procurement will take place in two timeframes: the Type 1 procurement will backstop the forward (bilateral) RA market; and the Type 2 procurement in response to Significant Events, such as major generation or transmission outages, that take place in real-time operations and do not allow for all reliability criteria to be met with the available RA resources. CAISO has proposed the same ICPM price for both types of procurements: the higher of \$41/kW-year or a \$/kW-year rate based on a unit's actual going forward costs as filed at FERC. The final ICPM price has yet to be determined by FERC. The ICPM proposal as filed allows a generator to choose whether to accept designation. The expectation is that the price offer for designation will be sufficient that any generator will accept the offer voluntarily.

Some stakeholders have drawn a linkage between Exceptional Dispatch and ICPM, since in the event of an outage that is not reflected in the FNM, Exceptional Dispatch will be the method by which resources without capacity contracts that are off-line temporarily, are committed out-of-market and then possibly requested to remain available for a period in exchange for an ICPM designation. There are two primary market design issues. The first is whether, under the existing Tariff rules or any subsequent modifications of those rules, a unit without an RA contract will voluntarily accept designation as a backstop capacity resource under ICPM, under which it will be subject to the same daily must offer requirement and rules on RUC offers as an RA resource. The second issue, which assumes resolution of the first issue, is whether resources subject to Exceptional Dispatch should be eligible immediately for an ICPM designation or other supplemental payments to provide contribution to fixed cost recovery.<sup>6</sup>

Turning first to the issue of incentives, since the Type 1 procurement, as proposed, takes place in the forward time-frame at a tariff rate, there should be minimal interaction between the current rules for Exceptional Dispatch and the willingness of a resource to accept ICPM designation.<sup>7</sup> In contrast, the Exceptional Dispatch pricing rules could affect incentives to accept Type 2 designation. During a Significant Event, the CAISO will first rely on existing operational capabilities of RA and non-RA resources scheduled through the IFM or RUC and Exceptional Dispatch

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<sup>5</sup> The filed proposal can be found at <http://www.caiso.com/1bc5/1bc5db284cc80.html>

<sup>6</sup> Protest of Dynegy Moss Landing, LLC, Dynegy Morro Bay, LLC, El Segundo Power, LLC, and Reliant Energy, Inc. ("California Generators Protest") submitted in FERC Docket Nos. ER06-615-000, ER08-556-000; CAISO reply comments addressing Exceptional Dispatch will be filed in March 2008.

<sup>7</sup> First, Type 1 procurement is likely to be infrequent and since Load Serving Entities (LSEs) will be charged directly under this type of procurement they have an incentive to procure forward. Second, in the event that Type 1 procurement is needed, the generator resource will be choosing between a known payment and the uncertain possibility of an Exceptional Dispatch. Hence, Exceptional Dispatch pricing rules are unlikely to affect the willingness to voluntarily accept Type 1 designation.

for RA and non-RA resources needed that were not scheduled through the market. Following the evaluation of the expected scope and duration of the Significant Event, CAISO will determine whether to make an ICPM designation offer to specific generation units. The designation request will be accompanied by a \$/kW-year offer for the term of the designation, as specified in the ICPM proposal. When a generator is accepted for designation, it will be treated as an RA unit; e.g. subject to a must-offer into the IFM and no longer eligible to submit a non-zero offer into the RUC.

If the current MRTU Tariff rules for Exceptional Dispatch are maintained without revision (i.e., Bids would not be subject to mitigation), there should be no disincentive to accept an ICPM designation, as payments under an ICPM designation would be additional to any revenues that a resource would make under Exceptional Dispatch.<sup>8</sup> However, if the Tariff rules are changed to mitigate market power, a resource without a prior capacity contract may reject an ICPM designation under some possible rules. These incentive issues and possible corrective rules are discussed below.

With regard to the second issue -- whether and under what conditions a non-RA/RMR resource subject to Exceptional Dispatch should be eligible for an ICPM designation -- CAISO has recently indicated in the context of the ICPM proceeding that it: "does not want to have a prescriptive "hard trigger" for an ICPM Significant Event that does not allow it to exercise prudent judgment based on Good Utility Practice to avoid designations that are not required."<sup>9</sup> Exceptional Dispatch should not be used as such a hard trigger. As discussed above, Exceptional Dispatch may be needed for a very short-term and transitory reliability requirement; if the need is transitory, due, e.g., to a temporary inability to model a particular constraint or a reliability requirement that only occurs for a brief period, then a monthly or multi-month ICPM designation does not appear to be proportional to the need. On the other hand, a more major reliability event deemed a Significant Event should lead to the offer of an ICPM designation. This issue is currently before FERC and hence any FERC decision may change the nature of the present stakeholder proceeding.

In the alternative, CAISO is proposing here to relax mitigation subject to a revenue cap set at the monthly ICPM rate when a resource without a capacity contract is subject to both Exceptional Dispatch and mitigation. If this approach is adopted, then it may provide an adequate link between Exceptional Dispatch and ICPM from the perspective of stakeholders without resorting to automatic designation triggers. Discussion of such options begins in Section 5 below.

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<sup>8</sup> This is because both RA/ICPM and non-RA units could be subject to Exceptional Dispatch without mitigation under the current Tariff rules. So, accepting the ICPM designation, while it would impose a requirement to offer into the IFM, could still allow for a unit to collect unmitigated payments under Exceptional Dispatch.

<sup>9</sup> See ICPM Transmittal Letter, pg. 25, located at <http://www.caiso.com/1f67/1f67d9d453990.pdf>.

## 4 Exceptional Dispatch Mitigation Proposal

As noted above, CAISO has evaluated the circumstances for Exceptional Dispatch and found that at least in some circumstances, a resource subject to such dispatch may have substantial locational or temporal market power. Toward the end of 2007 and into early 2008 the CAISO's Department of Market Monitoring (DMM) held several stakeholder conference calls to discuss a DMM mitigation proposal for Exceptional Dispatch.

On November 30, 2007 DMM issued the first issue paper<sup>10</sup> titled "Mitigation of Potential Market Power Under MRTU Exceptional Dispatch Provisions". Written comments from stakeholders on that initial white paper were received on December 12, 2007. In response to these comments, DMM issued a paper with additional discussion and information on this issue on January 3, 2008.<sup>11</sup> DMM then discussed issues related to the proposed mitigation rule and other stakeholder questions at a teleconference on January 7, 2008. Additional written comments were received on January 14, 2008.<sup>12</sup> Based on these stakeholder discussions and comments – along with further consultation with CAISO Operations personnel and management – DMM developed a more specific revised proposal that was the basis for a briefing at the January 28-29, 2008 Board of Governors (BoG) meeting.

Prior to the January 2008 CAISO Board meeting, comments were received on the mitigation proposal that prompted CAISO to withdraw the proposal until further stakeholder discussion could be had on the broader implications of mitigation of Exceptional Dispatches. In particular, stakeholders raised concerns about fixed cost recovery, especially by resources without capacity contracts that were subject to Exceptional Dispatch and mitigation.

The DMM proposal would modify the current tariff to apply market power mitigation to resources subject to Exceptional Dispatch in situations where market power is likely to be prevalent. The basic mitigation rule being proposed here is the same approach incorporated in DMM's revised white paper. The following language was taken directly from the January 17, 2008 DMM paper on the revised mitigation proposal. Specifically, under the final proposal, some units receiving manual Exceptional Dispatches for energy needed to meet reliability requirements that cannot be addressed through the MRTU software would be paid the higher of:

- The unit's Default Energy Bid (DEB) , or

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<sup>10</sup> DMM paper title "Mitigation of Potential Market Power Under MRTU Exceptional Dispatch Provisions" located at: <http://caiso.com/1ca9/1ca98ee3221f0.pdf>

<sup>11</sup> Initial stakeholder comments along with the response to these comments can be found at <http://www.caiso.com/1c89/1c89d76950e00.html>.

<sup>12</sup> These comments can be found at <http://www.caiso.com/1c89/1c89d76950e00.html>.

- The LMP at their location.

However, under this revised proposal, the criteria for determining which Exceptional Dispatches would be subject to mitigation has been narrowed and more specifically defined. Specifically, the mitigation rule would not apply to Exceptional Dispatches for energy needed for:

- System-wide energy requirements; and
- Relief of congestion on competitive transmission constraints

The mitigation rule would apply to Exceptional Dispatches for energy needed for:

- Reliability requirements related to non-competitive transmission constraints;<sup>13</sup>
- Ramping units up from minimum operating levels to minimum dispatchable levels in order to protect against reliability contingencies that are not directly incorporated or sufficiently met by the MRTU software; and
- Other special unit-specific operating or environmental constraints not incorporated in the MRTU model.

The above categories were developed based on input from CAISO Operations staff on the potential reasons that Exceptional Dispatches may be issued under MRTU, and the ability of CAISO Operators to identify and log the reason for Exceptional Dispatches into various categories.

The rationale underlying this approach is that the categories for which the mitigation rule is applied involve conditions under which the potential for market power is likely to exist due to the need to issue Exceptional Dispatches for highly localized or unit-specific constraints, and other reliability requirements that are not subject to the automated Local Market Power Mitigation (LMPM) provisions incorporated in the MRTU software. In such cases, mitigating payments for any Exceptional Dispatches (for energy above a unit's minimum operating level) to the higher of the unit's DEB or the LMP at the resource's location closely mirrors the market result that would occur if the reliability requirement creating the need for the Exceptional Dispatch were incorporated in the MRTU software.

As noted in previous documents and discussions on this issue, the CAISO will post hourly information on the volumes, costs and reasons for all Exceptional Dispatches on OASIS in a timely manner. Although such publicly posted information typically needs to be aggregated at some level (e.g. by the various categories established for logging Exceptional Dispatches), DMM believes this will provide a high level of transparency to market participants concerning the frequency, volume, costs, causes and degree of mitigation of Exceptional Dispatches.

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<sup>13</sup> DMM presentation on Competitive Path Assessment can be found at: <http://www.caiso.com/1f52/1f52bd74746f0.pdf>

## **5 Description and Evaluation of Design Options for Supplemental Payments**

Stakeholders were divided on the mitigation proposal. While Load Serving Entities and the CPUC supported the mitigation proposal, most resource owners and WPTF raised concerns about whether CAISO's ability to call on resources through Exceptional Dispatch while mitigating their Bids to variable costs would suppress forward RA prices and affect RA procurement incentives, encourage excessive CAISO use of such dispatch, and leave certain infrequently operated generators unable to recover annual fixed costs, especially generators without capacity contracts. As noted, Exceptional Dispatch is expected to be an infrequent measure and as such is unlikely to have significant impacts on market prices or the revenues of specific generators. However, in response to generator stakeholder concerns, CAISO initiated a further stakeholder process to examine whether, if Exceptional Dispatch Bids are mitigated, modifications to the mitigation or other pricing rules were appropriate to compensate for some effects on prices and revenues, notably to provide a mechanism for a contribution to fixed cost recovery.

The starting point for CAISO's review of potential additional market pricing options was to examine whether the DMM mitigation proposal needed any further pricing augmentation or modification. In general, while some stakeholders argued for alternative principles for mitigation, such as mitigating only when there was evidence of exercise of market power, no stakeholder provided a fully developed alternative to the mitigation proposal, nor any clear evidence that the situations subject to mitigation were incorrectly identified. Hence, the CAISO determined to retain the Exceptional Dispatch situations identified for mitigation, and the basic approach to mitigation, but to examine methods to supplement the mitigation rules.

Exceptional Dispatch to support reliability will take place during many different market and system conditions. In some circumstances, such as outages or deratings of large generators or transmission facilities, LMPs should be high enough to provide appropriate market compensation and coverage of fixed costs even with mitigation. CAISO will also be introducing scarcity pricing within one year of MRTU start-up, which will further increase LMPs at those times when Exceptional Dispatch commitments may be more likely for reliability purposes.

However, CAISO did agree with certain stakeholders that the combination of mitigation and Exceptional Dispatch would at times suppress LMPs and hence the revenues of Exceptionally Dispatched units. The incremental energy from Exceptional Dispatch, which is settled financially out-of-market, will be considered in the real-time market as effectively zero price energy, thus lowering the LMP. In general, resources with types of capacity contracts – RA, RMR or ICPM – have a guaranteed contribution to fixed cost recovery and should be less susceptible to the market revenue impact of infrequent Exceptional Dispatches. For the remaining resources on the Grid without any such capacity contracts, mitigation to short-term variable cost could indeed affect recovery of fixed costs for individual plants that are

infrequently dispatched or persistently subject to mitigation while also being the marginal price-setting unit (although not necessarily for the portfolio of plants owned by a firm). To compensate for this type of situation when Bids are cleared through the markets, there is a Bid Adder of \$24/MWh for Frequently Mitigated Units (FMU) that have no or partial unit RA or ICPM contracts. This adder can set the LMP. Also, units without RA or ICPM contracts can submit Bids up to \$250/MWh in the RUC for their capacity.

Thus, an additional opportunity to earn revenues towards fixed cost recovery is reasonable in out-of-market Exceptional Dispatches where mitigated Bids may only cover variable costs for resources without capacity contracts and also to reflect the reliability benefits offered by such resources. There was substantial stakeholder acceptance of this point

## **5.1 Supplemental Payments to Mitigated non-RA Resources**

Supplemental payments to provide revenues towards fixed costs can be direct payments, either as an adder to the Bid or as a separate capacity payment, or alternatively, they can be provided indirectly by loosening or “relaxing” the Bid mitigation.

The options that CAISO has considered over the course of the stakeholder process have several market design precedents. In the current pre-MRTU market design, resources that do not have RA/RMR/ICPM status are eligible for a daily capacity payment under the Reliability Capacity Services Tariff (RCST) rate formula when subject to Must Offer Waiver Denials (MOWDs). There are also pricing measures under the MRTU tariff that provide opportunities for additional payments and relaxed bidding restrictions for units without a capacity contract/designation in some circumstances that differ from the rules for RA/ICPM/RMR units. These include the Frequently Mitigated Unit (FMU) Bid Adder and also the ability to submit unmitigated Bids up to \$250/MWh into the Residual Unit Commitment (RUC).<sup>14</sup>

### **5.1.1 Criteria for Selecting Options**

To evaluate the supplemental pricing options and provide a foundation for the final proposal, the CAISO has considered the following evaluation criteria:

- Provide suppliers without capacity contracts/designations with a reasonable opportunity to make revenues that contribute to fixed cost recovery;
- Provide incentives for suppliers without capacity contracts/designations to offer resources into the MRTU markets;
- Provide incentives for suppliers without capacity contracts/designations to make resources available for designation under ICPM or RA;
- Mitigate local market power through Bid caps and/or revenue caps;
- Minimize administrative costs and implementation issues.

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<sup>14</sup> RA/RMR/ICPM units are not eligible for the FMU Bid Adder nor can they submit positive Availability Bids into the RUC.

### **5.1.2. Rules for Eligibility**

CAISO proposes the following rules for eligibility for any supplemental payment:

1. Such payments would only be available to resources that do not have an RA or RMR contract or an ICPM designation.
2. Such payments would only be available to resources that are committed or dispatched under Exceptional Dispatch and selected for Bid mitigation under the rules proposed in Section 4.
3. A non-RA resource must have a Bid in the IFM and HASP/RTM for the applicable operating day or hour in which they were being issued an Exceptional Dispatch in order to be eligible for the supplemental payment or revenues; otherwise, the payment will be the higher of the DEB or the LMP.

This eligibility requirement is to ensure that resources do not exit the market either in anticipation of an Exceptional Dispatch or to force the CAISO to undertake an Exceptional Dispatch so as to obtain a supplemental payment. Note that a unit that does not have a Bid in the HASP/RTM in the first hour that it is subject to Exceptional Dispatch could submit a Bid into the subsequent hours of the HASP/RTM.

4. Upon designation as an RA or ICPM unit, if that takes place during the period that a unit is being subject to Exceptional Dispatch, eligibility to receive supplemental payments would end.

In general, stakeholders supported the eligibility requirements within the context of supplemental payments. However, WPTF and Reliant argue that the rule that requires Exceptionally Dispatched resources subject to forced start-up to have a Bid in the market to receive supplemental payments is unreasonable.

CAISO notes that if a unit has local market power and the ability to submit a Bid after the fact, there would be a clear incentive for resources to exit the market to get the supplemental payment in situations identified as likely to cause Exceptional Dispatch. In contrast, the requirement to Offer provides an incentive to continue to participate in the market while ensuring that if resources choose otherwise, they will still be compensated at a minimum through their DEB. Hence, CAISO proposes to continue the requirement that a supplemental payment requires having a Bid in the market. CAISO notes that the current tariff language approved by FERC, and the relaxed mitigation option discussed above, both would allow for "as-bid" payments only assuming that there is a Bid in the market. Hence, as under the current tariff, if a resource does not have a Bid in the market it would only be eligible to get paid the higher of LMP or DEB.

## 5.2 “Relaxed” Mitigation Proposal

In the prior White Paper and Straw Proposal, CAISO proposed a number of options to allow resources that meet the eligibility requirements to obtain supplemental revenues towards fixed costs. These options included (a) no Mitigation of eligible resources, (b) Mitigation supplemented by a daily capacity payment or a Bid Adder, and (c) the “relaxed” Mitigation that ultimately became CAISO’s preferred approach for the final proposal. The options not chosen are summarized in Attachment 1.

The variant of the relaxed mitigation approach that CAISO is proposing would allow eligible resources to be paid the higher of LMP or their *unmitigated* market Bid until supplemental revenues reach a revenue cap that is equivalent to a monthly ICPM payment. Once the revenue cap is reached, the resource’s Bids will be subject to mitigation for the remainder of the 30 day period that began with the first Exceptional Dispatch of the resource. Hence, the revenue cap is based on a rolling 30 day calculation. Note that resources will always keep any market revenues earned from LMPs at their locations; this relaxed mitigation rule allows them to augment the market revenues that they would have otherwise earned while subject to mitigation.

The advantage of such a rule is that it would allow such resources to recover fixed costs that result from an Exceptional Dispatch through their unmitigated market offer. The disadvantage of such a rule is that there is remaining uncertainty about the scope of Exceptional Dispatch and at least in some foreseeable circumstances, a resource without a capacity contracts could at times garner rents not consistent with the market and system conditions at the time. Moreover, such a resource in this situation may at least temporarily reject an ICPM offer of designation, which would bring it under the same mitigation rules as RA/ICPM/RMR resources. However, it would need to submit Bids into the CAISO markets to obtain the supplemental revenues and hence would remain visible to grid operators. On balance, the CAISO feels that the advantages of the rule outweigh the disadvantages, although as noted below, as a market start safeguard, the relaxed mitigation will be phased in over a two month period.

In this proposal, the revenue cap becomes the market power mitigation rule until the cap is reached. As noted, that cap is based on the resource’s ICPM monthly rate. CAISO has proposed that the ICPM Type 2 price is the higher of \$41/kW-year or a \$/kW-year rate based on a unit’s going forward cost and approved by FERC.<sup>15</sup> This proposed payment is not subject to a Peak Energy Rent (PER) deduction and each monthly payment is 1/12 of the annual payment. Upon expiration of ICPM in 2010, the ICPM price would be replaced by any subsequent price available for Type 2 backstop procurement or another pricing proposal if needed.

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<sup>15</sup> The filing can be found at <http://www.aiso.com/1bc5/1bc5db284cc80.html>. Note that, assuming that ICPM rates will follow the CAISO’s January filing to FERC, any resource that intends to file for a rate higher than the proposed \$41/kW-year rate will have to have this approved rate on file with CAISO. Otherwise, the CAISO will calculate the surplus revenues on the basis of the \$41/kW-year rate or other standard rate approved by FERC.

Exceptional Dispatch revenues subject to the revenue cap would be measured as total payments for incremental energy under Exceptional Dispatch (higher of Bid or LMP) minus the payments that would have taken place if the unit had been mitigated to DEB. That is, for a unit subject to Exceptional Dispatch with a Bid or LMP of \$100/MWh and a DEB of \$50/MWh, it is the \$50 difference per MWh that is providing the supplemental payments that provide a contribution to fixed costs.

Hence, the maximum ICPM monthly payment for a 100 MW unit at the standard filed rate would be  $\$41/\text{kW}\text{-year} \times 1/12 \text{ months per year} \times 1000\text{kW}/\text{MW} \times 100 \text{ MW} = \$341,667$ . The same unit could thus hit the revenue cap after approximately 7-10 hours of Exceptional Dispatch if it was able to get selected with an Offer at the Offer Cap of \$500/MWh and depending on the contribution of its DEB. For example, if the DEB was \$100/MWh, this unit would reach its revenue cap in 8.5 hours.

When a supplier hits the revenue cap, it would be subject subsequently, for the remainder of the 30 day period beginning with the first Exceptional Dispatch, to full mitigation (i.e., higher of LMP or DEB).

### 5.2.1 Mitigation and Settlement Rule

The settlement rule for each resource can be stated more formally as follows:

Exceptional Dispatch Revenues per MWh for each 30 day period beginning with a first Exceptional Dispatch =

Max [Market Bid, LMP] for every Exceptional Dispatch settlement period that is in the set  $t^A$  (i.e., prior to hitting the revenue cap)

+

Max [DEB, LMP] for every Exceptional Dispatch settlement period that is in the set  $t^B$  (i.e., subsequent to hitting the revenue cap),

where

$t^A + t^B$  consist of all Exceptional Dispatch settlement periods in a 30 day period,

$t^A$  is the set of settlement periods prior to the unit accruing supplemental revenues equal to or greater than the revenue cap (equal to the ICPM monthly rate for the mitigated resource);

$t^B$  is defined as the set of settlement periods beginning with the period when the sum of supplemental revenues in the prior periods,  $t^A$ , is greater than or equal to the revenue cap.

For purposes of this paper, supplemental revenues for a resource are defined as revenues above short-term variable cost:

$(\text{Max} [\text{Market Bid}, \text{LMP}] - \text{DEB}) \times \text{MWh}$ , for all hours under Exceptional Dispatch,

and Bid mitigation begins when

supplemental revenues  $\geq$  ICPM Monthly Rate.

Finally, if a resource submits a Bid lower than its DEB, and the LMP is lower than both Bid and DEB, it will be settled at its Bid rather than the DEB. This is similar to the settlement rule for market power mitigation in the current MRTU Tariff.<sup>16</sup> However, in the period where a resource's supplemental revenue is being calculated,  $t^A$ , and an eligible resource submits a Bid lower than its DEB, the CAISO will nevertheless continue to calculate the supplemental revenue as the difference between LMP and the DEB, if the LMP is higher than both DEB and Bid.

### **5.2.2 Relationship of Relaxed Mitigation under Exceptional Dispatch to ICPM Designation**

The ICPM is CAISO's backstop capacity payment triggered by real-time reliability events, which, as filed at FERC, provides a contribution to non-RA units towards recovery of going forward fixed costs. As filed, an ICPM designation is for a minimum of one month and requires the designated resource to offer into the MRTU markets for the period of designation. In some circumstances, a transmission or generation outage or some other event may require CAISO to start-up or redispatch non-RA units through Exceptional Dispatch and if the situation is considered an enduring Significant Event (a defined term under ICPM), the CAISO may also subsequently offer them an ICPM designation. However, many Exceptional Dispatches will not be correlated with enduring Significant Events but will rather be occasional manual actions by the grid operators. Hence, while some suppliers have argued both in this stakeholder process and in the ICPM proceeding currently before FERC that any Exceptional Dispatch of a non-RA unit should lead to an ICPM designation, CAISO has not agreed with that view. However, as discussed below, CAISO has proposed that the ICPM monthly payment should be a cap on the supplemental revenues accruing under Exceptional Dispatch, in recognition that the ICPM payment, as approved by FERC, can be considered a reasonable contribution towards fixed costs. Moreover, because it is possible to accrue revenues up to the ICPM payment in a relatively few hours under relaxed Mitigation, this approach would lead to a similar financial outcome in some circumstances to an ICPM designation for the month. However, when resources face competition for Exceptional Dispatch, supplemental revenues will accrue more slowly. Hence, the relaxed Mitigation

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<sup>16</sup> See sections 31.2.2.2 and 33.4 in the MRTU Tariff. Specifically, the payment when a resource is subject to mitigation would be:  $\text{Max}[\text{Min}[\text{Market Bid}, \text{DEB}], \text{LMP}]$ .

approach is a more flexible and market-based mechanism to meet supplier views, as expressed in filings to FERC, that an Exceptional Dispatch should lead automatically to an ICPM designation of one or more months. As noted, even when subject to mitigation, a resource under Exceptional Dispatch will never be prevented from retaining the market revenues at its location during the period of Exceptional Dispatch.

### **5.2.3 Market Start Safeguard**

CAISO Grid Operations anticipates that the most frequent use of Exceptional Dispatch will be for the first few weeks or months of market operations as operators become familiar with the new software and any software design flaws that were not perceived during the months of testing prior to launch become apparent. Hence, one of the major concerns with the Relaxed Mitigation approach is that it may allow for extraordinary payments to some generators in those first few weeks and months due not to true reliability needs but simply to temporary software issues. Although this issue was not raised in the stakeholder process, CAISO is thus proposing that for the first two months of operations, Exceptional Dispatch will be subject to mitigation but with the \$24/MWh Bid Adder as the supplemental payment, not Relaxed Mitigation. Relaxed Mitigation will begin in the third month of operations. CAISO notes that ICPM designations will be available in those first two months for any Significant Events that warrant backstop capacity procurement from non-RA/RMR resources.

### **5.2.4 Sunset Date**

Due to the many uncertainties surrounding the frequency and predictability of Exceptional Dispatch and the nature of ICPM designations, along with the ongoing evolution of the Resource Adequacy program, CAISO proposes that the rules for market power mitigation and supplemental pricing of Exceptional Dispatch will be subject to the same Sunset Date as the ICPM of December 31, 2010. The CAISO would retain all Section 205 rights with respect to the rules for supplemental payments under Exceptional Dispatch.

### **5.2.5 Market Monitoring**

Relaxed Mitigation will potentially allow units that recognize that grid operators must call on them in an Exceptional Dispatch to hit the revenue cap after a just a few hours. On the other hand, in local areas with more competition among resources available for Exceptional Dispatch, whether with capacity contracts or not, Bids used in Exceptional Dispatch should be more competitive. Hence, for non-RA resources it will likely take more hours of Exceptional Dispatch to reach the revenue cap. In addition, in Significant Events, the CAISO has the capability to offer ICPM designations.

The use of relaxed Mitigation will be subject to ongoing monitoring and review by the DMM after MRTU has been implemented and potential reconsideration by the CAISO of whether to file for approval from FERC to modify the Tariff rules for supplemental pricing.

## **6 Implementation Issues**

Some implementation issues were discussed in the original DMM paper issued on November 30, 2007<sup>17</sup> and focused on the application of a mitigation rule. Any of the proposed options discussed above – the proposed market power mitigation rule for Exceptional Dispatches for local reliability and any other pricing rules – would require certain modifications in the MRTU system or processes. Additional assessment of implementation issues by various other areas of the CAISO is ongoing as part of the CAISO's overall assessment of this issue.

Grid Operations, Settlements, SIBR and MQS systems have been configured to handle the Exceptional Dispatch rules as described in the current MRTU Tariff and the exact impact of any changes created by the proposals above will need to be further explored when CAISO receives a FERC decision. Based on general discussions that have been had with the above mentioned groups any changes at this point in time will not be easily configured into the existing systems and tools but internal discussions will continue as we proceed through the market design process.

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<sup>17</sup> DMM paper title "Mitigation of Potential Market Power Under MRTU Exceptional Dispatch Provisions" located at: <http://caiso.com/1ca9/1ca98ee3221f0.pdf>

## Attachment 1

### Other Pricing Options Considered in Stakeholder Process

CAISO considered a number of other pricing options in the stakeholder process in addition to the final proposed approach. This section briefly reviews these options, including stakeholder views and CAISO response.

#### **Option 1 – No Mitigation for some or all resources subject to Exceptional Dispatch**

While the initial White Paper proposed that relaxation of mitigation should apply only to resources without capacity contracts, some stakeholders have proposed that no resources should be subject to mitigation. For example, in its comments WPTF argues that “to suggest that a unit that is subject to ED must be paid less because it is subject to a capacity payment implies that the same analogy will be applied to other market revenues, including ancillary service revenues and ultimately energy revenues.” The CAISO proposal began from a different starting point – not the intention to retract revenues from units with capacity contracts, but to mitigate local market power for all units in an “as-bid” situation due to Exceptional Dispatch. In that sense, the original DMM proposal did not discriminate among resources. The subsequent proposals to relax mitigation or provide supplemental payments for mitigated resources without capacity contracts were intended to provide for additional recovery of fixed costs by such resources. Similar arguments were used to justify, e.g., the current RCST daily capacity payments and the MRTU Frequently Mitigated Unit (FMU) Bid Adder. For that reason, CAISO does not support the argument for no market power mitigation under Exceptional Dispatch for all resources.

A second argument made by stakeholders for not imposing market power mitigation on all resources is that the DEB does not adequately provide mechanisms for recovery of types of short-term variable costs that might accrue under Exceptional Dispatch. For example, Reliant is concerned about recovery of “intra-day gas costs, which consist of LDC scheduling imbalance charges, firm access rights costs and gas costs for that day.” Reliant requests that the CAISO accept additional information on such costs to supplement the DEB calculation. CAISO feels that this issue has been decided in prior FERC orders, and is outside the scope of the present process.<sup>18</sup>

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<sup>18</sup> The proposal to use the DEB as the mitigated price was discussed and addressed by FERC in the September 21, 2006 Order. FERC stated that the variable cost plus 10% option would be sufficient to cover the various operating costs and “While this option accounts for a supplier’s operating cost, we note that a supplier whose bid is mitigated to cost plus ten percent will also have an opportunity to recover its fixed costs during times when it is not the marginal unit that sets the market clearing price in the market.” FERC also cited lack of evidence presented for the argument that the 10% adder would be insufficient. The FERC order can be found at: <http://caiso.com/1878/1878f9725ef80.pdf> with specific reference to paragraph 1045 for the FERC Determination.

We note further that the existing Exceptional Dispatch Tariff rule, that allows unmitigated Offers by all resources was not intended to cover costs not represented in the DEB, since the DEB was understood to be applicable in many instances of Exceptional Dispatch, notably when a resource did not have an offer in the market (see discussion in the FERC orders excerpted in Attachment 1).

### **Option 2 – Mitigation with Supplemental Daily Capacity Payment**

Under this proposal the CAISO would have mitigate Bids of all resources as described above but would also have provided a supplemental daily capacity payment to resources without a capacity contract/designation. CAISO proposed that the daily capacity payment would be a fraction to be determined of the ICPM monthly capacity payment amount. For each calendar month, CAISO would have limited the supplemental capacity payment to the amount that would have been received under the ICPM designation. Unresolved questions included whether to provide payment for full or partial capacity.

While several stakeholders and the CPUC supported this approach, on further consideration, CAISO withdrew it due to concerns that the potential complexity of this approach and the likelihood that key design parameters remain subject to FERC approval or otherwise will be difficult to resolve through the stakeholder process made a daily capacity payment less attractive than the alternatives. However, as noted above, the monthly ICPM payment, as approved by FERC, does offer a reference point as a capacity payment revenue cap, and hence has been retained in the proposed relaxed Mitigation.

### **Option 3 – Mitigation with Energy Bid Adder**

Under this proposal, the CAISO proposed that the supplemental payment would take the form of a Bid Adder. Following the non-RA FMU Bid Adder amount as noted in MRTU Tariff section 39.8.3, CAISO proposed to adopt a \$24/MWh Bid Adder. When applied in the market, the FMU Bid Adder would have been added to the resource's Bid and thus sets the LMP if the unit is marginal. When applied to an out of market settlement under Exceptional Dispatch, the payment would be the higher of the LMP or the DEB + \$24/MWh. In keeping with the general principle that in any one month, supplemental payments should not exceed the ICPM payment, CAISO also proposed to cap monthly revenues under the Bid Adder to the monthly ICPM capacity payment.

CAISO has proposed that, as a market start safeguard, for the first two months of MRTU operations, this option should be the supplemental pricing rule. Subsequently, the relaxed mitigation will be the pricing rule.

## **Attachment 2**

### **Relevant Excerpts on Exceptional Dispatch from the CAISO Tariff and FERC Orders**

#### **1. CAISO Tariff Excerpts (updated as of 10/12/07)**

##### **34.9 Exceptional Dispatch.**

The CAISO may perform Exceptional Dispatches for the circumstances described in this Section 34.9, which may require the issuance of forced Shut Downs or forced Start-Ups. The CAISO shall conduct all Exceptional Dispatches consistent with good utility practice. Dispatch Instructions issued pursuant to Exceptional Dispatches shall be entered manually by the Operator into the RTM optimization software so that they will be accounted for and included in the communication of Dispatch Instructions to Scheduling Coordinators. Exceptional Dispatches are not derived through the use of the RTM optimization software and are not used to establish the LMP at the applicable PNode. The CAISO will record the circumstances that have led to the Exceptional Dispatch. Imbalance Energy delivered or consumed pursuant to the various types of Exceptional Dispatch are settled according to the provisions in Section 11.5.6.

##### **34.9.1 System Reliability Exceptional Dispatches.**

The CAISO may manually dispatch Generation Units, System Units, Participating Loads, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.8, in addition to or instead of resources dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before Dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also dispatch in the Real-Time Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has submitted a Bid into the HASP.

##### **34.9.2 Other Exceptional Dispatch.**

The CAISO may also manually dispatch resources in addition to or instead of resources dispatched by the RTM optimization software to: (1) perform Ancillary Services testing; (2) perform pre-commercial operations testing for Generating Units; (3) mitigate for Overgeneration; (4) provide for Black Start; (5) provide for Voltage Support; (6) accommodate TOR or ETC Self-Schedule changes after the Market

Close of the HASP; or (7) to reverse a commitment instruction issued through the IFM that is no longer optimal as determined through RUC. If the CAISO dispatches an RMR Unit for Voltage Support, the RMR Unit will be compensated under its RMR Contract and not as an Exceptional Dispatch under the CAISO Tariff.

### **34.9.3 Transmission-Related Modeling Limitations.**

The CAISO may also manually Dispatch resources in addition to or instead of resources dispatched by the RTM optimization software, during or prior to the Real-Time as appropriate, to address transmission-related modeling limitations in the Full Network Model. Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of voltage support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating TOs have primary responsibility. The CAISO shall also manually Dispatch resources under this Section 34.9.3 in response to system conditions including threatened or imminent reliability conditions for which the timing of the Real-Time Market optimization and system modeling are either too slow or incapable of bringing the CAISO Controlled Grid back to reliable operations in an appropriate time-frame based on the timing and physical characteristics of available resources to the CAISO.

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### **11.5.6 Settlement Amounts for IIE from Exceptional Dispatch.**

For each Settlement Interval, IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.9 is calculated as the sum of the products of the relevant IIE quantity for the Dispatch Interval and the relevant Settlement price for the Dispatch Interval for each type of Exceptional Dispatch as further described below. For MSS Operators the settlement for IIE from Exceptional Dispatch is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC).

#### **11.5.6.1 Settlement for IIE from Exceptional Dispatches used for System Emergency Conditions, to Avoid Market Intervention, Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies.**

The Exceptional Dispatch Settlement price for incremental IIE that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, to avoid a Market Interruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the

higher of the Resource-Specific Settlement Interval LMP, the Energy Bid price or the Default Energy Bid price, if applicable and the Energy that does not have an Energy Bid price, or the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) second, the incremental Energy Bid Cost in excess of the applicable LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental IIE not associated with an Energy Bid that is delivered as a result of an Exceptional Dispatch instruction to avoid a Market Interruption, or to prevent or relieve a System Emergency is the minimum of the Resource-Specific Settlement Interval LMP, the Energy Bid price, or the negotiated price, if applicable and the Energy that does not have an Energy Bid price. All Energy costs for decremental IIE associated with this type of Exceptional Dispatch are included in the total IIE Settlement Amount described in Section 11.5.1.1.

**11.5.6.1.1 Settlement of Excess Costs for Exceptional Dispatches used for Emergency Conditions, to Avoid Market Intervention, and Avoid an Imminent System Emergencies.**

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, to avoid Market Interruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 for the applicable Exceptional Dispatch at the Resource-Specific Settlement Interval LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost, (2) the Default Energy Bid cost, or (3) the Energy cost at the negotiated price, if applicable, for the relevant Exceptional Dispatch.

**11.5.6.2 Settlement of IIE from Exceptional Dispatches caused by Modeling Limitations.**

**11.5.6.2.1 Exceptional Dispatches Not Associated with an Energy Bid for Transmission-Related Modeling Limitations.**

The Exceptional Dispatch Settlement price for IIE not associated with an Energy Bid that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.9.3 is the maximum of the Resource-Specific Settlement Interval LMP, Energy Bid Price or the Default Energy Bid price, if applicable and the Energy that does not have an Energy Bid Price, or the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two Payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) second, the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental

IIE for this type of Exceptional Dispatch is the minimum of the Resource-Specific Settlement Interval LMP Energy Bid Price or the Default Energy Bid price, if applicable and the Energy that does not have an Energy Bid Price, or the negotiated price as applicable to System Resources. Costs for decremental IIE associated with this type of Exceptional Dispatch are settled in two Payments: (1) decremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) second, the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

#### **11.5.6.2.2 Exceptional Dispatches Associated with an Energy Bid for Transmission-Related Modeling Limitations.**

The Exceptional Dispatch Settlement price for incremental IIE associated with an Energy Bid that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the CAISO FNM as described in Section 34.9.3 is the maximum of the Resource-Specific Settlement Interval LMP or the Energy Bid Price. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two Payments: (1) incremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) second, the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental IIE for this type of Exceptional Dispatch is the minimum of the Resource-Specific Settlement Interval LMP or the Bid price. Costs for decremental IIE associated with this type of Exceptional Dispatch are settled in two Payments: (1) decremental Energy is first settled at the Resource-Specific Settlement Interval LMP and included in the total IIE Settlement Amount described in Section 11.5.1.1; and (2) second, the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location is settled per Section 11.5.6.2.3.

**2. Excerpt from *California Independent System Operator Corporation, Order Conditionally Accepting the California ISO's Electric Tariff Filing to Reflect Market Redesign and Technology Upgrade (Tariff Amendment No. 44 and Proposed MRTU Tariff) (September 21, 2006), in Docket Nos. ER06-615-000 and ER02-1656-027, et al.***

**266.** We deny WPTF/IEP's request to modify the proposed provisions for Exceptional Dispatch. WPTF/IEP objects that the definition of "system emergency" in the MRTU Tariff is too broad and that the proposal for Exceptional Dispatches would result in undue intervention in market outcomes. However, the CAISO has not proposed to change the definition of "system emergency" provided in the MRTU Tariff from the definition in the CAISO's existing tariff, which the Commission has found to be just and reasonable. We note that in instances where a system emergency exists, or

there is the potential, that cannot be addressed by the real-time market optimization software, it is reasonable for the CAISO to take whatever other actions may be available consistent with good utility practice to address the emergency. The proposal for Exceptional Dispatches would not result in undue intervention in market outcomes because section 3.9.1 does not authorize Exceptional Dispatches when the real-time market optimization software can address an imminent system emergency. We also disagree with WPTF/IEP and Constellation/Mirant that Exceptional Dispatches should be allowed to set the market price. LMPs should reflect the marginal cost of energy, in order to send accurate price signals. However, manual Exceptional Dispatch instructions differ from those derived from the real-time market optimization software. Units manually dispatched in Exceptional Dispatches need not represent the marginal units, and thus, we agree with the CAISO that it would not be appropriate for such units to set the market price. Units producing energy for Exceptional Dispatch are paid at least the higher of the applicable settlement interval LMP or the unit's bid price. For many types of Exceptional Dispatch, the unit may alternatively receive the default energy bid price (in the event that the energy does not have a bid price), which is higher than the applicable LMP, or the negotiated price as applicable to System Resources.

267. We do however share WPTF/IEP's and others' concern that Exceptional Dispatch should not become a frequent occurrence and should be reserved for genuine emergencies where the CAISO needs to take actions outside the market software for maintaining system reliability. Therefore, we direct the CAISO, for transparency reasons, to publish all instances of Exceptional Dispatch on its OASIS website beginning on the effective date of MRTU Release 1. The OASIS website report should include, at a minimum, total hourly volumes and hourly weighted average prices, by transmission operator service territory. We will monitor the occurrence of and the method by which CAISO employs Exceptional Dispatch and if necessary will direct changes.

**3. Excerpt from *California Independent System Operator Corporation, Order Addressing Requests For Rehearing And Clarification (Issued October 15, 2007)*, in Docket No. ER06-615-009**

**D. MRTU Tariff Section 34.9.3, Transmission-Related Modeling Limitation**

36. Under section 34.9.3 of the MRTU Tariff, the CAISO proposed to make clear that the CAISO has the authority to manually dispatch resources in order to address transmission-related modeling limitations in the Full Network Model (FNM). Specifically, the CAISO defined transmission-related modeling limitations as "any FNM modeling limitations that arise from transmission maintenance, lack of voltage support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating Transmission Owners have primary responsibility."

37. In its comments to the CAISO's compliance filing, Southern California Edison Company (SoCal Edison) argued that the CAISO's proposed definition of transmission-related modeling limitation was overly broad, and requested that the Commission require the CAISO to revise proposed MRTU Tariff section 34.9.3 in order to specify that a modeling limitation "results when the real-time network constraints and limitations significantly differ from those that were assumed in the Integrated Forward Market, such that CAISO reliance on its real-time market would not be sufficient to maintain reliable grid operations."<sup>19</sup> The Commission agreed with SoCal Edison that the CAISO's proposed definition of transmission-related modeling limitation was too broad, but rejected SoCal Edison's requested modification to section 34.9.3, as too restrictive "because the definition would only be applicable to real-time occurrences where the CAISO has made use of all resources to maintain reliability."<sup>20</sup> The Commission further stated that:

to be consistent with sections 34.9.1 (System Reliability Exceptional Dispatches) and 34.9.2 (Other Exceptional Dispatch), the Commission directed the CAISO to modify section [34.9.3]<sup>21</sup> to acknowledge that Exceptional Dispatches will only be used in response to threatening/imminent reliability conditions for which the real-time market optimization and system modeling are either too slow or incapable of bringing the grid back to reliable operation in an appropriate time frame (*i.e.* less than 30 minutes).<sup>22</sup>

38. On rehearing, the CAISO states that it does not take issue with the Commission's directive to add language to section 34.9.3. However, the CAISO believes that the Commission should clarify that the CAISO will be permitted to issue Exceptional Dispatches prior to real time to address transmission related modeling limitation in the Full Network Model. The CAISO states that clarification is appropriate because it would be unreasonable to require the CAISO to wait until real time to issue an Exceptional Dispatch to address transmission-related modeling limitations in the Full Network Model if the CAISO has anticipated, prior to real time, that there will be threats to reliable grid operations that the CAISO cannot solve through real-time optimization and system modeling.

39. The CAISO also seeks clarification that the Commission directive in Paragraph 443, stating that "Exceptional Dispatches will only be used in response to threatening/imminent reliability conditions for which the real-time market optimization and system modeling are either too slow or incapable of bringing the grid back to reliable operation in an appropriate time frame (*i.e.* less than 30 minutes)," did not intend to imply that the CAISO's authority under section 34.9.1 or section 34.9.2 is limited to acting only in real time. The CAISO contends that it would be

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<sup>19</sup> June 25 Order, 119 FERC ¶ 61,313, at P 434-436.

<sup>20</sup> *Id.* P 442.

<sup>21</sup> P 443 of the June 25 Order contains a typographical error. The tariff section number should be "34.9.3."

<sup>22</sup> *Id.* P 443.

unreasonable to assume that the CAISO could not issue an Exceptional Dispatch during a System Emergency or to prevent an imminent System Emergency under these sections. Furthermore, the CAISO argues that the result is inconsistent with the September 21 Order stipulating that Exceptional Dispatches should be reserved for genuine emergencies.<sup>23</sup>

### **Commission Determination**

40. We grant clarification on the issue of the CAISO's ability to issue exceptional dispatches prior to the real-time market. In the June 25 Order, we explained that "[t]he Commission does not want to confine the CAISO to real-time solutions or comparing real-time conditions with planned conditions, especially if the CAISO is capable of resolving any reliability concerns before they reach the emergency stage."<sup>24</sup> Because exceptional dispatches are designed to cope with events that occur outside of normal market operations, in order to address specific reliability problems,<sup>25</sup> we clarify that the CAISO should not be prohibited, under sections 34.9.1 and 34.9.3, from issuing manual dispatch instructions during system emergencies, threatening/imminent emergencies, or to correct transmission-related modeling limitations. We further clarify that these sections are not limited to only real-time decisions but also allow the CAISO to respond to reliability conditions prior to real time. We find it reasonable for the CAISO to have the ability to manually dispatch units without delay or, at minimum, provide notice to those units that require more time to start-up and synchronize with the system to address certain reliability conditions prior to real time. For these reasons, we grant clarification on this issue.

41. We further clarify that it was not the intent of the Commission to limit the CAISO's authority under section 34.9.2 (Other Exceptional Dispatches) to only threatening/imminent reliability conditions, which the real-time optimization software cannot address. The CAISO listed three types of activities that it does not believe would be covered by section 34.9.2 under the Commission's current interpretation of that section. Specifically, the CAISO states that these activities include ancillary services testing, performance of pre-commercial operations testing for generating units and to accommodate ETCs or TOR) self-schedules. For instance, it explains that in order to honor ETC/TOR schedule changes, the CAISO will at times have to manually dispatch units under its exceptional dispatch authority because the real-time market optimization software is incapable of addressing such ETC/TOR schedule changes.

42. We accept the CAISO's rationale for having the flexibility to dispatch units under exceptional dispatch authority beyond those circumstances that threaten system reliability. We note that it was never the Commission's intent to limit that the CAISO's ability to honor these contracts to circumstances that threaten reliability. Thus, we grant clarification on this issue. We recognize that it may be necessary for the

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<sup>23</sup> CAISO cites to September 21 Order, 116 FERC ¶ 61,274 at P 267.

<sup>24</sup> June 25 Order, 119 FERC ¶ 61,313 at P 442.

<sup>25</sup> See September 21 Order, 116 FERC ¶ 61,274 at P 245-265.

CAISO to issue exceptional dispatch instructions to address specific reliability issues that are outside of normal market operations. Notwithstanding, we note that the CAISO must use all resources made available to them, as appropriate, prior to dispatching units under its exceptional dispatch authority. We also note that the CAISO, consistent with previous findings, must publish all instances of exceptional dispatch on its OASIS web site beginning on the effective date of MRTU Release 1.<sup>26</sup>

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<sup>26</sup> Id. P 267.

## Attachment 2

### List of Acronyms

CAISO	California Independent System Operator
DEB	Default Energy Bid
FERC	Federal Energy Regulatory Commission
FMU	Frequently Mitigated Unit
FNM	Full Network Model
ICPM	Interim Capacity Procurement Mechanism
IEP	Independent Energy Producers Association
IFM	Integrated Forward Market
LMP	Locational Marginal Price
LMPM	Local Market Power Mitigation
LSE	Load Serving Entity
MOWD	Must Offer Waiver Denials
MRTU	Market Redesign and Technology Upgrade
MSC	Market Surveillance Committee
MW	Megawatt
MWh	Megawatt hour
PER	Peak Energy Rent
RA	Resource Adequacy
RMR	Reliability Must-Run
RUC	Residual Unit Commitment
WPTF	Western Power Trading Forum

## **Attachment D**

FINAL

**Opinion on “Exceptional Dispatch: Options for Market Power Mitigation  
and Supplemental Pricing under MRTU”**

by

**Frank A. Wolak, Chairman**

**James Bushnell, Member**

**Benjamin F. Hobbs, Member**

**Market Surveillance Committee of the California ISO**

**May 7, 2008**

**1. Introduction**

The California Independent System Operator (CAISO) has asked the Market Surveillance Committee (MSC) to comment on its proposal for market power mitigation and pricing for exceptional dispatch instructions.<sup>1</sup> The current Market Redesign and Technology Upgrade (MRTU) tariff allows the ISO operators to issue Exceptional Dispatch (ED) instructions to move dispatchable resources that are necessary to maintain reliable real-time system operation that are not dispatched through the market software. Exceptional Dispatch instructions can be applied to all types of generation units in the CAISO Control Area, including those with a Resource Adequacy (RA) contract, an Interim Capacity Payment Mechanism (ICPM) designation, and a Reliability Must-Run (RMR) unit designation, as well as resources without one of these contracts or designations. For the purposes of this opinion, we will refer to this last group of dispatchable resources as non-RA resources. The rationale for an ED instruction is that there may be real-time operating constraints created by certain system conditions that are not currently embodied in the market software that require the CAISO operators to move certain generation units. An ED instruction is the mechanism used to accomplish this.

MSC members have discussed these issues with CAISO staff during several conference calls and in-person meetings over the past three months. At the April 11, 2008 joint MSC/Stakeholder meeting, several stakeholders provided comments on this topic and the MSC discussed these issues with stakeholders and CAISO staff. A joint MSC/Stakeholder conference call was held on April 17, 2008 so that two MSC members could hear more comments from stakeholders and CAISO staff on the CAISO’s ED proposal.

The current MRTU tariff allows resources dispatched for energy under an ED instruction to be paid the higher of: (1) their offer (Energy Bid price), whether submitted to the integrated forward market (IFM), the reliability unit commitment (RUC) process, or the real-time (RT) market, (2) their Default Energy Bid (DEB) price, if they have no offer in the markets, or (3) the real-time (RT) locational marginal price (LMP) at their node. This higher-of pricing rule is necessitated by the fact that the CAISO may need to issue an ED instruction to a unit with an offer price above the LMP at its location. Under the current MRTU tariff, ED instructions are not subject to the MRTU local market power mitigation mechanism or reliability requirement determination process. Consequently, the only limit on the price paid to an accepted ED

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<sup>1</sup> This proposal “White Paper: Options for Market Power Mitigation and Supplemental Pricing” is available at <http://www.caiso.com/1c89/1c89d76950e00.html>

instruction under the current MRTU tariff is the CAISO's energy bid cap. This has led to concerns among certain stakeholder groups and the CAISO's Department of Market Monitoring (DMM) that generation units with local market power that know they are needed for an ED instruction will submit an Energy Bid price equal to the CAISO's offer cap.

Although the CAISO expects to use ED instructions very rarely and unpredictably, there is still considerable uncertainty about the potential need to rely upon ED instructions, particularly during the initial phase of operation of the MRTU.<sup>2</sup> The primary concern of the CAISO is localized constraints that are not currently modeled in the CAISO's IFM, HASP, and RT market software. These can arise for a variety of reasons ranging from forced transmission and generation outages, voltage stability constraints, and 30-minute dispatched energy requirements in the South of Path 26 zone. It does not take too many hours of operation at a price equal to the \$500/MWh, \$750/MWh, or \$1000/MWh energy offer cap because of one of these unmodeled constraints for a generation unit owner to earn a substantial sum of money.

The CAISO is also concerned that the absence of a market power mitigation mechanism to ED instructions for non-RA units could provide an incentive for a supplier not to accept an ICPM designation. The unit owner could find that it earns more revenues through RUC availability payments, unmitigated ED instructions, and other energy and ancillary services market revenues than it would earn under an ICPM designation because, under such a designation, it no longer receives RUC availability payments and is subject to a must-offer obligation that makes it more costly for the unit to withhold energy and ancillary services from the CAISO's markets. Under the current CAISO tariff, a generation unit owner has less of an incentive to refuse an ICPM designation because the associated payments would be in addition to any revenue a supplier might receive from exercising substantial local market power under ED instructions. Although the supplier would still give up RUC availability payments and be subject to a must-offer obligation by accepting the ICPM designation, there may be circumstances where a supplier might refuse the ICPM designation under the current MRTU tariff. However, these circumstances are very unlikely to arise if the CAISO's resource adequacy program works as designed, because a non-RA unit is unlikely to receive significant revenues from RUC availability payments under a properly functioning resource adequacy program.

For the reasons described above, the CAISO proposes to subject ED instructions from all generation resources to a local market power mitigation mechanism. In designing a local market power mitigation mechanism for ED instructions, the CAISO faces two sets of constraints: (1) allowing a resource owner the opportunity to recover at least the cost of accepting an ED instruction, and (2) limiting the revenues the resource owner receives for ED instructions and other CAISO markets sales within a one month time period so that the unit owner will accept an ICPM designation if one is offered. The CAISO's market power mitigation mechanism would not apply to ED instructions issued: (1) for system-wide energy requirements, or (2) to resolve congestion on transmission constraints that have been deemed to be competitive transmission

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<sup>2</sup> CAISO is also under FERC guidance to ensure that Exceptional Dispatch does "not become a frequent occurrence." See page 267 in "California Independent System Operator Corporation, Order Conditionally Accepting the California ISO's Electric Tariff Filing to Reflect Market Redesign and Technology Upgrade (Tariff Amendment No. 44 and Proposed MRTU Tariff) (September 21, 2006)", in Docket Nos. ER06-615-000 and ER02-1656-027, et al.

paths by the DMM (as defined in the automated local market power mitigation procedures for the IFM and real-time market). Because RA units typically have a contractual payment that provides fixed cost recovery, under the CAISO's proposal RA units subject to mitigation will receive the higher of their DEB and the LMP at their location for responding to an ED instruction.

The CAISO proposes two options for local market power mitigation of ED instructions to non-RA units. The first will cap the price a resource owner receives at the higher of the LMP at that unit's location and the DEB plus the \$24/MWh frequently mitigated unit (FMU) bid adder. Because ED instructions are issued outside any of the CAISO's formal markets, this DEB plus \$24/MWh adder will not set the LMP at that supplier's location. This adder would be paid for all energy provided by the unit above its minimum output level, what the CAISO tariff calls  $P_{\min}$ . Under this proposal, the bid adder would no longer be applied within any 30-day period beginning with an ED instruction where the total ED instruction revenues less the total MWh of ED instructions valued at the DEB price exceeds the ICPM monthly payment for the total ED MWh for the 30-day period. The second option would allow unmitigated ED instructions to non-RA units to be paid as-bid, but *also* be subject to this same monthly maximum payment. Specifically, in any 30-day period beginning with an ED instruction mitigation to the higher of the DEB or LMP at the resource owner's location would be applied for the remainder of the month as soon as total ED instruction revenues less total MWh of ED instructions valued at the DEB exceeds the monthly ICPM payment for the total ED MWh.

We divide our comments of the CAISO's proposal into two parts. First, we consider the question of whether ED instructions to non-RA units should be subject to local market power mitigation. We believe that there is a significant risk under the current MRTU tariff that a resource owner could exercise substantial local market power for a sustained period of time. For this reason, we favor subjecting ED instructions to a local market power mitigation mechanism. Second, we consider the appropriate form that mitigation should take. One major concern is that the market power mitigation mechanism may distort a unit owner's decision to accept a voluntary ICPM designation if one is offered. This is one reason why we support the 30-day cap on total ED payments in excess of the total MWh of ED instructions valued at the DEB.

We also strongly recommend that the CAISO minimize the frequency of ED instructions by including all constraints that are reasonably predictable and can be modeled in the full network model used to run the DA, RUC, HASP, and RT markets. Our understanding is that in other RTO markets, it is often the case that recurring constraints are not modeled and are instead handled as ED instructions by operators, and that such omissions frequently result in distortion of LMPs. A major purpose of locational marginal pricing is to provide signals that reflect the full economic value to the system of withdrawing energy at each location in the network, and a failure to include predictable constraints undermines this purpose. We strongly recommend that CAISO operations staff record and track the specific causes of every ED instruction at a level of detail that will allow the CAISO to ascertain whether the network model used in the market software includes all the network constraints that it should. If certain unmodeled constraints lead to persistent ED instructions, every effort should be made to modify the network model so that these constraints are either directly incorporated or satisfied as an indirect result of other constraints. For some constraints, it may also be appropriate for the CAISO operations staff to

undertake studies to assess the economic and reliability consequences of their omission upon LMPs.

Our support of the CAISO's market power mitigation proposal for non-RA units relies on ED instructions occurring infrequently and unpredictably. Although we expect that during the initial stages of market operation under MRTU, the CAISO may need to make more frequent use of ED instructions because of unexpected glitches in the market software, once this initial market start-up phase is completed, ED instructions should occur rarely.

## **2. Rationale for Local Market Power Mitigation Applied to ED Instructions**

On the need for a local market power mitigation mechanism for ED instructions, we refer to the Federal Energy Regulatory Commission's (FERC) standard for granting market-based pricing authority. This FERC policy states that in order for a supplier to have market-based pricing authority it must demonstrate that it does not possess the ability to exercise unilateral market power or that this ability to exercise unilateral market power has been adequately mitigated. The circumstances leading to an ED instruction will often result in one or a small number of suppliers able to provide the energy required by the ED instruction, which is equivalent to these suppliers possessing significant unilateral market power. Consequently, we believe that it is consistent with the FERC policy for the CAISO to subject ED offers to local market power mitigation.

Following this same logic, we do not believe it is necessary to subject ED offers to mitigation in cases where there is an *a priori* assumption that adequate competition exists to provide this energy. Under the current MRTU tariff, offers into the DA-IFM to satisfy a system-wide energy need or resolve congestion on a competitive transmission path are not subject to local market power mitigation. Thus, the CAISO's proposal not to mitigate ED for energy that is dispatched to meet system-wide energy needs or resolve congestion on competitive transmission paths is consistent with the CAISO's policy for supply offers into its energy markets.

We also question the logic incorporated in the current MRTU tariff for differential treatment of suppliers in terms of when they are subject to local market power mitigation depending on the circumstances under which an offer to supply energy is accepted. Attempts to pay substantially different prices for energy supplied at the same location in the transmission network during the same hour, but called upon for different reasons, creates incentives for suppliers to take actions to receive the higher of the two or more prices for their energy. In the present case, not subjecting ED energy to local market power mitigation, but subjecting energy taken from the CAISO's DA, HASP or RT markets to local market power mitigation, can create incentives for suppliers to bid and operate their units to cause the CAISO to require ED energy. Subjecting both ED energy and energy sold in the CAISO's markets to local market power mitigation limits this incentive.

This logic for subjecting ED offers to local market power mitigation applies regardless of how many times an individual unit is called to provide ED energy. Consistent with the FERC standard for granting market-based pricing authority, if a supplier possesses local market power, it should be subject to mitigation. That said, it is important to note that the exceptional dispatch

circumstance presents an unusual case for local market power mitigation. The conventional mitigation process mitigates the *offers* of units, but not necessarily the *prices* earned by those units. To the extent that prices reflect local or regional scarcity, mitigated units are able to earn revenues that reflect scarcity conditions. While units mitigated under exceptional dispatch can also earn the LMP, we are concerned that this LMP will not reflect the conditions or constraints that created the need for the exceptional dispatch. Because exceptionally dispatched units are, by definition, being called upon to meet constraints that are not modeled, or priced, it is reasonable to assume that the LMP for these units may often be biased downward relative to the hypothetical LMP that would include these constraints. It is also reasonable to assume that these same constraints bestow local market power on those same units. In other words, the fact that a unit is exceptionally dispatched implies that, first, its LMP may not reflect the true value of energy injected at that location in the network and, second, the unit possesses significant local market power. A market power mitigation mechanism needs to balance these two considerations.

As noted earlier, the CAISO expects that ED instructions will be infrequent and unpredictable. To the extent that ED instructions are persistent and predictable, the CAISO should examine the network model that it uses to operate the DA-IFM, HASP and RT markets and the constraints that it imposes on the RUC process and its ancillary services purchases. A number of stakeholders have noted that the CAISO could reduce the likelihood of calling ED instructions by purchasing more ancillary services, creating new ancillary services products (such as a 20-minute or 30-minute operating reserve), and by setting ancillary services requirements locationally. The CAISO is currently evaluating the ranking of these and other options in its roadmap for market enhancements. The MSC has long expressed a desire to give the CAISO operators greater discretion to purchase additional ancillary services and impose locational constraints in order to reduce the need to rely on ED instructions and other costs that are recovered through uplift payments rather than through market-clearing pricing mechanisms. In some cases, this greater discretion in ancillary services procurement may allow CAISO operators to eliminate the need to issue an ED instruction.

### **3. Payments for ED Energy**

A payment for providing ED energy should at the very least recover the supplier's variable cost and would ideally capture the market-value of the power supplied by that unit. Paying the maximum of the unit's DEB and the LMP at the unit's location meets these requirements as long as: (1) the resource owner does not have to bear some unexpected cost not included in the supplier's DEB to provide the ED energy and (2) the LMP is not biased downward to a significant degree because the reliability constraint that necessitated the ED instruction is not modeled in the IFM. The CAISO accounts for the former possibility in several ways. First, the cost-based option for setting DEBs for a generating unit equals its variable costs plus a 10 percent adder. Alternatively, generators may select an LMP-based option under which their DEB could be substantially higher than their cost-based DEB. Finally, any generator that feels either of these two options does not reflect the unit's actual variable cost (including potential opportunity costs) may select a negotiated DEB option, under which a special negotiated DEB is established through an independent entity contracted by the CAISO, currently Potomac Economics.

The more difficult question is how much revenue a unit should receive in excess of variable cost in order to reflect its scarcity value and for purposes such as fixed cost recovery. As noted earlier, one consideration of the amount of revenue in excess of variable cost an ED instruction should receive is the potential for those revenues to distort the decision to accept an ICPM designation. If the unit owner expects to receive more benefits from not being subject to the CAISO's must-offer requirement and receiving RUC availability payments than it does under ICPM, the unit owner is likely to refuse this designation.

The CAISO's proposal to cap the monthly ED payments in excess of the DEB at the monthly ICPM payment is very likely to be sufficient to cause suppliers to accept the ICPM designation voluntarily. The CAISO's proposal of paying the higher of the LMP at the supplier's location and the DEB plus the FMU bid adder for each MWh called to provide ED energy from a non-RA unit will provide some fixed cost contribution. However, it is unclear if this mechanism provides sufficient fixed cost recovery for the unit to continue operation. This is an issue only if it is the mitigation, combined with any shortcomings in the pricing model, that is denying the unit that opportunity. Nevertheless, it is important to recognize that even non-RA resources have many other opportunities to earn fixed cost recovery from the CAISO market. These units can sell long-term energy and ancillary services contracts to loads both in and outside of California. They can sell energy in the CAISO's DA-IFM, HASP and RT markets, as well as the DA and HA ancillary services markets. Finally, if non-RA units do not earn sufficient fixed-cost recovery to remain in the market, they can always mothball the unit or make a cost-of-service filing with FERC to recover these costs through such mechanisms as an RMR contract.

As stated earlier, the problem here is to balance consideration of mitigation of local market power with the fact that the exceptional dispatch may reflect a distortion in the LMP earned by the dispatched units. On the one hand, we believe these units should have the opportunity to earn a market value that may not be reflected in the LMP, but on the other hand these units should not be allowed to excessively abuse their favorable local position. Last, it is at present unclear how common or predictable exceptional dispatch orders may be. A mitigation mechanism should be flexible enough to apply to both idiosyncratic and chronic circumstances.

Consequently, we support the proposal to leave unit offers unmitigated subject to the 30-day bound on payments in excess of the unit's DEB. If exceptional dispatch instructions turn out to be truly exceptional, then the mitigation cap is unlikely to be reached. If, however, some units are able to predict repeated exceptional dispatch conditions, the cap bounds the extent to which a unit can take advantage of its local market power. In the more extreme and chronic circumstances, a unit will likely be offered (and accept) an ICPM designation after its cap is reached. If the CAISO does adopt this proposal, we recommend the CAISO operators also incorporate economic considerations into their selection of units for ED instructions. Specifically, if there are two or more units able to satisfy an ED instruction, the CAISO operators should choose the one that can satisfy this ED need at least cost. To ensure that economic considerations are accounted for in ED instruction decisions, the CAISO management should require CAISO operators to record the price, quantity, and generation unit name for other available and effective ED offers that were not accepted.

The CAISO's market power mitigation mechanism for ED energy together with revenues from the ancillary services and energy markets should provide sufficient fixed cost recovery for the majority of non-RA units that provide ED energy during the year. RA units typically receive payment for providing RA capacity, so that a larger fraction of these units should earn enough revenues to remain financially viable. Non-RA units that are frequently subjected to ED instructions are also strong candidates for an ICPM designation or an RA contract in a future period, both of which will provide payments for fixed-cost recovery. However, those units that do not sell RA-contracts and are not frequently called for ED instructions should be able to mothball or retire unless the CAISO offers them an RMR contract. As we have noted in a number of previous opinions, there may be some circumstances where a cost-of-service contract may be the least cost (to consumers) remedy for a generation unit owner that possesses substantial local market power when providing ED energy but is not asked to provide ED energy frequently enough to achieve full cost recovery under the CAISO's market power mitigation mechanism.

#### **4. Concluding Comments**

For the reasons described above, we believe it is fully appropriate to apply a local market power mitigation mechanism to the supply offers of resources that receive ED instructions. There is no reason why non-RA units should be exempt from local market power mitigation of energy sales. Having said that, we also support a market power mitigation mechanism that provides an opportunity for units to earn revenues that reflect market values not necessarily contained in that unit's LMP. In order to balance these considerations, we support the proposal to leave unit offers unmitigated until the revenues earned by a unit exceed a threshold linked to the ICPM capacity payment. We do not believe it is necessary to set the price paid for ED instructions so high that all generation units can achieve fixed cost recovery from selling ED energy and energy and ancillary services in the CAISO's market. We also recommend that the CAISO make every effort to reflect all significant and predictable constraints in its network model so that ED instructions are truly that — exceptional — and not a significant and recurring source of revenue for generators.

# Attachment E

# Memorandum

**To:** ISO Board of Governors  
**From:** Udi Helman, Principal Market Economist  
Anjali Sheffrin, Chief Economist / Director, Market and Product Development  
**Date:** May 13, 2008  
**Re:** *Decision on Exceptional Dispatch*

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***This memorandum requires Board action.***

## EXECUTIVE SUMMARY

Under the Market Redesign and Technology Upgrade (MRTU) Tariff, an Exceptional Dispatch is a commitment or dispatch directed by grid operators that is not determined through the market software. These are manual instructions to generators (or participating loads) to start-up, shut-down, provide incremental energy, or provide decremental energy.<sup>1</sup> Typically, an Exceptional Dispatch is required to address a transmission constraint or generation unit operating constraint that was not captured in the models used in the Integrated Forward Market (IFM), the Reliability Unit Commitment (RUC) or the Real-Time Market (RTM), and may be needed to avoid a system emergency.<sup>2</sup> During the recent months, pricing for Exceptional Dispatch has been the subject of two stakeholder processes. The first, concluded in January 2008, examined the market power of generators subject to Exceptional Dispatch, and resulted in a proposal by the CAISO Department of Market Monitoring (DMM) to modify the current MRTU tariff provisions to mitigate Bids for certain Exceptional Dispatches. The second, begun in March of this year, examined options for altering or augmenting the mitigation rules such that certain suppliers subject to mitigation could collect additional revenues and resulted in the pricing proposal described in this memorandum. Management determined to combine these two efforts into one proposal to the Board.

In brief, under the combined proposal, Management proposes to apply mitigation to all Bids of units subject to Exceptional Dispatches in specified situations that could result in locational market power and would not apply for competitive system conditions. However, some stakeholders have concerns that the Bid mitigation may leave certain units only covering their short-term variable costs and a subset of these resources may not have other sources of revenues towards coverage of fixed costs, such as Resource Adequacy (RA) contracts, Reliability Must Run (RMR) Contracts or an Interim Capacity Pricing Mechanism (ICPM) designation. Recognizing such units may

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<sup>1</sup> Resources with Participating Generator Agreements (PGAs) or Participating Load Agreements have an obligation to comply with Exceptional Dispatch. Resources under a Metered Sub-System Agreement (MSSA) only have this obligation during an emergency. Other resources do not have an obligation.

<sup>2</sup> Section 34.9 of the MRTU tariff sets forth the CAISO's authority to issue Exceptional Dispatches. Not all Exceptional Dispatches are to avoid a system emergency. Other reasons for Exceptional Dispatch include pre-commercial testing and Ancillary Services testing.

be needed to prevent or respond to System Emergencies, Management proposes to allow such resources to obtain some level of fixed cost recovery when they are subject to Bid mitigation. Specifically, such resources will be eligible for a "relaxed" mitigation rule that allows payment of up to their *unmitigated* market Bid until revenues reach a revenue cap that is equivalent to a monthly ICPM payment towards fixed cost recovery. Once the revenue cap is reached, the resource's Bids will be subject to mitigation for the remainder of the month. Note that resources will always keep any revenues earned from LMPs at their locations; this "relaxed" mitigation rule allows them to augment the market revenues that they would have otherwise earned while subject to mitigation. Finally, this proposal has a staged implementation. As noted, Exceptional Dispatches of primary concern to management are those that result from operating constraints that are not fully reflected in the network models underlying the MRTU markets. Management thus recommends that during the initial two months of MRTU, the CAISO use a more restrictive approach to providing supplemental payments to eligible resources, such that their Bids subject to mitigation will be augmented with a \$24/MWh Bid Adder which would allow supplemental revenues to accrue at a slower rate. After this initial two-month time period, the "relaxed" mitigation will be implemented. This phased approach will allow the CAISO to learn from actual market operations and to enhance the market models to minimize the need for Exceptional Dispatch. While the CAISO is committed to addressing modeling issues prior to start up, it is very likely that additional issues will arise during the start-up of MRTU. A two-month "grace period" will serve as a safeguard against extraordinary costs in the event of frequent Exceptional Dispatches during the initial two months of operations.

## **MOTION**

***Moved, that the ISO Board of Governors approves the proposal for market power mitigation and revised pricing of Exceptional Dispatch as described in the memorandum dated May 13, 2008, and related attachments; and***

***Moved, that the ISO Board of Governors authorizes Management to make all the necessary and appropriate filings with the Federal Energy Regulatory Commission to implement the proposal for market power mitigation and revised pricing of Exceptional Dispatch.***

## **ISSUE STATEMENT**

### **(a) Proposed Market Power Mitigation Rules for Exceptional Dispatch**

As noted, the first phase of the stakeholder process focused on devising mitigation rules for Exceptional Dispatch Bids. When the MRTU Tariff was being developed, the MRTU software was still in development and it was expected that Exceptional Dispatch would be an infrequent and typically unpredictable event. Therefore, the Tariff allows that resources subject to Exceptional Dispatch would be paid the higher of their submitted Bid into the daily markets or the LMP, or if they had not submitted a Bid, the higher of their Default Energy Bid (DEB) or the LMP. However, issues associated with the potential for exerting locational market power, that is, when suppliers would anticipate that their Bids would be subject to Exceptional Dispatch, and, therefore, submit extremely high Bids, became evident in stakeholder discussions over the proposed pricing rules for the ICPM that took place in late 2007.<sup>3</sup> One issue raised during these discussions was whether non-RA resources receiving a high (unmitigated)

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<sup>3</sup> The ICPM is CAISO's proposed mechanism for procurement of backstop capacity from resources that do not already have an RA or RMR contract under MRTU. ICPM procurement will take place in two timeframes: the Type 1 procurement will backstop the forward (bilateral) RA market; Type 2 procurement will be in response to Significant Events that are enduring, such as major generation or transmission outages, that take place in real-time operations and do not allow for all reliability criteria to be met with the available RA resources. CAISO has proposed the same ICPM price for both types of procurements: the higher of \$41/kW-year or a \$/kW-year rate based on a unit's actual going forward costs as filed at FERC. The final ICPM price and designation rule has yet to be determined by FERC. The ICPM proposal as filed allows a generator to choose whether to accept designation. The expectation is that the price offer for

Bid offer price through Exceptional Dispatch would voluntarily accept an ICPM designation. Those discussions, and further inquiries into the capabilities of the MRTU software, especially upon market start-up, prompted a re-examination of the market power that could be exerted by resources subject to Exceptional Dispatch in some circumstances. This instigated the stakeholder process and market power mitigation proposal by the DMM.<sup>4</sup> The mitigation proposal was presented on an informational basis to the Board at the January 2008 meeting.

Upon review, and consideration of the uncertainty about the frequency and predictability of Exceptional Dispatch, the CAISO has determined to retain the proposed mitigation rules, which are briefly summarized here, but also to augment them as discussed in the next section. Specifically, units subject to mitigation would receive the higher of:

- The unit's Default Energy Bid (DEB) , or
- The LMP at their location.

The mitigation rule would apply to Exceptional Dispatches for energy needed for:

- Reliability requirements related to non-competitive transmission constraints;<sup>5</sup>
- Ramping units up from minimum operating levels to minimum dispatchable levels in order to protect against reliability contingencies that are not directly incorporated or sufficiently met by the MRTU software; and
- Other special unit-specific operating or environmental constraints not incorporated in the MRTU model.<sup>6</sup>

Consistent with the rules for mitigation of market offers, the mitigation rule would not apply to Exceptional Dispatches for energy needed for:

- System-wide energy requirements; and
- Relief of congestion on competitive transmission constraints.

As explained by DMM, the above categories for application of mitigation were developed based in part on input from CAISO Operations staff on the potential reasons that Exceptional Dispatches may be issued under MRTU, and the ability of CAISO Operators to identify and log the reason for Exceptional Dispatches into various categories.<sup>7</sup> The mitigation of generators that are identified as having market power on non-competitive transmission constraints is consistent with the market treatment of such Bids through the automated Market Power Mitigation process. The other two situations were identified as ones in which particular generators would have knowledge that due to unit operating constraints not represented in the IFM, they would likely be Exceptionally Dispatched subsequent to the Day-Ahead Schedule, thus allowing the supplier to raise its Bid accordingly.

Under the proposed rules, generators would always be paid the higher of LMPs or the mitigated Bid. Hence, in principle, no supplier should receive less than its short-term variable costs of operation and may receive higher than that. Exceptional Dispatch to support reliability could occur during many different market and system conditions. In some circumstances, such as outages or deratings of large generators or transmission facilities, LMPs should be high enough to provide appropriate market compensation to most generators subject to Exceptional Dispatch even with mitigation. CAISO will also be introducing scarcity pricing within one year of MRTU start-up, which may further increase LMPs above the offers of marginal units at those times when most units are likely to be committed.

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designation will be sufficient that any generator will accept the offer voluntarily. The filed proposal can be found at <http://www.caiso.com/1bc5/1bc5db284cc80.html>.

<sup>4</sup> This process included several papers and several stakeholder conference calls to discuss the DMM mitigation proposal for Exceptional Dispatch. These documents can be found at <http://www.caiso.com/1c89/1c89d76950e00.html>

<sup>5</sup> DMM presentation on Competitive Path Assessment can be found at: <http://www.caiso.com/1f52/1f52bd74746f0.pdf>

<sup>6</sup> Certain Exceptional Dispatches will not be eligible for bid-based compensation, e.g. pre-commercial testing and Ancillary Services testing. Any such Exceptional Dispatches will get the higher of the LMP or DEB.

## **(b) Rationale for Supplemental Payments to Augment Proposed Mitigation Rules**

While Load Serving Entity stakeholders supported the mitigation proposal, most generator stakeholders raised concerns about whether CAISO's ability to call on resources through Exceptional Dispatch while mitigating their Bids to variable costs would suppress forward RA prices and affect RA procurement incentives, encourage excessive CAISO use of such dispatch, and leave certain infrequently operated generators unable to recover annual fixed costs, especially generators without capacity contracts. As noted, Exceptional Dispatch is expected to be an infrequent measure and as such is unlikely to have significant impacts on market prices or the revenues of specific generators. However, in response to generator stakeholder concerns, CAISO initiated a further stakeholder process to examine whether, if Exceptional Dispatch Bids are mitigated, modifications to the mitigation or other pricing rules were appropriate to compensate for some effects on prices and revenues, notably to provide a mechanism for contribution to fixed cost recovery. Fixed costs are recovered both through energy and ancillary service market revenues (forward and spot), when a generator earns more than its variable costs, and through capacity payments, such as through RA contracts or ICPM designations (or through an RMR contract that uses an expectation of future market revenues when establishing the contract price to cover a unit's annual fixed revenue requirements).

CAISO did agree with certain stakeholders that the combination of mitigation and Exceptional Dispatch would at times suppress spot market revenues. The incremental energy from Exceptional Dispatch, which is settled financially out-of-market, will be considered in the real-time market as effectively zero price energy, thus lowering the LMP. In general, resources with types of capacity contracts – RA, RMR or ICPM – have a guaranteed contribution to fixed cost recovery and should be less susceptible to the market revenue impact of infrequent Exceptional Dispatches. For the remaining resources on the Grid without any such capacity contracts, mitigation to short-term variable cost could indeed affect recovery of fixed costs for individual plants (although not necessarily for the portfolio of plants owned by a firm). To compensate for this type of situation when Bids *are* cleared through the markets, there is a Bid Adder of \$24/MWh for Frequently Mitigated Units (FMU) that have no or partial unit RA or ICPM contracts. This adder can set the LMP. Also, units without RA or ICPM contracts can submit Bids up to \$250/MWh in the RUC for their capacity. Thus, an additional opportunity to earn revenues towards fixed cost recovery is reasonable in out-of-market dispatches where mitigated Bids may only cover variable costs for resources without capacity contracts and also to reflect the reliability benefits offered by such resources. There was substantial stakeholder acceptance of this point, and the second phase of the stakeholder process was primarily focused on examining supplementary pricing options, such as a Bid Adder or capacity payment or other mechanism. These are discussed in the next section.

It is worth noting that CAISO has filed at FERC for a backstop capacity payment triggered by real-time reliability events, under ICPM, as a mechanism for providing a contribution to non-RA units towards recovery of going forward fixed costs. An ICPM designation, as filed with FERC, is for a minimum of one month and requires the designated resource to offer into the MRTU markets for the period of designation. In some circumstances, a transmission or generation outage or some other event may require CAISO to start-up or redispatch non-RA units through Exceptional Dispatch and if the situation is considered an enduring Significant Event (a defined term under ICPM), the CAISO may also subsequently offer them an ICPM designation. However, many Exceptional Dispatches will not be correlated with enduring Significant Events but will rather be occasional manual actions by the grid operators. Hence, while some suppliers have argued both in this stakeholder process and in the ICPM proceeding currently before FERC that *any* Exceptional Dispatch of a non-RA unit should lead to an ICPM designation, CAISO has not agreed with that view. However, as discussed below, CAISO has proposed that the ICPM monthly payment should be a cap on the supplemental revenues accruing under Exceptional Dispatch, in recognition that the ICPM payment, as approved by FERC, can be considered a reasonable contribution towards fixed costs. Moreover, as noted, even when subject to mitigation, a resource under Exceptional Dispatch will never be prevented from retaining the market revenues at its location during the period of Exceptional Dispatch.

A few other issues were raised in the second phase of the stakeholder process related to the mitigation. Notably, some stakeholders argued that the DEB does not adequately provide mechanisms for recovery of certain types of short-term variable costs that might accrue under Exceptional Dispatch. For example, Reliant is concerned about recovery of "intra-day gas costs, which consist of LDC scheduling imbalance charges, firm access rights costs and gas costs for that day." Reliant requests that if mitigation is imposed, the CAISO accept additional information ex post on such costs to supplement the DEB calculation. Reliant argues that the ultimate compensation should be decided on the basis of empirical evidence that a resource subject to mitigation is not sufficiently recovering variable costs. CAISO feels that this issue has been decided in prior FERC orders on the definition of the DEB and is outside the scope of the present process.<sup>8</sup>

## OPTIONS FOR SUPPLEMENTAL PRICING

Over the course of the stakeholder process to consider supplemental pricing, CAISO considered a number of options, including:

- (a) not mitigating the Bids of resources without capacity contracts;
- (b) allowing such resources to get paid their Bids but limiting supplemental payments (over revenues that would accrue if mitigated) with a revenue cap (which was called "relaxed" mitigation); and
- (c) mitigating Bids but providing a specific supplemental payment based on either (i) a daily capacity payment similar to the current Reliability Capacity Services Tariff (RCST) and proposed Transitional Capacity Pricing Mechanism (TCPM) recently filed with FERC) or (ii) a Bid Adder similar to the FMU Bid Adder described above.

After consideration of the advantages and disadvantages of each option, and getting stakeholder comments on a White Paper and subsequent Straw Proposal, CAISO concluded that two options were most viable.

The first option was to mitigate Bids to the DEB but then add the FMU Bid Adder to the final payment. As noted, this Bid Adder is \$24/MWh and has been approved by FERC for use in market price setting. If used for Exceptional Dispatch, the payment would be the higher of the LMP or the DEB plus the Bid Adder. Hence, if the LMP was \$40/MWh and the mitigated unit's DEB was \$30/MWh, its payment would be the higher of \$40/MWh or \$54/MWh (\$54 = \$30 + \$24). After some consideration, CAISO also determined that this supplemental payment should be subject to a revenue cap equal to the monthly ICPM payment. This would ensure that this resource would accept the ICPM offer if made subsequently to Exceptional Dispatch. Importantly, the revenue cap does not restrict the mitigated resource from collecting LMP revenues in excess of its DEB, it only cuts off the additional Bid Adder revenues if Exceptional Dispatches are frequent and allow the supplemental revenue cap to be reached.

The second option was simply a "relaxed" version of the first: the resource would be paid its unmitigated Bid (which could thus be up to the Bid Cap, which will be \$500/MWh at the start of MRTU) for each hour of Exceptional Dispatch. Any revenues above the mitigated level, as with the Bid Adder option, would accrue against the revenue cap equal to the monthly ICPM payment. CAISO introduced this option in the second round of stakeholder discussion because it offers an opportunity for a resource to much more rapidly accrue a supplemental payment.

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<sup>8</sup> In the September 21, 2006 Order, FERC stated that the variable cost plus 10% option would be sufficient to cover the various operating costs and "While this option accounts for a supplier's operating cost, we note that a supplier whose bid is mitigated to cost plus ten percent will also have an opportunity to recover its fixed costs during times when it is not the marginal unit that sets the market clearing price in the market." FERC also cited lack of evidence presented for the argument that the 10% adder would be insufficient. The FERC order can be found at: <http://caiso.com/1878/1878f9725ef80.pdf> with specific reference to paragraph 1045 for the FERC Determination. In addition to the Variable Cost Option for determining a DEB, resources can choose an LMP based DEB or the Negotiated Rate Option, which allows for a unique DEB to be negotiated with an independent entity.

Because it is possible to reach the ICPM payment in a relatively few hours, this approach is similar in some circumstances to supplier views, as expressed in filings to FERC, that an Exceptional Dispatch should lead automatically to an ICPM designation of one or more months. As noted above, in its filings to FERC, CAISO has argued against such a "hard trigger" for ICPM designation, since not all Exceptional Dispatches are evidence of an enduring "Significant Event." However, this relaxed mitigation pricing rule could essentially lead to the same financial outcome if the unit being Exceptionally Dispatched is uniquely needed by grid operators for locational reasons and can thus submit a high Bid.

One disadvantage of the second option, when compared to the first, is that there is remaining uncertainty about the scope of Exceptional Dispatch and at least in some circumstances, where there are few competing units, a resource could garner significant rents not consistent with the market and system conditions at the time. In fact, in what are likely to be rare cases, a resource could earn the ICPM revenues under Exceptional Dispatch in a short period and then be offered the ICPM payment for a subsequent month if CAISO declares a Significant Event, thus earning twice the ICPM payment in little more than one month. On the other hand, in locations where multiple units might be available for Exceptional Dispatch, this bid-based approach will allow CAISO operators to select from alternative competing bids to meet operational needs, and so the additional revenues may accrue more slowly.

Another concern that is more accentuated under the second option is that in some situations, a resource subject to Exceptional Dispatch may reject an ICPM offer of designation for some period if it calculated that it could earn twice the ICPM monthly rate in little more than a month. This is certainly more likely under the second option. However, to obtain the Exceptional Dispatch payment, a resource must submit a Bid into the markets; hence it would be eligible for selection through the markets and at least remain visible to grid operators during the early phase of an ICPM Significant Event. Ultimately, a resource that chose to delay its acceptance of an ICPM offer would take the risk that CAISO could find other resources for ICPM designation that meet the reliability needs.

Under either supplemental pricing option, Exceptional Dispatch revenues subject to the revenue cap would be measured as total payments for incremental energy under Exceptional Dispatch (higher of Bid or LMP) minus the payments that would have taken place if the unit had been mitigated to DEB. That is, for a unit subject to Exceptional Dispatch with a Bid or LMP of \$100/MWh and a DEB of \$50/MWh, it is the \$50 difference per MWh that is providing a contribution to fixed costs. It is this difference that will be tracked over the month for purposes of determining when a unit reaches its supplemental revenue cap.

To give some indication of the value of the revenue cap, CAISO has filed with FERC that the ICPM annual rate would be \$41/kW-year or a higher rate for any particular unit that files with FERC showing that its going forward costs are higher than this rate. FERC has not yet approved this rate, but assuming this rate for purposes of illustration, the maximum ICPM monthly payment for a 100 MW unit (that does not file for a higher rate) would be  $\$41/\text{kW-year} \times 1/12 \text{ months per year} \times 1000\text{kW/MW} \times 100 \text{ MW} = \$341,667$ . This unit could thus hit the revenue cap after approximately 7-10 hours of Exceptional Dispatch if it was able to get selected with an Offer at the Offer Cap of \$500/MWh and depending on the value of its DEB. If FERC ultimately approves a different rate or rate formula for ICPM, the revenue cap would change accordingly.

There are a number of other similarities between the two options. Under both options, when a supplier hits the revenue cap, it would be subject subsequently, for the remainder of the 30 day period beginning with the first Exceptional Dispatch, to full mitigation (i.e., higher of LMP or DEB). Similarly, under both options, the resource would have to submit a Bid into the CAISO day-ahead and real-time markets to receive the supplemental payments, consistent with current Tariff rules. Both types of Bid-based supplemental payments would be provided only for incremental energy provided above the resource's minimum operating level. The start-up and minimum load components of the Offer are not subject to daily mitigation and moreover the MRTU Tariff already offers two options for determining these components, one based on costs and the other as high as 200 or 400 percent of costs (see section 30.4 of the MRTU Tariff). Both options have the advantage that they do not require negotiation

of any new tariff rates: The FMU Bid Adder is already approved in the MRTU tariff and the Relaxed Mitigation approach relies on voluntary Bids. The ICPM monthly rate is expected to be approved by FERC before MRTU start-up. Also, both options have similar administrative and implementation requirements.

Under either option, the CAISO proposes that a sunset provision be added to the revised MRTU Tariff language to coincide with the expiration of ICPM at the end of 2010. This provision would be added based on the assumption that over the first couple of years of operations the CAISO would be able to reduce the amount of Exceptional Dispatches issued. If, at the end of 2010, actual experience indicated that market power issues associated with Exceptional Dispatch are still frequent enough to warrant maintaining the mitigation then the CAISO would file an extension of the mitigation provisions.

**POSITIONS OF THE PARTIES**

The second phase of the stakeholder process included the following steps which allowed for three written comment opportunities and four public opportunities for stakeholders to express their opinions and react to CAISO proposals and MSC views:

Step #	Date	Process
1	March 21, 2008	Issue Paper posted
2	March 28, 2008	Conference call to discuss issue paper
3	April 4, 2008	Comments due on Issue Paper
4	April 11, 2008	MSC stakeholder meeting on Exceptional Dispatch
5	April 14, 2008	Straw Proposal posted
6	April 15, 2008	CAISO stakeholder meeting on Straw Proposal
7	April 17, 2008	Conference call with MSC Chair
8	April 24, 2008	Comments due on Straw Proposal
9	May 7, 2008	Draft Final Paper posted

LSEs and generation stakeholders were fairly divided on the pricing options, with positions generally following their respective stakeholder segments. Listed below are the general positions of each of the entities that provided comments on the second CAISO paper (the Straw Proposal), with the exception of Calpine that only provided comments on the first Issues Paper. For more detailed comments please refer to the stakeholder matrix (Attachment A).

Company	Summary of Main Comments
Calpine Corporation	Prefer no mitigation of Exceptional Dispatch Bids; also prefer designation of any non-RA resources subject to Exceptional Dispatch for a backstop capacity payment at a higher rate than the proposed ICPM payment.
Dynegy	Opposes supplemental payments as proposed; prefers designation of any non-RA resources subject to Exceptional Dispatch for a backstop capacity payment at a higher rate than the proposed ICPM payment.
Reliant	Opposes mitigation as proposed. Prefers designation of any non-RA resources subject to Exceptional Dispatch for a backstop capacity payment at a higher rate than the proposed ICPM payment; revise DEB to consider additional variable costs.
WPTF	Opposes mitigation as proposed; revise DEB to consider additional variable costs.

<b>Company</b>	<b>Summary of Main Comments</b>
CDWR/SWP	Did not support either option.
CPUC	Evaluating relaxed mitigation option.
PG&E	Supports bid adder option
SCE	Does not oppose relaxed mitigation option.
Six Cities	Supports bid adder option

## **DMM / MSC FEEDBACK**

The Department of Market Monitoring (DMM) was involved in all aspects of this stakeholder process. In addition, the MSC (with Frank Wolak as the MSC Advisor) provided its views on the CAISO proposals and alternatives and held public discussions with parties through their stakeholder process.

The MSC held a stakeholder meeting on April 11, 2008 during which the CAISO presented an overview of the initial issues paper and then the MSC members discussed aspects of the Exceptional Dispatch proposal with their stakeholders. This discussion was continued through a conference call on April 17, 2008 with two of the MSC members so that they could hear further comments on the CAISO proposal. In between the MSC meetings on April 11<sup>th</sup> and 17<sup>th</sup> the CAISO also held a stakeholder meeting on April 15<sup>th</sup> to discuss the Straw Proposal.

Both the DMM, in the monthly Market Monitoring Report, and MSC, in their formal opinion adopted on May 6<sup>th</sup> (Attachment B), have stated their support of the mitigation aspects of Exceptional Dispatch as well as the Management proposal, discussed next, to select the Relaxed Mitigation pricing option.

## **MANAGEMENT RECOMMENDATION**

Management's recommendation is to implement the mitigation of Bids for Exceptional Dispatch as proposed by the DMM, augmented by the option to "relax" Bid mitigation for eligible suppliers without RA, RMR or ICPM contracts, subject to the revenue cap based on the ICPM monthly payment. However, Management recommends that this pricing approach is implemented in a two-stage process. For the first two months of MRTU, all Bids of eligible suppliers subject to mitigation will be augmented with a \$24/MWh Bid Adder. This more restrictive initial approach will allow market and system operations time to evaluate systematic modeling issues that lead to Exceptional Dispatch and correct as many as possible without exposure to extraordinary costs. In the beginning of the third month, the relaxed mitigation would be implemented and the Bid Adder removed.

Management believes the relaxed mitigation approach balances the interests of the Load Serving Entities with the interests of the suppliers and is consistent with the pending ICPM filing. Suppliers will be able to potentially accrue supplemental payments more rapidly in certain circumstances than in the alternative considered. At the same time, buyers would typically be exposed to no more than the monthly ICPM payment in supplemental revenues over and above the revenues that would accrue under mitigation.<sup>9</sup> Moreover, as noted above, the MSC supports this option. ICPM is due to expire in December 2010. Accordingly, Management proposes that the proposed rules for mitigation and supplemental pricing under Exceptional Dispatch also expire with ICPM and new rules, if needed, be considered on the basis of market experience.

As evidence of Management's balancing of competing interests, this proposal does not fully satisfy any group of stakeholders. LSEs and the CPUC prefer the lower supplemental payments under the \$24/MWh Bid Adder. Suppliers argue against mitigation of Exceptional Dispatch Bids, although some have indicated that if such mitigation is imposed, the relaxed mitigation is preferred. In developing this proposal and refining it towards a

<sup>9</sup> By allowing relaxed mitigation, there is more risk that suppliers will be able to exercise market power in the short term, i.e. up to the revenue cap.

recommendation of the relaxed mitigation approach, the CAISO added a further requirement that Bid mitigation would apply and a \$24/MWh bid adder would be made until the third month of MRTU operations. This would protect buyers from extraordinary payments during a time which is likely to require relatively more Exceptional Dispatches. Although this further refinement of the proposal was not subject to stakeholder consideration, Management believes its proposal to be just and reasonable and to balance both load serving and supplier interests.

## Stakeholder Process: Exceptional Dispatch

### Summary of Submitted Comments

Stakeholders submitted two rounds of written comments to the CAISO on the following dates:

- Round One, 04/04/08
- Round Two, 04/24/08

Stakeholder comments are posted at: <http://www.caiso.com/1c89/1c89d76950e00.html>

#### Other stakeholder efforts include:

- 03/28/08 Conference Call on Issue Paper
- 04/11/08 MSC Stakeholder Meeting
- 04/15/08 Stakeholder Meeting on Straw Proposal
- 04/17/08 MSC Conference Call – Continuation of discussion from 4/11/08 meeting
- 05/06/08 MSC Conference Call – Adoption of a formal opinion supporting Management recommendation

The attached matrix only summarizes comments on the supplemental payment options. As noted in the Board Memo, the issue of mitigation under Exceptional Dispatch (ED) was debated extensively during the DMM stakeholder process at the end of 2007 and the mitigation proposal has support from the MSC. As the MSC stated in their opinion letter “we believe that it [the mitigation] is consistent with the FERC policy for the ISO to subject ED offers to local market power mitigation”. Management supports the DMM mitigation proposal.

NOTE: the comments in this matrix do not include stakeholder concerns about aspects of the mitigation proposal regarding total compensation. Notably, WPTF and Reliant raised concerns that units subject to Exceptional Dispatch “have the opportunity to receive an additional payment to compensate for the extra costs incurred above the ED-mitigated level to supply Exceptional Dispatch service, such as intra-day gas costs, local distribution company (“LDC”) and pipeline gas imbalance charges, any gas scheduling penalties and any charges for LDC firm access rights” (Reliant comments). They argue that such costs are not reflected in the DEB. Management does not necessarily disagree with this argument if it can be demonstrated empirically, but argues that this issue has been decided in prior FERC orders, and is outside the scope of the present process.

Management Proposal	Load Serving Entities and CPUC	Resource Owners and WPTF	Management Response
<p>Straw Proposal – Bid Adder Option</p> <p>This proposal for supplemental pricing to augment mitigation would apply the current Frequently Mitigated Unit (FMU) Bid Adder to any Bids mitigated to DEB. Payments, on incremental energy above Pmin, would be the higher of LMP or DEB + \$24. Resources would be able to collect the \$24/MWh payment up to the ICPM monthly cap amount. Subsequent to accruing the revenue cap, they would be subject to mitigation for the balance of the month and paid the higher of LMP or DEB.</p>	<p><u>CDWR/SWP: Conditional</u> CAISO should not allow revenue from ED and ICPM to overlap. Proposes that Bid Adder only be applied to DEB not LMP</p> <p><u>CPUC: Support</u> Suggest that cap should be lower than ICPM payment.</p> <p><u>PG&amp;E: Support</u> General comment from PG&amp;E is that CAISO has not provided any evidence or justification that resources are not receiving sufficient revenues through other CAISO markets and does not support any additional payment. But if one of the options were to be chosen from the Straw Proposal they would support the Bid Adder option.</p> <p><u>SCE: Support</u> SCE supports the mitigation proposal and the application of the Bid Adder option up to the cap of the monthly ICPM payment.</p> <p><u>Six Cities: Support</u> Six Cities supports the Bid Adder option at the proposed level of \$24/MWh.</p>	<p><u>Calpine</u> (comments from initial Issues Paper, no comments sent in on Straw Proposal): <u>Oppose</u> “Uncontracted capacity that is required for ED purposes serves as a capacity product and should be fully compensated at a rate equivalent to that of other capacity products. The need for price caps is predicated on the notion that generators will have market power in some situations where ED is required. Calpine believes that existing price mitigation in MRTU is sufficient to address this concern”</p> <p><u>Dynegy: Oppose</u> The Bid Adder provides some compensation for a resource taken through mitigated ED “but is a far inferior solution to treating capacity service as capacity service and providing that capacity with suitable longer-term compensation.” That is, a single Exceptional Dispatch should lead to an ICPM designation.</p> <p><u>Reliant Energy: Oppose</u> Reliant has a general concern with both options, which neither option is sufficient to cover the costs incurred by a resource in responding to the Exceptional Dispatch, with the exception of one scenario under the Relaxed Mitigation option, in which they state that a resource could earn net revenues for a month of \$198, 117.</p> <p><u>WPTF: Oppose</u> In general, WPTF does not believe that the proposed mitigation is appropriate for ED and hence does not support supplemental payments developed on the basis of the proposed mitigation. WPTF states that the CAISO should “procure the products in the market that it requires to meet its reliability needs rather than relying on out-of-market mechanisms.” WPTF further recommends that CAISO explore further when to offer an ICPM designation in response to an Exceptional Dispatch.</p>	<p>Management concluded that this option does not strike the proper balance between the two stakeholder groups on the issue of supplemental payments. Notably, under this approach in at least some circumstances it will take much longer to accrue the equivalent of the ICPM payment, even though a resource may be providing reliability benefit, through the out of market commitment and dispatch, to the CAISO markets. Hence, as discussed below, Management has determined to recommend the Relaxed Mitigation option.</p>

Management Proposal	Load Serving Entities and CPUC	Resource Owners and WPTF	Management Response
<p>Straw Proposal – Relaxed Mitigation Option</p> <p>This option would apply all mitigation rules to RA/RMR/ICPM resources but allow resources without such capacity contracts or designations to submit bids and receive ED payments above their DEB or the LMP up to the ICPM monthly cap. Subsequent to accruing the revenue cap, they would be subject to mitigation for the balance of the month and paid the higher of LMP or DEB.</p>	<p><u>CDWR/SWP: Conditional</u> Concerned about suppliers being able to submit very high bids under ED. Re-emphasized that CAISO should not allow revenue from ED and ICPM to overlap.</p> <p><u>CPUC: Oppose overall, but supports certain features</u> Generators are able to exercise market power until the ICPM cap is reached. Proposes a “claw back mechanism” such that if an entity declines an ICPM designation, gets an ED and ultimately accepts ICPM then the total revenues should not exceed the ICPM monthly payment for any month. “Though CPUC staff strictly prefers the bid adder option over the relaxed mitigation option, the idea of a cap makes both options more palatable. However, CAISO must implement mechanisms that will not increase the probability that a generator will not forgo RA contracts or ICPM designations.”</p> <p><u>PG&amp;E: Oppose</u> Believes this option provides an opportunity for ED resources to reach the proposed ICPM cap too quickly, possibly within several hours, and could adversely impact acceptance of ICPM designation. This approach would reward local market power.</p> <p><u>SCE: Oppose</u> SCE does not support the Relaxed Mitigation option since it allows a non-RA/RMR/ICPM resource to receive its unmitigated bid price until the monthly ICPM payment cap is met.</p> <p><u>Six Cities: Oppose</u> The Relaxed Mitigation option would seem to permit the exercise of market power and the ability for suppliers to collect “unreasonably high revenues, especially in conjunction with the potential for designation and compensation under the ICPM proposal.”</p>	<p><u>Calpine (comments from initial Issues Paper, no comments sent in on Straw Proposal): Oppose Same as above.</u></p> <p><u>Dynegy: Oppose</u> Dynegy’s position is that a resource that is Exceptionally Dispatched should have been provided an ICPM designation. Dynegy also contests the proposed ICPM rate.</p> <p><u>Reliant Energy: Oppose, but observed that relaxed mitigation can address some concerns about revenue sufficiency under ED.</u> Believes this option is an improvement over the Bid Adder but is still not sufficient to resolve the problems created by mitigating ED bids. Reliant did provide a third option, which would be to link ICPM designation to a single ED and to allow all resources the ability to be compensated for all actual verifiable gas costs incurred to respond to an ED.</p> <p><u>WPTF: Oppose</u> See general comments above.</p>	<p>Management proposes that the mitigation rules are augmented with the Relaxed Mitigation option for units without RA, RMR or ICPM contracts or designations. Although resource owners do not support this approach, it clearly provides a higher revenue stream than the Bid Adder and will still be subject to the ICPM monthly revenue cap. The Relaxed Mitigation will come close in some Exceptional Dispatches to providing a monthly ICPM payment in a short period, perhaps as little as 7-8 hours of Exceptional Dispatch. This will take place when there are few or no competing resources to provide Exceptional Dispatch and thus is reflective of the real need for a particular unit. Hence, it meets some of the concerns of resource owners. In other circumstances, when there are multiple units that can provide Exceptional Dispatch, Bids will allow for some level of market competition and will appropriately reduce the supplemental payment to reflect market value.</p> <p>In addition, in response to some resource owners that contest the ICPM rate as filed, Management notes that the final ICPM rate will reflect FERC’s decision on the appropriate price for backstop capacity. This proposal does not pre-judge that FERC decision.</p> <p>While LSEs and the CPUC are not fully supportive of this option either, the application of the ICPM monthly payment revenue cap protects buyers against excessive payments due to the market power of certain units under Exceptional Dispatch. Hence, Management believes that this proposal appropriately balances the interests of stakeholders.</p>

**Opinion on “Exceptional Dispatch: Options for Market Power Mitigation  
and Supplemental Pricing under MRTU”**

by

**Frank A. Wolak, Chairman**

**James Bushnell, Member**

**Benjamin F. Hobbs, Member**

**Market Surveillance Committee of the California ISO**

**May 7, 2008**

## **1. Introduction**

The California Independent System Operator (CAISO) has asked the Market Surveillance Committee (MSC) to comment on its proposal for market power mitigation and pricing for exceptional dispatch instructions.<sup>1</sup> The current Market Redesign and Technology Upgrade (MRTU) tariff allows the ISO operators to issue Exceptional Dispatch (ED) instructions to move dispatchable resources that are necessary to maintain reliable real-time system operation that are not dispatched through the market software. Exceptional Dispatch instructions can be applied to all types of generation units in the CAISO Control Area, including those with a Resource Adequacy (RA) contract, an Interim Capacity Payment Mechanism (ICPM) designation, and a Reliability Must-Run (RMR) unit designation, as well as resources without one of these contracts or designations. For the purposes of this opinion, we will refer to this last group of dispatchable resources as non-RA resources. The rationale for an ED instruction is that there may be real-time operating constraints created by certain system conditions that are not currently embodied in the market software that require the CAISO operators to move certain generation units. An ED instruction is the mechanism used to accomplish this.

MSC members have discussed these issues with CAISO staff during several conference calls and in-person meetings over the past three months. At the April 11, 2008 joint MSC/Stakeholder meeting, several stakeholders provided comments on this topic and the MSC discussed these issues with stakeholders and CAISO staff. A joint MSC/Stakeholder conference call was held on April 17, 2008 so that two MSC members could hear more comments from stakeholders and CAISO staff on the CAISO's ED proposal.

The current MRTU tariff allows resources dispatched for energy under an ED instruction to be paid the higher of: (1) their offer (Energy Bid price), whether submitted to the integrated forward market (IFM), the reliability unit commitment (RUC) process, or the real-time (RT) market, (2) their Default Energy Bid (DEB) price, if they have no offer in the markets, or (3) the real-time (RT) locational marginal price (LMP) at their node. This higher-of pricing rule is necessitated by the fact that the CAISO may need to issue an ED instruction to a unit with an offer price above the LMP at its location. Under the current MRTU tariff, ED instructions are not subject to the MRTU local market power mitigation mechanism or reliability requirement determination process. Consequently, the only limit on the price paid to an accepted ED

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<sup>1</sup> This proposal “White Paper: Options for Market Power Mitigation and Supplemental Pricing” is available at <http://www.caiso.com/1c89/1c89d76950e00.html>

instruction under the current MRTU tariff is the CAISO's energy bid cap. This has led to concerns among certain stakeholder groups and the CAISO's Department of Market Monitoring (DMM) that generation units with local market power that know they are needed for an ED instruction will submit an Energy Bid price equal to the CAISO's offer cap.

Although the CAISO expects to use ED instructions very rarely and unpredictably, there is still considerable uncertainty about the potential need to rely upon ED instructions, particularly during the initial phase of operation of the MRTU.<sup>2</sup> The primary concern of the CAISO is localized constraints that are not currently modeled in the CAISO's IFM, HASP, and RT market software. These can arise for a variety of reasons ranging from forced transmission and generation outages, voltage stability constraints, and 30-minute dispatched energy requirements in the South of Path 26 zone. It does not take too many hours of operation at a price equal to the \$500/MWh, \$750/MWh, or \$1000/MWh energy offer cap because of one of these unmodeled constraints for a generation unit owner to earn a substantial sum of money.

The CAISO is also concerned that the absence of a market power mitigation mechanism to ED instructions for non-RA units could provide an incentive for a supplier not to accept an ICPM designation. The unit owner could find that it earns more revenues through RUC availability payments, unmitigated ED instructions, and other energy and ancillary services market revenues than it would earn under an ICPM designation because, under such a designation, it no longer receives RUC availability payments and is subject to a must-offer obligation that makes it more costly for the unit to withhold energy and ancillary services from the CAISO's markets. Under the current CAISO tariff, a generation unit owner has less of an incentive to refuse an ICPM designation because the associated payments would be in addition to any revenue a supplier might receive from exercising substantial local market power under ED instructions. Although the supplier would still give up RUC availability payments and be subject to a must-offer obligation by accepting the ICPM designation, there may be circumstances where a supplier might refuse the ICPM designation under the current MRTU tariff. However, these circumstances are very unlikely to arise if the CAISO's resource adequacy program works as designed, because a non-RA unit is unlikely to receive significant revenues from RUC availability payments under a properly functioning resource adequacy program.

For the reasons described above, the CAISO proposes to subject ED instructions from all generation resources to a local market power mitigation mechanism. In designing a local market power mitigation mechanism for ED instructions, the CAISO faces two sets of constraints: (1) allowing a resource owner the opportunity to recover at least the cost of accepting an ED instruction, and (2) limiting the revenues the resource owner receives for ED instructions and other CAISO markets sales within a one month time period so that the unit owner will accept an ICPM designation if one is offered. The CAISO's market power mitigation mechanism would not apply to ED instructions issued: (1) for system-wide energy requirements, or (2) to resolve congestion on transmission constraints that have been deemed to be competitive transmission

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<sup>2</sup> CAISO is also under FERC guidance to ensure that Exceptional Dispatch does "not become a frequent occurrence." See page 267 in "California Independent System Operator Corporation, Order Conditionally Accepting the California ISO's Electric Tariff Filing to Reflect Market Redesign and Technology Upgrade (Tariff Amendment No. 44 and Proposed MRTU Tariff) (September 21, 2006)", in Docket Nos. ER06-615-000 and ER02-1656-027, et al.

paths by the DMM (as defined in the automated local market power mitigation procedures for the IFM and real-time market). Because RA units typically have a contractual payment that provides fixed cost recovery, under the CAISO's proposal RA units subject to mitigation will receive the higher of their DEB and the LMP at their location for responding to an ED instruction.

The CAISO proposes two options for local market power mitigation of ED instructions to non-RA units. The first will cap the price a resource owner receives at the higher of the LMP at that unit's location and the DEB plus the \$24/MWh frequently mitigated unit (FMU) bid adder. Because ED instructions are issued outside any of the CAISO's formal markets, this DEB plus \$24/MWh adder will not set the LMP at that supplier's location. This adder would be paid for all energy provided by the unit above its minimum output level, what the CAISO tariff calls  $P_{\min}$ . Under this proposal, the bid adder would no longer be applied within any 30-day period beginning with an ED instruction where the total ED instruction revenues less the total MWh of ED instructions valued at the DEB price exceeds the ICPM monthly payment for the total ED MWh for the 30-day period. The second option would allow unmitigated ED instructions to non-RA units to be paid as-bid, but *also* be subject to this same monthly maximum payment. Specifically, in any 30-day period beginning with an ED instruction mitigation to the higher of the DEB or LMP at the resource owner's location would be applied for the remainder of the month as soon as total ED instruction revenues less total MWh of ED instructions valued at the DEB exceeds the monthly ICPM payment for the total ED MWh.

We divide our comments of the CAISO's proposal into two parts. First, we consider the question of whether ED instructions to non-RA units should be subject to local market power mitigation. We believe that there is a significant risk under the current MRTU tariff that a resource owner could exercise substantial local market power for a sustained period of time. For this reason, we favor subjecting ED instructions to a local market power mitigation mechanism. Second, we consider the appropriate form that mitigation should take. One major concern is that the market power mitigation mechanism may distort a unit owner's decision to accept a voluntary ICPM designation if one is offered. This is one reason why we support the 30-day cap on total ED payments in excess of the total MWh of ED instructions valued at the DEB.

We also strongly recommend that the CAISO minimize the frequency of ED instructions by including all constraints that are reasonably predictable and can be modeled in the full network model used to run the DA, RUC, HASP, and RT markets. Our understanding is that in other RTO markets, it is often the case that recurring constraints are not modeled and are instead handled as ED instructions by operators, and that such omissions frequently result in distortion of LMPs. A major purpose of locational marginal pricing is to provide signals that reflect the full economic value to the system of withdrawing energy at each location in the network, and a failure to include predictable constraints undermines this purpose. We strongly recommend that CAISO operations staff record and track the specific causes of every ED instruction at a level of detail that will allow the CAISO to ascertain whether the network model used in the market software includes all the network constraints that it should. If certain unmodeled constraints lead to persistent ED instructions, every effort should be made to modify the network model so that these constraints are either directly incorporated or satisfied as an indirect result of other constraints. For some constraints, it may also be appropriate for the CAISO operations staff to

undertake studies to assess the economic and reliability consequences of their omission upon LMPs.

Our support of the CAISO's market power mitigation proposal for non-RA units relies on ED instructions occurring infrequently and unpredictably. Although we expect that during the initial stages of market operation under MRTU, the CAISO may need to make more frequent use of ED instructions because of unexpected glitches in the market software, once this initial market start-up phase is completed, ED instructions should occur rarely.

## **2. Rationale for Local Market Power Mitigation Applied to ED Instructions**

On the need for a local market power mitigation mechanism for ED instructions, we refer to the Federal Energy Regulatory Commission's (FERC) standard for granting market-based pricing authority. This FERC policy states that in order for a supplier to have market-based pricing authority it must demonstrate that it does not possess the ability to exercise unilateral market power or that this ability to exercise unilateral market power has been adequately mitigated. The circumstances leading to an ED instruction will often result in one or a small number of suppliers able to provide the energy required by the ED instruction, which is equivalent to these suppliers possessing significant unilateral market power. Consequently, we believe that it is consistent with the FERC policy for the CAISO to subject ED offers to local market power mitigation.

Following this same logic, we do not believe it is necessary to subject ED offers to mitigation in cases where there is an *a priori* assumption that adequate competition exists to provide this energy. Under the current MRTU tariff, offers into the DA-IFM to satisfy a system-wide energy need or resolve congestion on a competitive transmission path are not subject to local market power mitigation. Thus, the CAISO's proposal not to mitigate ED for energy that is dispatched to meet system-wide energy needs or resolve congestion on competitive transmission paths is consistent with the CAISO's policy for supply offers into its energy markets.

We also question the logic incorporated in the current MRTU tariff for differential treatment of suppliers in terms of when they are subject to local market power mitigation depending on the circumstances under which an offer to supply energy is accepted. Attempts to pay substantially different prices for energy supplied at the same location in the transmission network during the same hour, but called upon for different reasons, creates incentives for suppliers to take actions to receive the higher of the two or more prices for their energy. In the present case, not subjecting ED energy to local market power mitigation, but subjecting energy taken from the CAISO's DA, HASP or RT markets to local market power mitigation, can create incentives for suppliers to bid and operate their units to cause the CAISO to require ED energy. Subjecting both ED energy and energy sold in the CAISO's markets to local market power mitigation limits this incentive.

This logic for subjecting ED offers to local market power mitigation applies regardless of how many times an individual unit is called to provide ED energy. Consistent with the FERC standard for granting market-based pricing authority, if a supplier possesses local market power, it should be subject to mitigation. That said, it is important to note that the exceptional dispatch

circumstance presents an unusual case for local market power mitigation. The conventional mitigation process mitigates the *offers* of units, but not necessarily the *prices* earned by those units. To the extent that prices reflect local or regional scarcity, mitigated units are able to earn revenues that reflect scarcity conditions. While units mitigated under exceptional dispatch can also earn the LMP, we are concerned that this LMP will not reflect the conditions or constraints that created the need for the exceptional dispatch. Because exceptionally dispatched units are, by definition, being called upon to meet constraints that are not modeled, or priced, it is reasonable to assume that the LMP for these units may often be biased downward relative to the hypothetical LMP that would include these constraints. It is also reasonable to assume that these same constraints bestow local market power on those same units. In other words, the fact that a unit is exceptionally dispatched implies that, first, its LMP may not reflect the true value of energy injected at that location in the network and, second, the unit possesses significant local market power. A market power mitigation mechanism needs to balance these two considerations.

As noted earlier, the CAISO expects that ED instructions will be infrequent and unpredictable. To the extent that ED instructions are persistent and predictable, the CAISO should examine the network model that it uses to operate the DA-IFM, HASP and RT markets and the constraints that it imposes on the RUC process and its ancillary services purchases. A number of stakeholders have noted that the CAISO could reduce the likelihood of calling ED instructions by purchasing more ancillary services, creating new ancillary services products (such as a 20-minute or 30-minute operating reserve), and by setting ancillary services requirements locationally. The CAISO is currently evaluating the ranking of these and other options in its roadmap for market enhancements. The MSC has long expressed a desire to give the CAISO operators greater discretion to purchase additional ancillary services and impose locational constraints in order to reduce the need to rely on ED instructions and other costs that are recovered through uplift payments rather than through market-clearing pricing mechanisms. In some cases, this greater discretion in ancillary services procurement may allow CAISO operators to eliminate the need to issue an ED instruction.

### **3. Payments for ED Energy**

A payment for providing ED energy should at the very least recover the supplier's variable cost and would ideally capture the market-value of the power supplied by that unit. Paying the maximum of the unit's DEB and the LMP at the unit's location meets these requirements as long as: (1) the resource owner does not have to bear some unexpected cost not included in the supplier's DEB to provide the ED energy and (2) the LMP is not biased downward to a significant degree because the reliability constraint that necessitated the ED instruction is not modeled in the IFM. The CAISO accounts for the former possibility in several ways. First, the cost-based option for setting DEBs for a generating unit equals its variable costs plus a 10 percent adder. Alternatively, generators may select an LMP-based option under which their DEB could be substantially higher than their cost-based DEB. Finally, any generator that feels either of these two options does not reflect the unit's actual variable cost (including potential opportunity costs) may select a negotiated DEB option, under which a special negotiated DEB is established through an independent entity contracted by the CAISO, currently Potomac Economics.

The more difficult question is how much revenue a unit should receive in excess of variable cost in order to reflect its scarcity value and for purposes such as fixed cost recovery. As noted earlier, one consideration of the amount of revenue in excess of variable cost an ED instruction should receive is the potential for those revenues to distort the decision to accept an ICPM designation. If the unit owner expects to receive more benefits from not being subject to the CAISO's must-offer requirement and receiving RUC availability payments than it does under ICPM, the unit owner is likely to refuse this designation.

The CAISO's proposal to cap the monthly ED payments in excess of the DEB at the monthly ICPM payment is very likely to be sufficient to cause suppliers to accept the ICPM designation voluntarily. The CAISO's proposal of paying the higher of the LMP at the supplier's location and the DEB plus the FMU bid adder for each MWh called to provide ED energy from a non-RA unit will provide some fixed cost contribution. However, it is unclear if this mechanism provides sufficient fixed cost recovery for the unit to continue operation. This is an issue only if it is the mitigation, combined with any shortcomings in the pricing model, that is denying the unit that opportunity. Nevertheless, it is important to recognize that even non-RA resources have many other opportunities to earn fixed cost recovery from the CAISO market. These units can sell long-term energy and ancillary services contracts to loads both in and outside of California. They can sell energy in the CAISO's DA-IFM, HASP and RT markets, as well as the DA and HA ancillary services markets. Finally, if non-RA units do not earn sufficient fixed-cost recovery to remain in the market, they can always mothball the unit or make a cost-of-service filing with FERC to recover these costs through such mechanisms as an RMR contract.

As stated earlier, the problem here is to balance consideration of mitigation of local market power with the fact that the exceptional dispatch may reflect a distortion in the LMP earned by the dispatched units. On the one hand, we believe these units should have the opportunity to earn a market value that may not be reflected in the LMP, but on the other hand these units should not be allowed to excessively abuse their favorable local position. Last, it is at present unclear how common or predictable exceptional dispatch orders may be. A mitigation mechanism should be flexible enough to apply to both idiosyncratic and chronic circumstances.

Consequently, we support the proposal to leave unit offers unmitigated subject to the 30-day bound on payments in excess of the unit's DEB. If exceptional dispatch instructions turn out to be truly exceptional, then the mitigation cap is unlikely to be reached. If, however, some units are able to predict repeated exceptional dispatch conditions, the cap bounds the extent to which a unit can take advantage of its local market power. In the more extreme and chronic circumstances, a unit will likely be offered (and accept) an ICPM designation after its cap is reached. If the CAISO does adopt this proposal, we recommend the CAISO operators also incorporate economic considerations into their selection of units for ED instructions. Specifically, if there are two or more units able to satisfy an ED instruction, the CAISO operators should choose the one that can satisfy this ED need at least cost. To ensure that economic considerations are accounted for in ED instruction decisions, the CAISO management should require CAISO operators to record the price, quantity, and generation unit name for other available and effective ED offers that were not accepted.

The CAISO's market power mitigation mechanism for ED energy together with revenues from the ancillary services and energy markets should provide sufficient fixed cost recovery for the majority of non-RA units that provide ED energy during the year. RA units typically receive payment for providing RA capacity, so that a larger fraction of these units should earn enough revenues to remain financially viable. Non-RA units that are frequently subjected to ED instructions are also strong candidates for an ICPM designation or an RA contract in a future period, both of which will provide payments for fixed-cost recovery. However, those units that do not sell RA-contracts and are not frequently called for ED instructions should be able to mothball or retire unless the CAISO offers them an RMR contract. As we have noted in a number of previous opinions, there may be some circumstances where a cost-of-service contract may be the least cost (to consumers) remedy for a generation unit owner that possesses substantial local market power when providing ED energy but is not asked to provide ED energy frequently enough to achieve full cost recovery under the CAISO's market power mitigation mechanism.

#### **4. Concluding Comments**

For the reasons described above, we believe it is fully appropriate to apply a local market power mitigation mechanism to the supply offers of resources that receive ED instructions. There is no reason why non-RA units should be exempt from local market power mitigation of energy sales. Having said that, we also support a market power mitigation mechanism that provides an opportunity for units to earn revenues that reflect market values not necessarily contained in that unit's LMP. In order to balance these considerations, we support the proposal to leave unit offers unmitigated until the revenues earned by a unit exceed a threshold linked to the ICPM capacity payment. We do not believe it is necessary to set the price paid for ED instructions so high that all generation units can achieve fixed cost recovery from selling ED energy and energy and ancillary services in the CAISO's market. We also recommend that the CAISO make every effort to reflect all significant and predictable constraints in its network model so that ED instructions are truly that — exceptional — and not a significant and recurring source of revenue for generators.