

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**California Independent System            )       Docket No. ER11-\_\_\_\_-000**  
**Operator Corporation                        )**

**PETITION FOR LIMITED WAIVER OF TARIFF PROVISIONS**

The California Independent System Operator Corporation (ISO) respectfully requests a limited, one-time suspension of the effectiveness, or “waiver,” of certain requirements in Section 11.8 of its tariff, in order to permit the ISO to refrain from correcting the calculation of bid cost recovery payments during the period from April 2009 to July 2010.<sup>1</sup> The ISO is exercising its existing authority to recalculate bid cost recovery payments during the period from August 2010 to March 2011, when a bidding practice exacerbated the impact of an error in the procedures used by the ISO to calculate bid cost recovery payments. As explained below, the requested waiver will avoid the unnecessary burden to market participants of resettlements for the earlier period when the financial impact of the error in calculating bid cost recovery payments was relatively smaller.

**I.       Executive Summary**

Earlier this year, the ISO identified a bidding practice which some market participants were using to maximize bid cost recovery payments. This bidding practice highlighted an error in the manner in which the ISO was implementing

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<sup>1</sup> The ISO requests this waiver pursuant to Rule 205 of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.205. To the extent necessary, the ISO also requests waiver of any other relevant provisions of the ISO tariff for which waiver may be required in order for the Commission to grant this waiver request.

the requirement in Section 11.8.2.2 of the ISO tariff that the market revenue component of the bid cost recovery payment take into account “delivered MWh, in the relevant Day-Ahead Schedule.” The error resulted in the ISO failing to account for certain market revenues received by a resource in calculating the bid cost recovery payments for that resource. On May 4, 2011, the Commission issued an order accepting a tariff amendment addressing this bidding practice.<sup>2</sup>

As explained in the ISO's pending request for clarification or, in the alternative, rehearing, in Docket No. ER11-3149, the ISO has the authority both under the filed rate doctrine and under the express provisions of the ISO tariff to correct settlements implementation errors where the resulting charges do not reflect the filed rate. The ISO will exercise this authority to correct the error in calculating bid cost recovery payments for the period from August 2010 through March 25, 2011.<sup>3</sup> Although the ISO believes resettlements are appropriate to ensure that bid cost recovery payments are calculated in accordance with the filed rate for that period, the ISO has determined that bid cost recovery settlements should not be rerun for the period from April 2009 to July 2010. Because this determination will result in the ISO calculating bid cost recovery payments for the April 2009-July 2010 period in a manner inconsistent with the

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<sup>2</sup> *California Independent System Operator Corp.*, 135 FERC ¶ 61,110 (2011). Simultaneously with the submittal of this petition for limited waiver, the ISO is also submitting, in Docket No. ER11-3149, a motion for clarification or, in the alternative, request for rehearing of the May 4 order.

<sup>3</sup> In Section V of this waiver filing, the ISO addresses questions raised by some market participants regarding the correction of bid cost recovery payments for that period.

filed rate, the ISO now seeks waiver of Section 11.8 of its tariff solely as to the April 2009-July 2010 period.<sup>4</sup>

Good cause exists for the ISO's requested waiver because it satisfies all the requirements of a waiver request under applicable Commission precedent. First, the underlying error – the erroneous calculation of bid cost recovery payments – was made in good faith and the ISO promptly took steps not only to remedy the error for the period when the error had the greatest impact but also to obtain Commission authority to refrain from correcting the error for the period from April 2009 to July 2010. Second, the waiver is of limited scope, because it only applies to the period from April 2009 to July 2010 and does not affect any subsequent period. Third, the waiver remedies a concrete problem – namely, the unnecessary burden of resettlement to market participants for the period from April 2009 to July 2010. Fourth and finally, the waiver does not have undesirable consequences, such as harm to third parties. For these reasons, the Commission should grant the requested waiver.

## **II. Background**

When the ISO commits resources, the ISO tariff essentially guarantees certain payments to those resources of the submitted prices for the applicable portion of a resource's bid curve. The rules for this bid cost recovery mechanism are set forth in Section 11.8 of the ISO tariff. Bid cost recovery applies to the ISO

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<sup>4</sup> In its request for clarification/rehearing, the ISO emphasized that, even if the Commission determines that the ISO's petition for limited waiver is not justified, the Commission should not contravene longstanding precedent that independent system operators and regional transmission organizations have general authority under the filed rate doctrine to correct charges and prices that are not calculated in accordance with the filed rate. Request for clarification/rehearing at 4-5, 8-11; see, e.g., *ISO New England, Inc.*, 90 FERC ¶ 61,141, at 61,425 (2000).

day-ahead market, which includes the integrated forward market and the residual unit commitment process, and the real-time market. The purpose of the bid cost recovery mechanism is to ensure that each resource at least recovers its start-up, minimum load, and energy and ancillary services bid costs. The provisions of Section 11.8 include an adjustment for a resource's market revenues so that a resource does not receive an overpayment for those costs. Section 11.8 limits bid cost recovery to energy that is actually delivered. In an effort to implement these tariff provisions, the ISO included in its business practice manual for settlements and billing two metered energy adjustment factors, one for the day-ahead market and the other for the real-time market.<sup>5</sup>

In March 2011, the ISO identified a bidding practice employed by certain resources to maximize bid cost recovery payments. This bidding practice caused the ISO to schedule a resource in the integrated forward market at a high MW level and then to dispatch the resource at a much lower level in the real-time market. An example of the impact of this bidding practice is included in the ISO's April 5, 2011, technical bulletin entitled "Bid Cost Recovery and Accounting for Delivered Minimum Load Energy Market Revenues," provided as Attachment A to this filing.

In analyzing the impacts of this bidding practice, the ISO also identified a second, separate issue – an error resulting from the application of the metered energy adjustment factor in implementing the requirement in Section 11.8.2.2 of

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<sup>5</sup> The formulas for calculating the day-ahead and real-time metered energy adjustment factors are part of the settlements charge code calculations contained in that business practice manual. Further details regarding the bid cost recovery and metered load adjustment factor mechanisms are provided at pages 3-8 of the transmittal letter for the ISO's March 21, 2011 filing in Docket No. ER11-3149.

the ISO tariff that the market revenue component of the bid cost recovery payment take into account “delivered MWh, in the relevant Day-Ahead Schedule.” In some circumstances, the use of the day-ahead metered energy adjustment factor as an input to the formula used by the ISO to calculate bid cost recovery payments caused the overpayment of bid cost recovery to resources because market revenues for “delivered MWh, in the relevant Day-Ahead Schedule” were not fully accounted for in the formula. Applying the day-ahead metered energy adjustment factor ratio to market revenue for energy delivered below a resource’s minimum load cannot fully account for market revenue from delivered energy.

In response to the discovery of these two separate issues, the ISO undertook two specific actions. First, on March 21, 2011, as amended on March 25, the ISO submitted a tariff amendment in Docket No. ER11-3149 proposing a market rule change to eliminate the possibility of future bid cost recovery overpayments resulting from the identified bidding practice. The ISO explained that limiting market revenue calculations to only market revenue from delivered energy does not fully account for a resource’s earned market revenue in those instances when the resource is dispatched down to its minimum load in the real-time market. The ISO stated that, because day-ahead market revenues were accounted for based on delivered portions of the day-ahead schedule, the under-accounting of market revenue in cases where the resources in the real-time were dispatched to levels below the day-ahead schedule incentivized parties to engage in a particular bidding strategy that further exaggerated bid cost recovery

payments as resources were repeatedly forced to minimum load in the real-time under the identified bidding strategy.<sup>6</sup>

In order to address this specific bidding practice, the March 21 filing proposed revisions to Section 11.8 to eliminate the incentive for market participant actions that resulted in bid cost recovery overpayments in those circumstances. The proposed tariff revisions specified that, for resources that are dispatched at lower levels in the real-time than in the day-ahead, calculation of integrated forward market revenues used to offset bid costs will be based on scheduled portions as opposed to delivered portions.

As part of its preparation of the March 21 filing, the ISO also determined that a more accurate methodology for applying its filed rate requirement that day-ahead market revenues accounting be based on delivered portions of the day-ahead schedule would be to apply the same methodology that the ISO applies to determine whether resources are eligible to receive minimum load cost payments in any given interval. More specifically, the ISO determined that, if the ISO's settlement calculations had used the tolerance band to determine whether or not the resource reached its minimum load (instead of using the metered energy adjustment factor), these calculations would not have ignored market revenues associated with minimum load energy for resources. The ISO took immediate actions to remedy its error and immediately began configuring its settlements codes to ensure that the ISO's settlements systems properly accounted for all

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<sup>6</sup> Transmittal letter for March 21 filing at 11-12.

delivered portions of the day-ahead schedule below the resource's minimum load.

The ISO also considered how best to address the interests of market participants in addressing the historic error in calculating bid cost recovery payments. In the April 5 technical bulletin, the ISO stated that it had determined that, in certain instances, the use of the metered energy adjustment factor to determine delivered portions of the day-ahead schedule resulted in an accounting deficiency, rendering the bid cost recovery payments since the start of the new ISO market on April 1, 2009, inconsistent with the tariff requirement that the accounting of integrated forward market revenues be based on delivered portions of the scheduled energy curve. The ISO also announced its intent to recalculate portions of resources' previously settled bid cost recovery payments to account for past bid cost recovery payments that were calculated in a manner consistent with the ISO tariff. The implementation detail that defined how the ISO accounted for delivered portions of the energy bid curve was contained in the business practice manual for settlements and billing, not in the tariff. While the accounting deficiency in using the metered energy adjustment factor existed since the start of the new ISO market, it did not become apparent until the practices described in the March 21 filing became prominent. Absent the repeated dispatch of the resources that engaged in the bidding practice to their minimum load, the effect of the ISO's implementation error would have been less substantial because the metered energy adjustment factor would not have tended toward zero so frequently.

The April 5 technical bulletin explained that bid cost recovery overpayments became much more pronounced over time due to the market participant bidding practice described above. For the 16-month period from April 1, 2009, to July 31, 2010, the overpayments totaled approximately \$23 million, or an average of approximately \$1.4 million per month. In contrast, for the seven-month period from August 1, 2010, to February 28, 2011, the overpayments totaled approximately \$32 million, or an average of approximately \$4.6 million per month. In light of the interest of market participants in minimizing changes to financial settlements – particularly in the first year of the ISO’s new market – as well as the less significant impact of the bid cost recovery calculation error in the first 16 months of the new ISO market, the ISO determined that it was appropriate not to resettle bid cost recovery amounts for the period from new market start-up on April 1, 2009, through July 31, 2010. Therefore, the April 5 technical bulletin stated that, to avoid unnecessary burden of resettlement to market participants for the period prior to August 1, 2010, the ISO would only resettle amounts from trading day August 1, 2010, through March 21, 2011, when the bulk of the overpayments occurred.

Absent the bidding behavior, the ISO would not have identified the difference in payments arising out of the use of the metered energy adjustment factor as opposed to the tolerance band in determining whether the market revenues below minimum load should be recovered. Having also determined that how the ISO’s calculations account for market revenues for delivered portions materially impacts the bid cost recovery payments, the ISO included



detail in the ISO tariff that describes in all instances the methodology the ISO uses to determine delivered portions of the energy curve. In doing so, however, the ISO did not change the existing policy as it pertains to the minimum load energy portions of the energy curve. In other words, the ISO continues to base market revenues accounting for portions below the minimum load energy on delivered energy, even though it proposed a different formula for upper portions of the energy curve in cases where the resource is dispatched below its day-ahead schedule in real-time.

In the May 4 order, the Commission accepted the March 21 filing in its entirety effective March 26, 2011.<sup>7</sup> Although it was beyond the scope of the ISO's tariff filing, the May 4 order also addressed the April 5 technical bulletin, indicating that the Commission made no finding with regard to the resettlements discussed in the April 5 technical bulletin.<sup>8</sup> On June 3, 2011, the ISO filed its request for clarification/rehearing with regard to statements contained in one paragraph of the May 4 order.

### **III. Request for Waiver of ISO Tariff Provisions**

As the courts have recognized, “under the filed rate doctrine, once rates have been accepted for filing under FPA [Federal Power Act] § 205, utilities must adhere to those rates *absent a waiver*.”<sup>9</sup> The ISO requests waiver of the provisions of Section 11.8 discussed above in order to permit the ISO to refrain

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<sup>7</sup> May 4 order at P 1. The Commission made March 26 the effective date because it was one day after the ISO submitted errata to the March 21 filing on March 25, 2011. *Id.* at P 26.

<sup>8</sup> *Id.* at P 27.

<sup>9</sup> *California ex rel. Lockyer v. FERC*, 383 F.3d 1006, 1012 (9th Cir. 2004) (emphasis added) (citing *Arkansas Louisiana Gas Co. v. Hall*, 453 U.S. 571, 577 (1981)).

from correcting the calculation of bid cost recovery payments during the period from April 2009 to July 2010.

The Commission has historically granted requests for waiver of tariff provisions by public utilities – and by independent system operators (ISOs) and regional transmission organizations (RTOs) in particular – where an unintentional error was involved. Specifically, in the past, the Commission has granted tariff waivers where: (1) the underlying error was made in good faith; (2) the waiver was of limited scope; (3) a concrete problem needed to be remedied; and (4) the waiver did not have undesirable consequences, such as harm to third parties.<sup>10</sup>

In this case, all four of these elements under Commission precedent for granting a tariff waiver are satisfied. Therefore, good cause exists to grant the ISO's requested waiver of Section 11.8.

**A. The Underlying Error Was Made in Good Faith**

The underlying error in this case was the ISO's erroneous calculation of bid cost recovery payments as described above. The ISO made this error in good faith and, after discovery of the error, the ISO promptly took steps to correct it by preparing and submitting the March 21 filing, issuing the April 5 technical bulletin, and beginning the process of recalculating settlement statements for the time period after August 2010. The ISO is also submitting this waiver request to obtain the necessary Commission authority for the ISO to refrain from correcting the calculation of bid cost recovery payments during the period from April 2009 to July 2010. This waiver request is timely because the first regularly scheduled

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<sup>10</sup> See, e.g., *PJM Interconnection, L.L.C.*, 135 FERC ¶ 61,069, at P 8 (2011); *California Independent System Operator Corp.*, 132 FERC ¶ 61,004, at P 10 (2010); *ISO New England, Inc.*, 117 FERC ¶ 61,171, at P 21 (2006).

resettlement window for the pre-August 2010 trade dates after the bid cost recovery calculation error was identified is not scheduled to occur until later in 2011.

**B. The Waiver Is of Limited Scope**

The ISO requests a one-time waiver of limited scope, to permit it to refrain from correcting the calculation of bid cost recovery payments solely during the period from April 2009 to July 2010. The requested waiver will have no effect on the ISO's correction of the calculation of bid cost recovery payments during the period from August 2010 to March 25, 2011, nor will the requested waiver affect the ISO's accurate calculation of bid cost recovery payments pursuant to the tariff provisions that went into effect on March 26, 2011, following the Commission's acceptance of the March 21 filing.

**C. The Waiver Remedies a Concrete Problem**

The ISO's requested waiver will remedy a concrete and clearly defined problem – namely, the unnecessary burden of resettlement to market participants for the period from April 2009 to July 2010. For that period, the burden of resettlement would outweigh the benefits of doing so. As explained above, the erroneous calculation of bid cost recovery payments for that period had substantially less financial impact and market participants have a much greater interest in avoiding changes to financial settlements, as compared with the period from August 2010 through March 25, 2011, when the erroneous calculation of bid cost recovery payments had substantially more financial impact on market participants.

Commission and court precedent support a finding that the ISO's requested waiver is an appropriate remedy for the unnecessary burden of resettlement to market participants for the period from April 2009 to July 2010. The Commission has granted a requested tariff waiver when the burden of recalculating amounts pursuant to the tariff would outweigh the benefits of the recalculation.<sup>11</sup> Moreover, courts have held that, under the Federal Power Act, there is no obligation to order refunds for every departure from the filed rate. The Commission may decline to order refunds due to "considerations of administrative practicality," and in deciding whether to order refunds, the Commission must consider "relevant factors and . . . [strike] a reasonable accommodation among them" to ensure that its refund decision is "equitable in the circumstances."<sup>12</sup> Waiver is appropriate in the circumstances presented in this filing.

**D. The Waiver Will Not Have Undesirable Consequences, Such as Harm to Third Parties**

The ISO's requested waiver will have no undesirable consequences. As explained above, granting the waiver will eliminate the unnecessary burden of resettlement to market participants for the period from April 2009 to July 2010. Also, the waiver will not unfairly disadvantage any market participant. All market participants will be treated the same for each applicable time period. In addition, customers will benefit from the increased financial certainty resulting from the

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<sup>11</sup> *New York Independent System Operator, Inc.*, 115 FERC ¶ 61,026, at P 55 (2006) (granting an ISO's request for waiver of tariff provision regarding recalculation of location-based marginal prices on grounds that the burden of such recalculation would outweigh the benefits).

<sup>12</sup> *Towns of Concord, Norwood and Wellesley v. FERC*, 955 F.2d 67, 76 (D.C. Cir. 1992), cited in *Consolidated Edison Company of New York, Inc. v. FERC*, 347 F.3d 964, 972 (D.C. Cir. 2003).

ISO's determination that bid cost recovery payments should not be resettled for the first 16 months of the ISO's new market.

#### **IV. Request for Additional Waivers**

To the extent that the Commission deems that Section 35.17(e) of its regulations applies to this waiver request, the ISO respectfully requests waiver of that Section 35.17(e).<sup>13</sup> The ISO further requests that the Commission grant any additional waivers of its regulations as may be necessary to grant this request. The ISO submits that good cause exists for granting a waiver of its regulations for the reasons stated above.

#### **V. Issues Related to the Correction of Bid Cost Recovery Payments for the Period from August 2010 to March 25, 2011**

The ISO is aware that some market participants have raised questions about the ISO's correction of the calculation errors for bid cost recovery payments for the period from August 2010 through March 25, 2011. As explained in the ISO's request for clarification/rehearing in Docket No. ER11-3149, the ISO already has the authority both under the filed rate doctrine and under the express provisions of the ISO tariff to correct settlements implementation errors where the resulting charges do not reflect the filed rate. Nonetheless, for the information of the Commission and other interested parties, the ISO now addresses certain questions that market participants have raised regarding the ISO's intention to make settlements corrections for the period from August 2010 through March 25, 2011.

Some market participants suggest that the version of Section 11.8.2.2 in

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<sup>13</sup> 18 C.F.R. § 35.17(e).

effect prior to the changes proposed in the March 21 filing does not support the ISO's corrected methodology for calculating bid cost recovery payments. These arguments ignore the fact that the existing language of Section 11.8.2.2 requires that the market revenue component of the bid cost recovery payment take into account "delivered MWh, in the relevant Day-Ahead Schedule." Although in most circumstances the use of the day-ahead metered energy adjustment factor as an input to the formula previously used by the ISO allowed the ISO to calculate payments in accordance with the filed tariff language, in the circumstances described in the April 5 technical bulletin, the formula did not allow the ISO to accurately calculate the integrated forward market revenue for a resource. Section 11.8.2.2 does not specify the use of the day-ahead metered energy adjustment factor and only specifies that the ISO will calculate integrated forward market revenues based on the delivered portions. The erroneous formula was never a part of the filed tariff accepted by the Commission. The ISO's corrected settlements formula for resources that are dispatched below their day-ahead schedule in real-time more accurately implements the requirement in Section 11.8.2.2 that the market revenue component of the bid cost recovery payment take into account "delivered MWh, in the relevant Day-Ahead Schedule."

Arguments that the ISO is prohibited from using the corrected bid cost recovery payment calculation methodology prior to the effective date of the March 21 filing should be rejected. The changes to Section 11.8.2.2 proposed in the March 21 filing and accepted by the Commission were clearly identified as clarifications which added detail but did not change the fundamental terms and

conditions of Section 11.8.2.2.<sup>14</sup>

While the ISO does not believe there is any ambiguity in the previously effective version of Section 11.8.2.2, even if there were any ambiguity, such ambiguity should be resolved consistent with the ISO's reading of this tariff provision. The ISO's reading – as implemented through the corrected calculation methodology – is more consistent with the fundamental design of the bid cost recovery mechanism as accepted by the Commission “to calculate the bid cost recovery payment by netting any market revenues received by the resource over a 24-hour period against any unrecovered costs in any interval.”<sup>15</sup> Indeed, failure to accept the ISO's proper reading of Section 11.8.2.2 for the period from August 2010 through March 25, 2011 will result in substantial overpayments to resources for bid cost recovery, much of those overpayments the result of an intentional bidding practice by some market participants to maximize bid cost recovery payments notwithstanding market revenues received in the day-ahead market. The Commission has rejected tariff interpretations that would result in unjust and unreasonable results.<sup>16</sup> For example, in one case involving the New York Independent System Operator, Inc. (NYISO), the Commission accepted the NYISO's interpretation of a tariff provision as consistent with the purpose of the NYISO market rules and further noted that an alternative interpretation proposed

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<sup>14</sup> See, e.g., May 4 order at P 16 (“CAISO also proposes to clarify in the tariff that it will use the tolerance band to determine whether or not the resource delivered minimum load energy and is entitled to minimum load bid cost recovery. CAISO proposes to include the metered energy adjustment factor in the tariff rather than in its business practice manual.”) (Footnote omitted.)

<sup>15</sup> See *California Independent System Operator Corp.*, 116 FERC ¶ 61,274, at PP 492, 504 (2006).

<sup>16</sup> See *Texas Eastern Transmission Corp.*, 49 FERC ¶ 61,395 (1989).

by another party could “provide incentives for manipulating the market price” and “thus could lead to unjust and unreasonable results.”<sup>17</sup> Similar considerations support the ISO’s correct reading of Section 11.8.2.2.

The ISO acknowledges that the corrected methodology it now is using to recalculate bid cost recovery payments for the period from August 2010 through March 25, 2011, differs from the methodology previously documented in the ISO’s business practice manual. In the event of a conflict between a business practice manual and the terms of the ISO tariff, the provisions of the ISO tariff govern.<sup>18</sup> The Commission itself has held that an ISO or RTO tariff must be followed in the event that a business practice manual or other related document not approved by the Commission conflicts with the tariff accepted by the Commission.<sup>19</sup> Therefore, to the extent that the provisions in the business practice manual for settlements and billing regarding the day-ahead and real-time metered data adjustment factors conflicted with Section 11.8.2.2 of the tariff (or any other tariff section), the tariff section takes precedence.

For all these reasons, the ISO is justified in correcting bid cost recovery payments for the period from August 2010 through March 25, 2011.

## **VI. Service**

The ISO has served copies of this filing upon the California Public Utilities Commission and all parties with effective scheduling coordinator service

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<sup>17</sup> *Long Island Power Authority v. New York Independent System Operator, Inc.*, 118 FERC ¶ 61,109, at PP 34, 38 (2007).

<sup>18</sup> ISO tariff, Section 1.3.2(k); *California Independent System Operator Corp.*, 122 FERC ¶ 61,271, at P 111 fn.66 (2008).

<sup>19</sup> *Midwest Independent Transmission System Operator, Inc.*, 118 FERC ¶ 61,212, at P 95 (2007); *ISO New England, Inc., et al.*, 113 FERC ¶ 61,157, at P 18 (2005).



agreements under the ISO tariff. In addition, the ISO has posted this filing on its website and has served a copy of this filing on all parties in Docket No. ER11-3149 via e-mail.

## **VII. Correspondence**

The ISO requests that all correspondence, pleadings, and other communications concerning this filing be served upon the following:

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## VIII. Conclusion

For the reasons discussed above, the ISO respectfully requests that the Commission grant a one-time waiver of certain requirements in Section 11.8 of its tariff, in order to permit the ISO to refrain from correcting the calculation of bid cost recovery payments during the period from April 2009 to July 2010.

Respectfully submitted,

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Dated: June 3, 2011

## CERTIFICATE OF SERVICE

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

Dated at Washington, D.C., this 3<sup>rd</sup> day of June, 2011.

/s/ Bradley R. Miliauskas  
Bradley R. Miliauskas

**California Independent System Operator Corporation**  
**Fifth Replacement FERC Electric Tariff**  
**Petition for Waiver of Tariff Provisions re: Bid Cost Recovery**  
**Attachment A**  
**June 3, 2011**

## **Technical Bulletin**

**2011-04-01**

# **Bid Cost Recovery and Accounting for Delivered Minimum Load Energy Market Revenues**

**Market Issue**

**April 5, 2011**

## **Technical Bulletin 2011-04-01**

### **Bid Cost Recovery and Accounting for Delivered Minimum Load Energy Market Revenues**

The ISO has determined that under certain market scenarios there exists an accounting deficiency arising out of its use of the day-ahead metered energy adjustment factor to account for market revenue in calculating bid cost recovery payments for resources. ISO Tariff Section 11.8.2.2 requires that in calculating integrated forward market (IFM) market revenues used to net IFM bid costs, the ISO must account for market revenue associated with delivered portions of the day-ahead schedule. The ISO uses the day-ahead metered energy adjustment factor to determine the delivered portions of the day-ahead schedule, which is configured to determine the portion of the resource's day-ahead schedule delivered based on the resource's meter. Because the day-ahead metered energy factor approaches or goes to zero when the resource performs at minimum load, the application of the day-ahead metered energy adjustment factor to the IFM market revenue associated with the day-ahead schedule results in the failure to account for market revenue for portions at or below the resource's minimum load that were actually delivered according to the resource's meter reading. The issue is aggravated by a bidding practice identified earlier this year that forces the ISO to schedule the resource at its maximum capacity in the day-ahead and then dispatch the resource down to its minimum load in the real-time.

The ISO will be resettling previously settled bid cost recovery payments to account for energy market revenue associated with all delivered energy associated with the day-ahead schedule as required by the tariff.<sup>1</sup> Because prior to August 2010, the identified bidding practice was not being employed, the deficiency in market revenue accounting did not pose a material difference in settled amounts. Prior to August 1, 2010, the difference in total bid cost recovery amounts to approximately \$6 million from January through July 2010, and \$17 million from April through December 2009. This amounts to approximately \$23 million over a period of fifteen months. Whereas, after August 1, 2010, for a

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<sup>1</sup> On March 21, 2011, the ISO filed with the Federal Energy Regulatory Commission a proposed rule change that eliminates the incentive for parties to engage in the identified bidding practice. The ISO proposed that for the specific case where a resource is dispatched to levels below its day-ahead schedule the IFM market accounting rule will be based on scheduled day-ahead energy as opposed to delivered day-ahead scheduled energy. This technical bulletin and the proposed resettlement herein only address the accounting deficiency in the use of the metered energy adjustment factor for market revenues at or below the resource's minimum load energy. This resettlement does not apply to the proposed rule change in the March 21, 2011 filing.

period covering only seven months, the difference in total bid cost recovery is approximately \$32 million. To avoid unnecessary burden of resettlement to market participants the ISO will only resettle amounts from trading day August 1, 2010, through March 21, 2011, when the bulk of overpayments occurred.

**Background:**

The bid cost recovery mechanism is a series of market rules and calculations that together serve as the mechanism for ensuring resources are paid for their unrecovered start-up and minimum load bid costs if committed by the ISO. Bid cost recovery is also the mechanism through which scheduling coordinators are guaranteed recovery of their energy bid costs. The bid cost recovery mechanism performs four main functions: 1) calculates the applicable bid costs covered for the resource if dispatched or committed by the ISO; 2) determines the applicable market revenues earned by the resource; 3) offsets the calculated bid costs by the market revenue earned by the resource to determine bid cost recovery uplift paid to the resource; and 4) allocates out the total bid cost recovery uplift paid to all resources to ISO load and exports.<sup>2</sup>

The bid costs include both the start-up costs of a resource and the minimum load costs, as well as the energy or ancillary services bid costs. The unrecovered start-up and minimum load bid costs are paid to resources only for intervals in which the resource was committed by the ISO. The unrecovered energy or ancillary services bid costs are calculated and paid for a given interval the resource is dispatched or committed at prices below the bid price included in its bid for the relevant interval. This ensures that the resource is not paid lower than their submitted bid price.

The ISO guarantees recovery of the resource's unrecovered bid costs only to the extent its market revenues are not sufficient to cover these costs. Resources scheduled in the day-ahead market are settled at the locational marginal price (LMP) cleared in the IFM for all the energy scheduled, regardless of actual delivery of the energy scheduled in the day-ahead. Similarly, resources dispatched in the real-time are settled at the applicable LMP cleared in the real-time dispatch run of the real-time market. To the extent these market revenues meet or exceed the bid costs, there are no unrecovered bid costs and thus is no need to compensate the resource under the bid cost recovery mechanism above and beyond what the resource earned from the market. Therefore, the calculated bid costs for a given resource are offset by the market revenue costs first at the interval level and ultimately based on all market revenues earned by the resource across all of the ISO markets over the 24 hour period of a trade day.

The ISO pays for the unrecovered bid costs associated with portions of the day-ahead scheduled energy that are actually delivered. For energy that is

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<sup>2</sup> The bid cost recovery rules are contained in section 11.8 of the ISO tariff.  
<http://www.caiso.com/pubinfo/tariffs/index.html>

not actually delivered as measured through the resource's meter, the ISO does not guarantee recovery of bids costs for the resource. Minimum load costs are paid only to the extent that the ISO can determine that the resource is actually on-line in the applicable trading hour. This determination is made on the basis of the resource actually reaching its minimum load within a given trading hour, subject to a tolerance band which establishes the resource to be on so long as the resource reaches within a tolerance band quantity its minimum load; where the tolerance band is defined as the higher of 5 MW or the product of 3% and the resources PMax. Similarly, start-up costs are only paid to the extent the resource actually starts up within the applicable commitment period.

The ISO compares the portion of metered energy above the greater of the resource's minimum load and self-schedule for a given resource relative to its portion of the day-ahead schedule above the greater of the resource's minimum load and self-schedule through a tool called the day-ahead metered energy adjustment factor (MEAF). The day-ahead MEAF formula is part of the settlements charge code calculations contained in the ISO Business Practice Manual (BPM) for Settlements and Billing.<sup>3</sup> As described in the BPMs, the day-ahead MEAF is bounded by 1 or 0, and is the ratio of the resource's (a) Metered Energy *minus* the Day-Ahead Self-Scheduled Energy *minus* the Day-Ahead Minimum Load Energy *minus* the Standard Ramping, and (b) the Day-Ahead Scheduled Energy *minus* the Day-Ahead Self-Scheduled Energy *minus* the Day-Ahead Minimum Load Energy. It reflects the portion of the scheduled energy above the greater of the resources self-schedule and its minimum load from the dispatched bid curve delivered based on the meter and can be applied to the energy bid cost calculations so that energy bid cost is paid for delivered portions and not paid for the undelivered portions of the day-ahead schedule.

The ISO calculates all the market revenues earned by the resource for a given trading hour by summing up the product of the resource's MWhs scheduled in the day-ahead schedule actually delivered multiplied by the applicable LMP. The ISO applies the day-ahead MEAF to this calculation to capture the IFM market revenue associated only with the delivered portions of the day-ahead schedule.

The ISO also developed a real-time MEAF that compares the metered generation to the dispatched amount above or below the amount scheduled in the day-ahead market. The real-time MEAF formula is also part of the settlements charge code calculations contained in the BPM for Settlements and Billing. The real-time MEAF is also bounded by 1 or 0, and is defined as the ratio of the resource's (a) metered energy *minus* day-ahead scheduled energy *minus* standard ramping *minus* real-time self-scheduled energy, and (b) total expected energy *minus* day-ahead scheduled energy *minus* standard ramping *minus* real-time self-scheduled energy.

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<sup>3</sup> <https://bpm.caiso.com/bpm/bpm/doc/000000000000536>.



**Description of the Market Issue:**

Section 11.8.2.2 provides, in relevant part:

For any Settlement Interval in a CAISO IFM Commitment Period the IFM Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of: (1) the product of the delivered MWh, in the relevant Day-Ahead Schedule in that Trading Hour where for Pumped-Storage Hydro Units and Participating Load operating in the pumping mode or serving Load, the MWh is negative, and the relevant IFM LMP, divided by the number of Settlement Intervals in a Trading Hour; and (2) the product of the IFM AS Award from each accepted IFM AS Bid and the relevant Resource-Specific ASMP, divided by the number of Settlement Intervals in a Trading Hour. In the case of a Multi-Stage Generating Resource, the CAISO will calculate the market revenue at the Generating Unit or Dynamic Resource-Specific System Resource level. *[emphasis added]*

Generally, the day-ahead MEAF is effective in determining the portions of the day-ahead schedule that are actually delivered based on the resource's meter. However, in cases where the resource is operating at a level below its day-ahead schedule in the real-time the application of the day-ahead MEAF results in the failure to account for the fully delivered portions of the day-ahead schedule below the minimum load.

The day-ahead MEAF is used to capture the delivered portions of the day-ahead schedule based on the resource's metered energy. For portions above the resource's minimum load, energy is delivered if the resource is operating at minimum load. If a resource reaches its minimum load, the resource has in essence delivered its minimum load energy, even though the resource may not have delivered energy above its minimum load. Using the day-ahead MEAF to determine what portion of the day-ahead schedule below the minimum load is delivered poses a problem because by design if the resource is at or near the resource's minimum load, the day-ahead MEAF approaches or reaches zero. Consequently, when the day-ahead MEAF is applied to the portion of the calculation of market revenues for portions of the day-ahead schedule below the minimum load, no revenue is accounted for when, in fact, the resource earned market revenue for portions at or below the minimum load.

Example:

PMax = 400 MWs

Pmin = 100 MWs

Day-Ahead Schedule = 400 MWs

Day-Ahead market cleared LMP = \$35/MWh

Day-Ahead Market Revenue for total Scheduled Energy = \$14,000

Day-Ahead Market Revenue above Minimum Load Energy = \$10,500  
 Day-Ahead Market Revenue at or below Minimum Load = \$3500  
 Day-Ahead Minimum Load Cost (Based on Registered Cost) = \$4000

Real-time Meter = 100 MWs

(1) Use of Day-Ahead MEAF in Accounting for IFM Market Revenues

Apply Tolerance Band to Determine whether Resource is On = Resources Passes and is Eligible to Receive Minimum Load costs = \$4000

Assume no Self-Scheduled Energy and no Standard Ramp, therefore,  
 day-ahead MEAF = (metered energy *minus* minimum load energy) *divided*  
*by* (day-ahead schedule energy *minus* minimum load energy) =  $(100 - 100) / (400 - 100) = 0$

IFM Market Revenue for netting IFM Bid Cost Recovery =  $\$14,000 * 0 = 0$   
 IFM Minimum Load Cost Payment =  $\$4000 - 0 = \$4000$   
 Day-Ahead Scheduled Energy Revenue actually earned for Minimum Load Energy Portions = \$3500

Total Payments for Associated with Reaching Minimum Load =  $\$3500 + \$4000 = \$7500$

(2) Determining Delivered Minimum Load Energy Based on Resource Coming Online

Apply Tolerance Band to Determine whether Resource is On = Resources Passes and is Eligible to Receive Minimum Load costs = \$4000

Resource Determined to be On, capture IFM Market Revenue associated with Minimum Load Energy = \$3500

Result:

IFM Market Revenue for netting IFM Bid Cost Recovery above Minimum load =  $\$10,500 * 0 = 0$

IFM Market Revenue for netting IFM Bid Cost Recovery above Minimum load = \$3,500

IFM Minimum Load Cost Payment =  $\$4000 - \$3500 = \$500$

Total Payments for Associated with Reaching Minimum Load =  $\$3500 + \$500 = \$4000$

The ISO intended to use the day-ahead MEAF for the purposes of calculating the delivered portions of the day-ahead schedule. When a resource

delivers at least its minimum load energy, the ISO pays the LMP for that scheduled minimum load energy through the settlement of the day-ahead schedule. Applying the day-ahead MEAF which was determined from the energy delivered and scheduled above minimum load to the delivered minimum load energy (day-ahead MEAF<1) results in the under accounting of those revenues associated with the delivered portions of the day-ahead schedule.

Section 11.8.2.2 of the tariff does not specify the use of the day-ahead MEAF and only specifies that the ISO calculate IFM market revenues based on the delivered portions. Section 11.8.2.1.2, of the ISO tariff specifies that the ISO provides IFM Minimum Load Cost payment in a given interval if the resource is determined to be "On." To determine whether the resource is "On," the ISO applies the tolerance band to the resource's metered energy and if the resource is at or near their minimum load at any time during the applicable time interval, the resource is determined to be "On" and the ISO qualifies the resource for payment of its IFM Minimum Load cost. The tolerance band is defined as: the higher of 5 MW or the product of 3% and the resources PMax.

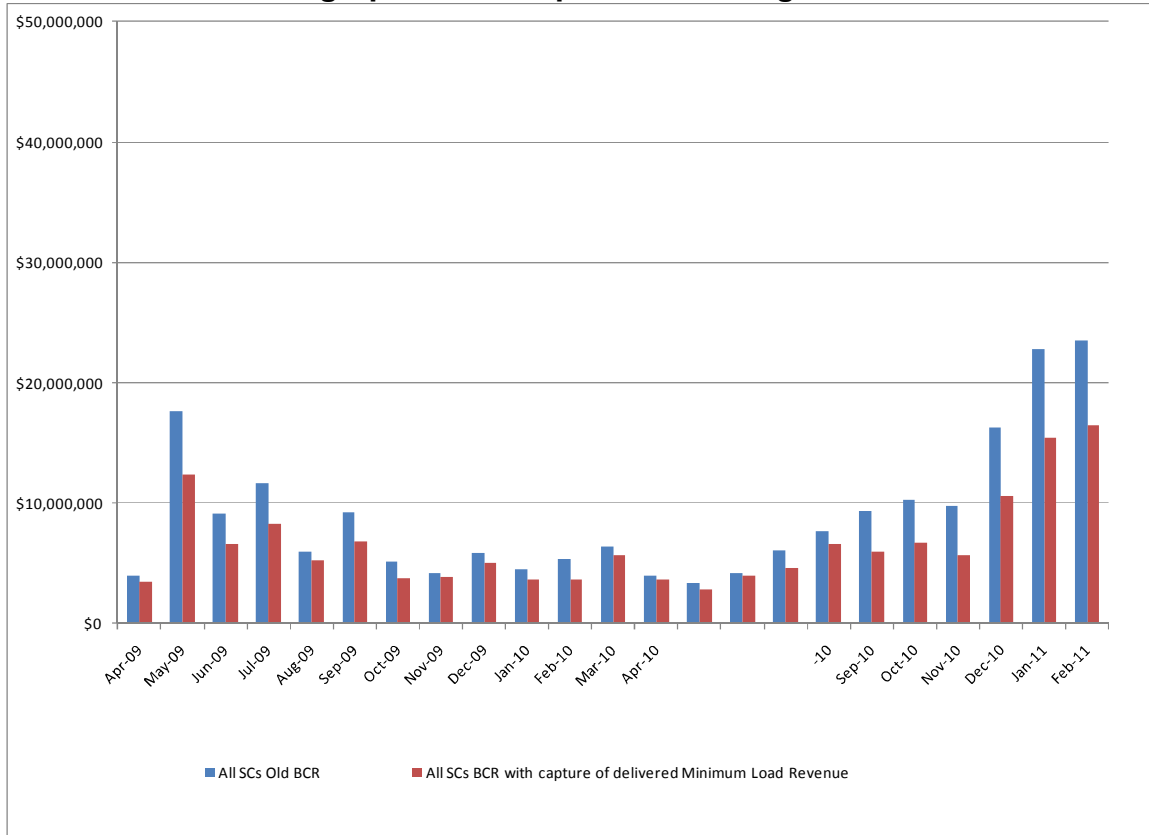
The ISO believes the application of the tolerance band to determine the delivered portions as opposed to the day-ahead MEAF would better capture the delivered portions of the day-ahead schedule for portions below the minimum load.

**Impact of Market Issue:**

Figure 1 and table 1 below provide an estimate of the impact of this deficiency in bid cost recovery payments.

The data in Figure 1 and table 1 only estimates resettlement based on the change in accounting for minimum load energy market revenues in the IFM. The ISO will be adopting the same practice of using the tolerance band to determine delivered portions of minimum load energy in the real-time market as well. Therefore, the actual resettlement may vary from these illustrative data. However, given that the real-time metered energy adjustment factor does not pose the same issue described above, the ISO does not anticipate the actual resettlement amounts will differ substantially from the illustrative data. Moreover, this impact analysis was conducted outside of the settlement systems. Consequently, when the actual settlement statements are recalculated, the actual settlement amounts may vary.

**Figure 1: Impact of Under Accounting for Delivered Minimum Load Revenue** The below graph is from April 2009 through Feb 2011.



**Table 1: The estimated bid cost recovery differences related to the above graph for April 2009 through February 2011.**

Month - Year	Using DA MEAF	Using Tolerance Band	Difference
Apr 2009 through Dec 2009	\$73,057,073	\$55,614,811	\$17,442,262
Jan 2010 through Jul 2010	\$33,815,457	\$28,132,357	\$5,683,100
Aug 2010 through Dec 2010	\$53,298,509	\$35,628,911	\$17,669,598
Jan 2011 through Feb 2011	\$46,406,415	\$31,951,362	\$14,455,053

In its March 21, 2011, filing, the ISO explained in greater detail that a bidding practice has been identified as having exaggerated bid cost recovery payments since August 2010. See <http://www.aiso.com/2b4c/2b4cb97236f80.pdf>. The bidding practice led to the ISO committing the resource at full capacity in the IFM daily, and then forcing the ISO to dispatch the resource down to the resource’s minimum load in the real-time. As a result the day-ahead MEAF was frequently at 0 for the affected

resources, thereby failing to capture any of the day-ahead market revenue associated with portions below the minimum load energy, even though such resources performed at their minimum load. Prior to August 2010, while in certain cases the day-ahead MEAF at times also resulted in the under-recovery of IFM market revenues, the magnitude was much smaller given the lack of a strategy forcing the ISO to keep resources on at minimum load each day.<sup>4</sup>

**Next Steps:**

January, February and part of March 2011 – Resettlement will commence in T+76 business day statements, starting mid-April 2011.

August – December 2010 – Resettlement will commence in the T+18 months statements, starting in February of 2012.

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<sup>4</sup> In the early months after the start of the ISO's LMP-based market, in gaining experience with its new market, resources were committed in greater amounts than was the case later on. This accounts for the greater volume of bid cost recovery in the earlier months of the 2009 time period.