

102 FERC ¶ 61,317  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;  
William L. Massey, and Nora Mead Brownell.

San Diego Gas & Electric Company,  
Complainant,

Docket No. EL00-95-045

v.

Sellers of Energy and Ancillary Services  
Into Markets Operated by the California  
Independent System Operator and the  
California Power Exchange,  
Respondents

Investigation of Practices of the California  
Independent System Operator and the  
California Power Exchange

Docket No. EL00-98-042

ORDER ON PROPOSED FINDINGS ON  
REFUND LIABILITY

(Issued March 26, 2003)

1. In this order, we will adopt in part and modify in part, Proposed Findings issued on December 12, 2002 by the presiding administrative law judge in this proceeding, and direct the parties in this proceeding to take certain actions.<sup>1</sup> This order benefits customers by clarifying the method for calculating refunds for purchases made in the organized spot markets in California during the period October 2, 2000 through June 20, 2001 (the refund period). With the issuance of this order, the Commission expects that refunds will be distributed by the end of this summer.

**Background**

2. The Commission found in November 2000 that the electric market structure and market rules for wholesale sales of electric energy in California were seriously flawed and

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<sup>1</sup>See San Diego Gas & Electric Company, et al., 101 FERC ¶ 63,026 (2002) (December 12 Proposed Findings).

that these structures and rules, in conjunction with an imbalance of supply and demand, caused unjust and unreasonable rates. In a July 25, 2001 order, the Commission initiated formal evidentiary hearings in these proceedings to further develop the record with regard to implementation of the Commission's mitigated market clearing price (MMCP) methodology established by that Order and a determination of what refunds are owed.<sup>2</sup> In the July 25 Order, the Commission directed the presiding administrative law judge to certify findings of fact without an Initial Decision with respect to application of its mitigated pricing method on the following issues:

- (1) the mitigated price in each hour of the refund period;
- (2) the amount of refunds each supplier owed according to the Commission's MMCP method; and
- (3) the amount currently owed to each supplier (with separate quantities due from each entity) by the California Independent System Operator Corporation (CAISO), the three California investor owned utilities, and the State of California.

3. The Commission also directed the CAISO to provide the presiding administrative law judge, within 15 days of its July 25 Order, with a re-creation of mitigated prices resulting from the Commission's mitigated pricing methodology for every hour from October 2, 2000 through June 20, 2001. The Commission also directed the CAISO and California Power Exchange (PX) to rerun their settlement billing processes and provide the presiding administrative law judge and the parties with these data. The revised settlement data would permit the parties to "use this information to form the basis of any offsets (i.e. the amounts to be refunded against the payments past due)."<sup>3</sup>

4. The CAISO, using settlement data as of September 27, 2001, its "snapshot" of amounts owed and owing, calculated that for the refund period October 2, 2000 through June 20, 2001, suppliers owe the CAISO and PX a refund of \$1.8 billion. Those calculations are based upon use of the CAISO's MMCPs which the presiding administrative law judge adopted. Since the presiding administrative law judge determined that the suppliers are owed approximately \$3.0 billion, he found that the net result is that suppliers are due \$1.2 billion after refunds. Of this \$3.0 billion in unpaid amounts, more than half is related to PG&E (about \$1.8 billion), with almost all the remainder being the \$1.2 billion in undistributed money still held by the PX.

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<sup>2</sup>See San Diego Gas & Electric Company et al., 96 FERC ¶ 61,120 (2001) (July 25 Order), order on clarification and reh'g, 97 FERC ¶ 61,275 (2001).

<sup>3</sup>See July 25 Order at 61,519.

**Proposed Findings Summarily Adopted**

5. The Commission will summarily adopt the presiding judge's following proposed findings of fact:
- A. (Issue: Phase 1, I.B.2.) The base heat rate data supplied by generators pursuant to the April 26 Order, and modified by the Trial Stipulation as to Heat Rates and Non-Natural Gas Generation Joint Ex. (JE-) 1 entered in this proceeding ("Heat Rate Stipulation"), is accurate and its use will obtain a just and reasonable end result. Accordingly, the uncontested Heat Rate Stipulation is summarily adopted.
  - B. (Issue: Phase 1, I.B.3.) Incremental heat rate curves should not be adjusted to be monotonically non-decreasing.
  - C. (Issue: Phase 1, I.C.) The CAISO's Acknowledged Operating Target process is a reasonable interpretation and implementation of the Commission's instruction in the June 19 Order to calculate the proxy market clearing price based upon the approximate point on the heat rate curve at which the last unit is dispatched.
  - D. (Issue: Phase 1, I.D.2.a. & b.) BEEP Supplemental and BEEP Ancillary Services energy bids are eligible to set the MMCP. At paragraph 119, the presiding judge noted that all parties support this finding as shown in the MMCP Stipulation.<sup>4</sup>
  - E. (Issue: Phase 1, I.D.2.e.) Units dispatched out of sequence (OOS) to address locational constraints and mitigate congestion are ineligible to set the BEEP Stack price and should not be included in the universe of units eligible to set the MMCP.
  - F. (Issue: Phase 1, I.D.3.) Only gas-fired units with incremental dispatch instructions (as opposed to decremental) can set the MMCP in intervals where both types of bids were dispatched.

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<sup>4</sup>See San Diego Gas & Electric Company et al., 98 FERC ¶ 63,026 at 65,116 (2002).

- G. (Issue: Phase 1, I.D.4.) When there were decremental dispatch instructions but no incremental dispatch instructions, the decremented gas-fired unit with the lowest marginal costs should be used to set the MMCP.
- H. (Issue: Phase 1, I.D.5.) When no eligible unit was dispatched for imbalance energy, the gas-fired unit with the lowest marginal operating costs that had a bid for incremental energy submitted into the BEEP stack should set the MMCP.
- I. (Issue: Phase 1, I.D. 6.) Units running on fuels other than natural gas are not eligible to set the MMCP as provided for in the uncontested Heat Rate Stipulation and adopted by the MMCP Joint Stipulation.
- J. (Issue: Phase 1, I.D.7.) Units that did not respond to BEEP Stack dispatch instructions are not eligible to set the MMCP. Further, we will adopt the presiding judge's proposed finding that the CAISO should be directed to screen out units that did not meaningfully respond to BEEP Stack dispatch instructions (response less than 0.1 MW) from setting the MMCP.
- K. (Issue: Phase 1, I.E.2.) For hourly MMCPs that are calculated based on 10-minute interval MMCPs, the six interval MMCPs should be averaged on a simple (not weighted) basis.
- L. (Issue: Phase 1, II.A.1.-9.) The presiding judge's proposed findings on the criteria determining whether a transaction was conducted pursuant to Section 202(c), as discussed in paragraphs 273-418.
- M. (Issue: Phase 2, I.A.2.b.) The presiding judge's proposed findings on the following transactions: (1) the Dynegy transactions listed in hearing exhibit DYN-26 involve multi-day transactions ineligible to be mitigated (paragraphs 475-85);<sup>5</sup> (2) the AES transactions described in the presiding judge's findings in paragraphs 486-90; (3) the BPA transactions described in the presiding judge's findings in paragraphs 491-2; (4) the LADWP transactions described in the presiding judge's findings in paragraphs 493-501; (5) the Transalta transactions described in the presiding judge's

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<sup>5</sup>The presiding judge did not address other Dynegy transactions that were made under the 11-day contract because they are the subject of ongoing settlement negotiations between Dynegy and the CAISO. We will make no finding on these other transactions until the completion of these ongoing settlement negotiations.

findings in paragraphs 502-06; (6) the EPME transactions described in the presiding judge's findings in paragraphs 507-11; (7) the Redding transactions described in the presiding judge's findings in paragraphs 518-24; (8) the Imperial Irrigation District transactions described in the presiding judge's findings in paragraphs 525-29; and (9) the two Powerex transactions described in paragraphs 512-17.

- N. (Issue: Phase 2, I.A.2.g.ii.) The CAISO's proposed methodology for accounting for Energy Exchange Transactions will treat energy exchanges identically in the CAISO's productions system and refund calculations and, thus, ensure symmetrical treatment and a just and reasonable end result (paragraphs 530-36).
- O. (Issue: Phase 2, I.A.2.j.) The CAISO should mitigate capacity charges for ancillary services or other non-energy charges by applying the MMCP to sales of imbalance energy and ancillary service sales and their attendant charge types.
- P. (Issue: Phase 2, I.A.2.k.i.) Because amounts collected through neutrality adjustment charges may change following the application of the MMCP to other charge types, it is not necessary and would be improper to mitigate, adjust, and/or offset neutrality adjustment charges against refund amounts by applying the MMCP to them.
- Q. (Issues: Phase 2, I.A.2.p.i. and ii.) Reliability Must Run (RMR) services provided through contract path (cost-of-service) pricing are not subject to mitigation, but RMR services provided through market path pricing are subject to mitigation.
- R. (Issue: Phase 2, I.A.2.m.) We will summarily adopt the presiding judge's proposed findings on the following three issues related to the issue of how Charge Types 401 and 481 should be mitigated or adjusted: (1) the CAISO acknowledged mistakes in the manual adjustments of charge type 481 transactions and the CAISO will correct these particular adjustments in a Compliance Filing; (2) the CAISO improperly mitigated a Charge Type 401 transaction with AES on December 8, 2000, and has agreed to correct this error in the Compliance Filing; and (3) the CAISO erred in rerunning its settlement system by not properly accounting for a settlement between the CAISO and WAPA (SCID WAMP) of an error in Charge Type 401 on

WAPA's December 2000 invoice and the CAISO agreed to correct this error in a Compliance Filing.

- S. (Issue: Phase 2, I.A.2.n.) That the CAISO must correct the acknowledged mistakes it made when it neglected to remove original, unmitigated penalty amounts, and incorrectly duplicated some mitigated penalties during the settlement rerun concerning Charge Type 485 (see paragraph 595).
- T. (Issue: Phase 2, I.A.2.o.) The record conclusively establishes that the CAISO must manually adjust in a proper method transactions involving qualified transactions for amounts paid above the MCP, as described in paragraphs 611-27.
- U. (Issue: Phase2, I.A.3.) The CAISO has admitted that its settlement rerun calculations erred in various respects and it will correct these errors and other corrective adjustments in a Compliance Filing, as described in paragraph 646.
- V. (Issue: Phase 2, I.B.1.a.-c.) Subject to the corrections discussed in the presiding judge's findings at paragraphs 715 and 716, the method the PX proposed for handling congestion is consistent with the Commission's April 6, 2001 Compliance Order, 95 FERC ¶ 61,021 (2001) (April 6 Order) and that Powerex's proposal has not been shown to be just and reasonable; and the PX's proposed allocation of congestion shortfalls to buyers is appropriate because it is consistent with the Commission's \$150/MWh breakpoint methodology as clarified by the Commission's May 15 Order and the PX's allocation of congestion shortfalls yield results that are just and reasonable.
- W. (Issue: Phase 2, I.B.4.) As described in paragraph 707 of the presiding judge's proposed findings, there is no controversy that requires resolution over whether short-term bilateral sales to the PX should be exempt from mitigation.
- X. (Issue: Phase 2, I.B.5.) Vernon's proposal to use net purchase or sale amounts for an hour (rather than gross sales and purchases), where a participant has both sales and purchases within the same zone, within that same hour, and within the same market (e.g., PX Day-Ahead Market) is not just and reasonable.

- Y. (Issue: Phase 2, I.B.6.) The PX must make the corrections described in paragraphs 715-24 of the findings, to its refund methodology when it files a compliance filing.
- Z. (Issue: Phase 2, I.C.1.) The issue of how to treat default chargeback amounts held by the PX, inclusive of interest, is not an issue for resolution in this proceeding (paragraphs 725-28).
- AA. (Issue: Phase 2, II.A.) Load Serving Entities (LSEs) are eligible to recover demonstrable emissions costs as described in paragraph 730.
- BB. (Issue: Phase 2, II.A.) Duke supported its claimed CAISO NO<sub>x</sub> emissions costs of \$137,656 and Dynegy and Williams adequately supported recovery of their claimed emission costs as described in paragraphs 736-41.
- CC. (Issue: Phase 2, II.B.) Emission costs found to be eligible for recovery under II.A. shall be applied to the refunds ultimately found and shown in a corrected version of Ex. ISO-30 at 19-20, as an offset to the discrete refund liability of the listed seller/SC as described in paragraphs 761-64.
- DD. (Issue: Phase 2, III.) That the parties' illustrative calculations of amounts claimed to be owed to them by the CAISO and/or the PX provide little confidence of their accuracy and will not be used to calculate refunds.<sup>6</sup> Instead, the CAISO's settlement re-run data and the PX's refund calculations will be used to calculate refunds.<sup>7</sup>
- EE. (Issue: Phase 2, III.B.) The CAISO and PX markets and tariffs are discrete and should continue to be discrete particularly as concerns the calculation of refunds and of interest.<sup>8</sup> The CAISO and the PX shall settle up separately with SCs and market participants, respectively, and in each market refunds shall be applied as offsets to the unpaid balances.<sup>9</sup>

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<sup>6</sup>See December 12 Findings at paragraph 765.

<sup>7</sup>Id. at paragraphs 765-67.

<sup>8</sup>Id. at paragraph 789.

<sup>9</sup>The presiding judge stated that in Exhibit CPX-39, the PX sets forth the proper way in which refunds, with interest, should be applied as offsets to the unpaid balances

- FF. (Issue: Phase 2, IV.A.) We will adopt the presiding judge's finding that the CAISO must correct its improper handling of a particular AES transaction in its final settlement run in this proceeding, as described in paragraph 823.
- GG. (Issue: Phase 2, IV.B.) We will adopt the presiding judge's finding that the APX should be held liable for refunds in this proceeding as described in paragraph 824-58. We further agree with the presiding judge's findings in paragraphs 859 and 871, which state that, given the above finding, it is unnecessary to address the issue of how any refunds or amounts owed should be determined, and the issue of whether APX has provided data to allow participants to determine the amounts owed and owing.
- HH. (Issue: Phase 2, IV.D.) We will adopt the presiding judge's findings in paragraphs 876 and 877 that the issues described therein concerning Dynegy are moot.
- II. (Issue: Phase 2, IV.E.) We will adopt the presiding judge's finding that the PX properly mitigated the transactions that were spot sales in its day ahead and day of markets, and not non-spot transactions, as described in paragraphs 878-80.
- JJ. (Issue: Phase 2, IV.H.1.-2.) We will adopt the presiding judge's finding in paragraph 881 that SRP's concern on this issue is a reiteration in its initial brief of its concerns about the propriety of the PX's zonal allocation methodology, and that the presiding judge's findings on issue I.B.1 approve the PX's zonal allocation methodology. We will further adopt the presiding judge's statement in paragraph 882 that SRP is a SC and amounts due by the CAISO to all SCs can not be definitively resolved until the filing of the compliance filing required by his proposed findings.
- KK. (Issue: Phase 2, IV.K.1.) We will adopt the presiding judge's finding in paragraph 884 that the CAISO acknowledged errors made in its last settlement run regarding certain Vernon transactions and that the CAISO agreed to correct these errors.

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<sup>9</sup>(...continued)

and that, as in II.B., emission costs should be applied as offsets to the discrete refund liability of the listed seller/SC in ISO-30 at 19-20. We also summarily adopt these findings.



LL. (Issue: Phase 2, L.1.) We will adopt the presiding judge's finding in paragraph 885 that the CAISO acknowledged errors made in its last settlement run regarding certain WAPA transactions and that the CAISO agreed to correct these errors.

### **Issues for Discussion**

6. For convenience, we will follow the issue numbering conventions the presiding judge used in his proposed findings.

### **Phase 1, I.B. What is the appropriate heat rate data set for each unit eligible to set the MMCP that should be referenced for insertion in the MMCP Formula?**

#### **1. Should average and/or incremental heat rate curves be used in determination of the MMCP?**

#### **Background**

7. The Commission directed the presiding judge to determine the marginal cost of the last unit dispatched to meet load in California's real-time market in each hour of the refund period and to set the MMCP at that marginal cost. The Commission provided the presiding judge with the following formula to calculate MMCP.<sup>10</sup>  $MMCP = (\text{Heat Rate} \times \text{Gas Price} + \$6 \text{ for O\&M}) \times 1.1$  (creditworthiness adder beginning 1/6/01).

8. Much of the discussion at hearing centered around whether to use average or incremental heat rates in this formula. Average heat rate is generally defined as the total heat content of fuel burned (Btu) divided by the net electrical output generated (kWh). The average heat rate changes at different levels of electrical output because the unit's efficiency changes with output. As noted by the presiding judge, the incremental heat rate in this case is based on the incremental gas consumption needed to produce the last, or marginal, change in electrical output (that made the unit the marginal unit).<sup>11</sup>

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<sup>10</sup>See July 25 Order.

<sup>11</sup>December 12 Proposed Findings at paragraph 50.

Presiding Judge's Proposed Finding

9. With one exception, the presiding judge found that the CAISO's incremental heat rate data should be used instead of the basic average heat rate data supplied by generators. (See discussion beginning at paragraph 40 of the December 12 Proposed Findings.) The CAISO calculated incremental heat rates from generators' average heat rate data for each different output level. The exception involved units owned by Pasadena. The presiding judge found that, because these gas turbine units generally operated at only one level besides zero output, their average heat rates at that operating level should be used instead of the incremental heat rate.

Comments

10. Generators such as CSG, CA Generators, AEPCO, and Modesto object to the use of incremental heat rates because they do not allow for recovery of minimum load fuel costs. In its comments, CA Generators advocates a "mixed" heat rate approach if the average is not adopted for all intervals. Under this approach, if the marginal unit is turned on solely to respond to the CAISO dispatch (no other customers in the interval), then its average heat rate would be used. Otherwise (when the marginal unit is merely changing operating level), the CAISO's incremental heat rate is used.

11. Other parties such as Trial Staff, CAISO, and CA Parties support the use of incremental heat rates as being consistent with the Commission's orders that sought to replicate a competitive market. They also argue the following: (1) sellers would expect to recover their average costs over an entire operating cycle of multiple hours or days so calculating 10-minute MMCPs with average heat rates would grossly overstate them; (2) each generator owns a large portfolio of units with widely varying heat rates so that even if the marginal unit in a given interval is not recovering its full operating costs, the more efficient elements of the portfolio can earn enormous profits; (3) most units earn money on both power sales and ancillary service sales and production decisions will likely be based on joint revenues; and (4) the Commission provided a cost-based backstop for sellers who do not feel they are recovering their costs. The CAISO also points out that, unlike the prospective period where minimum load fuel costs are specifically recovered, the refund period had no must-offer requirement and Trial Staff states that the Commission clearly excluded minimum load fuel costs from the MMCP and cites the April 26 Order at pages 61,358-59.

12. Trial Staff and CA Parties oppose the exception for Pasadena for the same reasons expressed above. Trial Staff also notes that Pasadena's units actually operated occasionally at output levels between zero and the full output level.

### Discussion

13. The Commission will adopt the incremental approach as being the best means of replicating a competitive market outcome. We find that the presiding judge and the CAISO correctly interpreted our prior orders by developing the hourly mitigated prices for the refund period using incremental heat rates.

14. We will reject the arguments that average heat rates should be used in this proceeding in order to allow recovery under the MMCP formula of minimum load fuel costs. As discussed further below, we will adopt the gas index-related recommendations of the Staff Initial Report, as modified by the Staff Final Report being issued concurrently with this Order. Since, as discussed below, the staff recommendation provides a means to directly reimburse generators for their fuel costs, there is no reason to attempt to use average heat rates as an indirect means of achieving the same result.

15. We see no basis in the record to treat Pasadena differently from all other sellers. In fact, as noted by the presiding judge at paragraph 74, for gas turbines such as Pasadena's, which can move from zero output to the required operating level within one 10-minute interval, there is no difference between the average and incremental heat rates. Thus, eliminating the exception for Pasadena should have no adverse impact on Pasadena. Accordingly, we will make no exception for Pasadena concerning the use of incremental heat rate data.

#### **D. What units are eligible to set the MMCP for each 10-minute interval in the refund period?**

##### **1. Is eligibility to set the MMCP contingent upon a unit having had a bid in the BEEP Stack?**

#### Background

16. As noted by the presiding judge at paragraph 95, "BEEP Software" is defined in the CAISO Tariff as "the balancing energy and ex post pricing software which is used by the CAISO to determine which Ancillary Service and Supplemental Energy resources to Dispatch and calculate the Ex Post Prices." Ex. JE-4 at 22 (The CAISO Tariff, Appendix A - Master Definitions Supplement, Original Sheet No. 307).

17. The two main types of bids available for dispatch through the BEEP system are Ancillary Services and Supplemental Energy bids. Once such bids are submitted to the Real Time Market for each operating hour, the BEEP system ranks them in merit order

based on price to determine a supply curve of real time energy, known as the "BEEP Stack".

18. Bids are dispatched through the BEEP Stack on a 10-minute basis, known as intervals. The BEEP system also establishes Real Time Imbalance Energy prices every 10 minutes based on the real time energy bid of the marginal unit dispatched to meet the system imbalance in that 10-minute interval. For each 10-minute interval, the CAISO established two different MCPs for real time energy: one price based on the highest incremental energy bid dispatched (the incremental MCP or "inc price"), and another price based on the lowest decremental energy bid dispatched (the decremental MCP or "dec price").

#### Presiding Judge's Proposed Finding

19. The presiding judge found that, consistent with the relevant Commission orders,<sup>12</sup> eligibility to set the MMCP is contingent on having a bid in BEEP Stack.

#### Comments

20. CSG and AEPCO continue to argue against this limitation for the same reasons expressed at hearing; primarily because during the refund period, most energy was traded outside the BEEP Stack. CA Parties, CAISO, and Trial Staff support the findings as being in conformance with the Commission's orders and its intent to replicate the outcome of a competitive market.

#### Discussion

21. The Commission will adopt the presiding judge's finding. We believe our orders have been clear in holding that the mitigated price will be based on units dispatched through the CAISO's Real Time Market, which relied on the BEEP Stack to set real-time prices. Since we are attempting to closely emulate the outcome of a properly competitive CAISO market, reliance on the BEEP Stack is appropriate. Comments to the contrary, which have already been addressed by the presiding judge in any event, have failed to convince us otherwise.

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<sup>12</sup>The presiding judge noted at paragraph 95 that the Commission directed the CAISO to base its mitigation calculations on "the [CA]ISO's auction" (April 26 Order), "[CA]ISO Market Clearing Auction" [San Diego Gas & Electric Company, et al., 95 FERC ¶ 61,418] (June 19 Order), "real time imbalance market" (July 25 Order), and "Imbalance Energy Market" (December 19 Compliance Order).

## **2. Are the following energy types eligible to set the MMCP?**

### **c. OOS Non-congestion Imbalance Energy Supplemental**

### **d. OOS Non-congestion Imbalance Energy Spin, Non-Spin and Replacement Ancillary Services**

#### Background

22. Occasionally, bids in the BEEP Stack must be taken out of the merit order determined by the BEEP system in order to address reliability or intra-zonal congestion issues. Such transactions are called Out of Sequence (OOS) transactions. The presiding judge noted at paragraph 124 that under the CAISO Operating Procedure M-403, OOS transactions to address reliability can set the MCP, while OOS transactions to address intra-zonal congestion cannot.

23. In a related matter, the hearing included a discussion of an internal CAISO audit that indicated that the CAISO incorrectly logged certain OOS transactions as having occurred out of market (OOM). As discussed below, under CAISO procedures, OOM transactions cannot set the MCP. Thus, CSG and CA Generators argued that some OOS non-congestion transactions may have been inappropriately excluded from eligibility to set the MMCP because of the mislogging. CAISO and CA Parties answered that there was insufficient evidence to support this claim since not all OOS transactions are eligible to set MCP either. They said that generators had not supported any specific "corrections" or additions to the BEEP dispatch data or identified any affected transactions.<sup>13</sup> The May 15 Rehearing Order directed the presiding judge to address the mislogging issue.<sup>14</sup>

#### Presiding Judge's Proposed Finding

24. The presiding judge found that OOS non-congestion units that are eligible to set the BEEP stack price under CAISO Operating Procedure M-403, and that are bid into,

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<sup>13</sup>See December 12 Proposed Findings at paragraph 133.

<sup>14</sup>Specifically, the Commission stated the following in the May 15 Rehearing Order: "If the presiding judge finds information, through either an internal audit or other disclosures, that out-of-sequence non-congestion transactions were not logged according to the [CA]ISO's Tariff provisions, the [CA]ISO must recalculate each clearing price during the refund period where an out-of-sequence non-congestion transaction was "mis-logged" and use these corrected clearing prices in the refund proceeding." 99 FERC ¶ 61,160 at 61,654 (2002) (May 15 Rehearing Order).

and dispatched through, the BEEP stack for reasons unrelated to congestion, are part of the universe of units eligible to determine the MMCP.

25. Regarding the mislogged transactions, the presiding judge found that the mislogging concerns had not been shown to be material and prejudicial to the CAISO's analysis of units eligible to determine MMCP.

### Comments

26. Trial Staff agrees that generators have not shown the extent to which relevant mislogging occurred but states that any errors that the CAISO has already identified internally should be corrected before the final rerun. CA Parties and CAISO also support the finding regarding mislogging. CA Generators disagree. They say that the May 15 Rehearing Order required that, where mislogging occurred, the CAISO must recalculate MCP and MMCP.<sup>15</sup>

### Discussion

27. The Commission will adopt the finding that OOS non-congestion units that are eligible to set the BEEP Stack price under CAISO Operating Procedure M-403, and that are bid into, and dispatched through, the BEEP Stack for reasons unrelated to congestion, are part of the universe of units eligible to determine the MMCP. As noted earlier, generators oppose the BEEP Stack limitation on eligibility and their arguments apply to individual energy types as well. However, since we will adopt this limitation generally, generators' arguments are unavailing here as well.

28. Regarding the mislogging issue, we will provide clarification. The May 15 Rehearing Order required the presiding judge to determine whether any OOS non-congestion transactions were not logged according to the CAISO's Tariff provisions. Our review of the record, the initial and reply comments here, and of additional evidence submitted following our November 20, 2002 Order permitting additional discovery,<sup>16</sup> indicates that a CAISO internal audit has already identified OOS units that may be eligible to set the BEEP Stack price under CAISO Operating Procedure M-403.<sup>17</sup> In light of the

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<sup>15</sup>See May 15 Rehearing Order at 61,654.

<sup>16</sup>San Diego Gas & Electric Co., et al., 101 FERC ¶ 61,186 (2002).

<sup>17</sup>At paragraphs 456-58, the presiding judge discussed evidence adduced at hearing that indicated that instances of mislogging identified by the internal audit were  
(continued...)

CAISO's identification of these OOS units, we direct the CAISO to determine whether mislogged OOS transactions were non-congestion transactions eligible to set the MCP. Accordingly, the CAISO's final rerun should reflect such corrections, for purposes of both MCP and MMCP calculation. The final calculation of amounts owed requires that both figures be as accurate as practicable. We believe this approach will achieve that result.

## **f. OOM**

### Background

29. OOM transactions, by definition, occur outside the formal spot markets. They are the product of an extra-market arrangement between the CAISO and a generator and can be paid at either the MCP or a cost-based price.

### Presiding Judge's Proposed Finding

30. The presiding judge found that units that by definition are not bid into the BEEP Stack and are dispatched out-of-market by the CAISO are ineligible to set the MMCP.

### Comments

31. Since generators argue against the BEEP Stack limitation on eligibility, they continue to disagree with this finding for the same reasons expressed at hearing. They argue that, given the CAISO's reliance on OOM transactions during the refund period, it would be unreasonable to exclude these transactions from eligibility to set the MMCP. Other parties support the presiding judge's proposed finding on this issue.

### Discussion

32. Again, we have already determined that the BEEP Stack limitation on eligibility is appropriate so we will adopt the exclusion of OOM transactions from the universe of units eligible to set the MMCP.

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<sup>17</sup>(...continued)

corrected by the CAISO for purposes of settlement with the individual generator involved, but were not incorporated into any recalculation of historical MCP. In other words, the CAISO did not attempt to make corrections to the underlying dispatch data to see if there would be any impact on MCP. As discussed further below under Phase 2, I.A.1.b and c, we will require such a recalculation.

**g. Residual Energy**Background

33. Residual energy is energy produced due to dispatch instructions for a preceding dispatch interval while the resource ramps to its new dispatch operating target. Under the CAISO Tariff and pertinent operating procedures, residual energy is paid at the MCP for the interval in which the unit was actually dispatched.

34. A related issue involves units with minimum run times of one hour such as certain combustion turbines. The CAISO Operating Procedure M-403 essentially provides that such units are dispatched for their entire minimum run times and can set the MCP in each of the 6 intervals of the hour that they operate. The presiding judge addresses this related issue in Section i. Other Imbalance Energy.

Presiding Judge's Proposed Finding

35. The presiding judge found that units providing residual energy in an interval are ineligible to set the MMCP in that interval because they are not bid into, or dispatched through, the CAISO's auction in the specific interval in which the residual energy is being produced.

Comments

36. The generators disagree with the presiding judge's proposed findings on this issue. As part of their general disagreement with the BEEP Stack limitation, generators claim that the CAISO's inclusion of this residual energy in its balancing of load with supply in each subsequent period is evidence that the CAISO actually relies on residual energy to meet demand in real time. AEPCO also concludes that the proposed residual energy exclusion is in conflict with the finding, discussed below, that combustion turbines can set the MMCP in periods where they are essentially generating residual energy because of their minimum run times. In support of the presiding judge's proposed findings on the residual energy issue, CA Parties would remove the conflict by reversing the finding that combustion turbines can set the MMCP when they are generating residual energy.

Discussion

37. We will adopt this finding because it parallels the procedure contained in the CAISO Tariff, which governs the market for which we are attempting to replicate a competitive outcome. In light of our ruling on the BEEP Stack limitation, arguments to



the contrary are unavailing. However, in keeping with the procedures from the underlying CAISO Tariff, we clarify that during the refund period Residual Energy should be paid at the MMCP for the last interval where the associated unit was actually dispatched. We address the arguments regarding combustion turbines in Section i. below.

## **h. Regulation**

### Background

38. Regulation energy comes from units under automatic generation control (AGC) that can be ramped upward or downward as needed (within a prescribed operating range) in response to changes in system frequency and tie-line loading so as to maintain system frequency within acceptable target levels. In the settlement process, Regulation energy is treated as Uninstructed Imbalance Energy and is not used in the determination of the real time MCP.

### Presiding Judge's Proposed Finding

39. The presiding judge found that regulation energy, because it is dispatched automatically without regard to the price of energy and does not set the clearing price in any market, is ineligible to determine the MMCP.

### Comments

40. There is no clear opposition to this finding, save perhaps for the generators' general arguments against the BEEP Stack limitation on eligibility.

### Discussion

41. We will adopt this finding because it parallels the procedures in the CAISO Tariff, which governs the market for which we are attempting to replicate a competitive outcome.

## **i. Other Imbalance Energy**

### Presiding Judge's Proposed Finding

42. The presiding judge found that other imbalance energy units that are not bid into and dispatched through the BEEP Stack, such as units providing energy in real time as a result of RMR dispatches, scheduling through the PX forward markets, bilateral arrangements, or the provision of uninstructed imbalance energy, are not eligible to

determine the MMCP. However, the presiding judge made it clear that combustion turbines dispatched for their minimum run time can set the MMCP throughout that minimum run time, not just in the first 10-minute interval, consistent with the Commission's June 19 Order,<sup>16</sup> and CAISO Operating Procedure M-403.

### Comments

43. As noted above in Section g. Residual Energy, AEPCO argues that the exclusion of residual energy is in conflict with the finding allowing combustion turbines to set the MMCP throughout their minimum run times, and CA Parties argue for reversing the finding that combustion turbines can set the MMCP.

### Discussion

44. We will adopt the presiding judge's proposed finding regarding other imbalance energy units because it parallels the procedures in the CAISO Tariff, which governs the market for which we are attempting to replicate a competitive outcome. We also see no conflict between the presiding judge's findings on Residual Energy and combustion turbines. As demonstrated by the presiding judge, the energy produced by combustion turbines when they are dispatched by the CAISO for their entire minimum run times is not residual energy, it is dispatched energy. Thus there is no conflict.

## **8. Should units outside the CAISO control area be eligible to set the MMCP?**

### Background

45. The Commission's May 15 Rehearing Order stated that if out of state generators bid into the Imbalance Energy market during the refund period and they can provide the heat rate information to the CAISO for the unit used to supply the power, that unit should be eligible to set the mitigated market clearing price during the refund period.<sup>17</sup>

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<sup>16</sup>The Commission rejected the CAISO's argument that "combustion turbines should not set the proxy price, because they do not have the flexibility to be dispatched on a 10-minute basis." June 19 Order at 62,560. The Commission found that, "If a combustion turbine is the last generator dispatched, its bid should establish the market clearing price." Id.

<sup>17</sup>See May 15 Rehearing Order at 61,154.

46. The only such claim came from AEPCO for its out of state gas turbine units. The presiding judge noted at paragraphs 213-15, that the hearing on the AEPCO claim preceded the Commission's May 15 Rehearing Order and that he had initially struck testimony and exhibits dealing with this issue pursuant to the Commission's December 19 Order that did not permit out-of-state generators to set MMCP. Following issuance of the May 15 Rehearing Order, the presiding judge restored this material to the record, set an abbreviated schedule for parties to file simultaneous briefs, and denied motions for discovery and to file additional rebuttal briefs.<sup>18</sup>

#### Presiding Judge's Proposed Finding

47. Following an extensive analysis of the record as made, the presiding judge found that the heat rate data in Ex. AEP-13 and gas price data provided by AEPCO were adequate to establish the MMCPs that are to be calculated by the CAISO. The presiding judge also found that AEPCO's own calculation of MMCPs is not germane and is not entitled to any probative value.

#### Comments

48. Trial Staff argues that AEPCO did not meet the burden of proof because it failed to provide adequate supporting information. Further, Trial Staff argues against AEPCO's use of the Southern California gas index price. Trial Staff argues that AEPCO probably paid less for gas in Arizona during this period because, as the Commission has recognized, gas prices were higher in California than in the rest of the West during summer months. Finally, Trial Staff asks the Commission for guidance as to what indicia of gas price should be used by out-of-state generators. The CAISO also argues that AEPCO did not provide sufficient heat rate information to permit its units to set the MMCP. In particular, the metering data that makes it possible for the CAISO to determine how units within its system operated during the refund period is absent from AEPCO's submission. AEPCO simply assigned its most expensive operating unit to CAISO sales. The CAISO states that there also is not enough heat rate information to construct incremental curves as it did for in-state generators. The CAISO also points out that this finding conflicts with the finding excluding unit bids from setting the MMCP when those bids are not supported by metering data proving the units responded to

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<sup>18</sup>At paragraph 215, the presiding judge noted that Trial Staff and CAISO had each filed rebuttal testimony prior to his initial decision to strike, which was subsequently restored to the record, but CA Parties elected not to file such testimony prior to the May 15 Rehearing Order.

CAISO dispatches (see summary adoption section). CA Parties make the same general arguments as the CAISO on this issue.

49. Additionally, Trial Staff, CA Parties, and CAISO all object to the presiding judge's decision not to permit discovery and a second chance to file rebuttal testimony after the May 15 Rehearing Order.

50. AEPCO and CA Generators, on the other hand, support the finding. They argue that opposing parties had ample opportunity to submit contrary evidence into the record or cross-examine AEPCO's witness but failed to do so and cannot now question the veracity of AEPCO's support. They also support use of Southern California gas prices as being in conformance with the Commission's orders.

### Discussion

51. First, regarding the question of the appropriate gas price index, as discussed in the next section we will adopt the index-related recommendations of the Initial Staff Report, as modified by the Final Staff Report. These changes apply to AEPCO as well.

52. As to AEPCO's heat rate information, we will adopt the presiding judge's proposed finding that AEPCO's heat rate data was sufficient to allow its units to set the MMCP.

### **E. 1 What is the proper use of gas price indices for the calculation of the MMCP for each interval?**

#### Presiding Judge's Proposed Findings

53. The presiding judge found that the CAISO complied with the July 25 Order when it used the average of three daily midpoint spot gas prices (as reported by Gas Daily, NGI's Daily Gas Price index, and Inside FERC's Gas Market Report) rather than the so-called "common high index" of gas prices advocated by witnesses for several sellers when it calculated the MMCP for each interval.

#### Comments

54. In its comments, the Competitive Supplier Group states that the presiding judge erred when he found that the CAISO complied with the July 25 Order using the daily midpoint spot gas prices in its MMCP calculations. First, CSG states that the CAISO should use the published "common high spot prices" instead of the midpoint, to better reflect the spot prices of a marginal generator that was required to dispatch energy on short notice. Arizona Electric Power Cooperative, Inc. also states that gas prices in the

MMCP calculation should reflect the higher prices of the last units dispatched. Next, if the midpoint is upheld, CSG objects to the CAISO's use of the midpoint of the "common range" instead of the midpoint of the absolute range.<sup>19</sup> However, the CAISO replies that, since a marginal unit is not necessarily chronologically the last unit to access the spot market to purchase gas, the marginal unit does not automatically pay higher than average spot gas prices. Accordingly, the CAISO states that using a "common high spot price" would result in less accurate gas prices than the use of midpoint of the common range of daily spot gas prices. Trial Staff also supports the use of the midpoint of daily spot gas prices.

55. Additionally, CA Parties state that, in light of the Commission staff initial report in Docket PA02-2-000 (Initial Staff Report) in which the Commission staff identified flaws in the gas price indices that the CAISO relied on in the calculation of refunds, another gas price methodology should be used. Specifically, the CA Parties request that the Commission require the CAISO to use a "production basin price plus the full tariff transportation charge" rather than the spot prices from three publications as described in the July 25 Order.<sup>20</sup>

### Discussion

56. In the July 25 Order, the Commission adopted a methodology in the California refund proceeding that employed a rate formula for calculating the MMCP (and resulting refunds) that relied on published natural gas spot prices in California or at the California border (California delivery points).<sup>21</sup> The purpose of this methodology was to "provide prices that emulate closely those that would result in a competitive market and that provide generators with a reasonable opportunity to recover their costs."<sup>22</sup> In specifying that California spot gas prices be used to emulate the outcome of a competitive market,

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<sup>19</sup>As explained by CSG at p. 39 of its Initial Comments, and CAISO at p. 39 of its Reply Comments, the common range eliminates outlying values that are present in the absolute range.

<sup>20</sup>See Fact-Finding Investigation of Potential Manipulation of Electric and Natural Gas Prices, Initial Report on Company-Specific Separate Proceedings and Generic Reevaluations; Published Natural Gas Price Data; and Enron Trading Strategies, Docket No. PA02-2-000, August 13, 2002.

<sup>21</sup>July 25 Order at 61,518.

<sup>22</sup>Id.

the Commission assumed that the gas spot market was truly competitive and could provide a reliable foundation for emulating the outcome of a competitive power market.

57. The Commission has released a Final Staff report concurrent with this Order that contains the Staff's findings concerning price manipulation in Western energy markets.<sup>23</sup> Based on information developed in its investigation, Staff finds that the prices established in the California gas spot market were not solely the outcome of fundamental supply and demand forces, but were artificially high due to, among other things, market dysfunctions, illiquidity in the spot gas market, and misreporting of index prices. Staff states that the spot gas prices reflected extraordinary basis differentials that far exceeded the cost of transportation and reached levels that would never have been sustained in a competitive market. In Staff's view, the effects of these inflated gas prices were greatly magnified because they were used in the California refund proceeding to compute clearing prices for the entire electric spot power market.

58. While there is no way to precisely replicate the level that spot gas prices would have reached in a competitive market, Staff recommends the use of producing-area prices plus transportation (including a fuel compression charge allowance) as a proxy for gas prices in computing the MMCP in the California refund proceeding. In Staff's estimation, over the eight and one-half month refund period its proposal would reduce gas costs used in the refund formula by \$7.03 in southern California and \$4.18 in northern California, or about \$5.60 on average.

59. In light of the Staff's findings that the prices established in the California gas spot market were not solely the outcome of fundamental supply and demand forces, but were artificially high, the Commission finds that the Staff Final Report recommendation to modify the mitigated market-clearing price formula in the California refund proceeding to use producing-area prices plus a tariff rate transportation allowance (including a fuel compression charge allowance) instead of California spot gas prices has significant merit. Accordingly, because of these unique circumstances, we will adopt this Staff Final Report recommendation to calculate the mitigated market-clearing price in this proceeding.

60. Staff also recognizes that market manipulation was not the sole cause of high California spot gas prices. However, Staff does not believe that the effects of scarcity can be separated from those of market dysfunction and price manipulation.

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<sup>23</sup>See Staff Final Report on Price Manipulation in Western Markets, Docket No. PA02-2-000, March 26, 2003. This report is available on the Commission's website at <http://www.ferc.gov/electric/bulkpower.htm>

61. We find that a modification to Staff's proposal is necessary to address comments stating that in most cases generators paid the California spot gas index price.<sup>24</sup> To verify that generators paid spot gas prices, we will require each generator to base its additional fuel cost allowance on its actual daily cost of gas incurred to make spot power sales in the PX and CAISO spot markets. This approach will require that a generator determine what portion of its daily gas supply portfolio it used for spot power sales versus longer term bilateral sales. We will assign the shortest term gas to the spot power sales by requiring each generator to rank its gas supplies by term and allocate its gas supply to its spot power fuel requirement starting with the shortest term gas supply, proceeding sequentially to the next shortest term supply, until a generator's spot power demand for gas is met. The average cost of this portion of the generator's gas supply portfolio would serve as the cost of gas for the additional fuel cost allowance.

62. Staff also recommends in its Final Report that this cost allowance for generators should not be included in the MMCP. We find merit in this recommendation. While we find it reasonable to grant generators an allowance to recover these costs, the Commission will not impose this charge in the calculation of the mitigated market clearing price paid to all suppliers because we intend this calculation to reflect a competitive market free from manipulation. Without the ability to quantify these exact costs to the market as a whole, we will not inject this uncertainty and multiplier effect into the mitigated market-clearing price calculation. We find that this methodology strikes a balance between protecting customers from prices based on market manipulation and dysfunction and protecting suppliers' incentives to compete in the California energy market.

63. Regarding the actual use of reported gas prices, we will adopt the method proposed by the Staff Final Report. Accordingly, the midpoint of the common range reported for the relevant producing basins will be used to set the MMCP and the midpoint for the common range reported for the California delivery points will be used to calculate generator fuel costs.

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<sup>24</sup>See Study by Drs. Wang and Reishus submitted by the Generator Group (Mirant, Dynegy, Williams, Duke Energy and Reliant Energy) as a comment on the Initial Staff Report.

**Section 202(c) Issues****II. What transactions were conducted pursuant to Section 202(c) of the Federal Power Act?**Background

64. As discussed above, we will summarily adopt the presiding judge's findings regarding most 202(c) issues. However, some issues remain that merit additional discussion.

65. The Commission's July 25 Order excluded from refund liability transactions entered into under orders (DOE Orders) issued by the Secretary of Energy (Secretary). The Commission stated that "rates for transactions entered into under Section 202(c) in compliance with the Secretary's orders are outside the scope of this refund proceeding."<sup>25</sup> Consistent with this direction, the presiding judge held a hearing to determine whether and to what extent the participants made transactions under Section 202(c) during the Refund Period and, thus, were not subject to the Commission's mitigated pricing methodology.

Presiding Judge's Proposed Finding

66. The presiding judge identified certain eligibility criteria and applied those criteria to identify transactions that were made under Section 202(c). We will summarily adopt those findings as discussed above.

67. The presiding judge also determined at paragraph 273 that the burden of proof to show that a transaction qualifies as a Section 202(c) exclusion lies with those who are claiming 202(c) status because they are seeking an exemption from the mitigated market pricing and refund liability required by the Commission's July 25 and December 19 Orders. As such, the presiding judge found, each seller is the proponent of a claim and, under the Administrative Procedure Act of 1946, 5 U.S.C. § 552 et. seq., as well as the Federal Power Act, has the burden of establishing a prima facie case in support of its claim, and the ultimate burden of persuasion. In most instances, he found that this burden had not been met.

68. The presiding judge also found that transactions claimed by Coral on December 13 and 14, 2000, which were not days on which the CAISO certified an emergency (one of the criteria we will summarily adopt as discussed above), were not shown to have been

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<sup>25</sup>July 25 Order at 61,516.



made in response to a request of the CAISO under the DOE Orders. Accordingly, he found that they are subject to mitigation and refund.

### Comments

69. Commentors disagree on where the burden of proof of 202(c) eligibility should lie. Generally, buyers and the CAISO agree with the presiding judge that the burden of proof rests with sellers. Sellers oppose this view and Trial Staff labels the burden of proof arguments as red herrings, stating that (1) since sellers are respondents in the complaint, anyone arguing that their sale was under 202(c) is essentially arguing that they are not a respondent and thus the burden of this limited argument is on them; and (2) even if the burden is on parties arguing that transactions are not 202(c), that burden has been met for all transactions that do not fit Trial Staff's criteria, which we have summarily approved above.

70. Further, Coral argues that 202(c) eligibility should be attributed to sales made after the Dec 13th press release announcing the Secretary's first Order but before the Dec 14th release of that Order, as those sales were made in an environment of exigency and confusion, in good faith pursuant to the Secretary's press release, and before the detailed language of the Order was made available. Coral asserts that based upon the crisis then-existing in CAISO markets, and the very real possibility of further blackouts, "it was wholly rational, and indeed totally responsible, for [Coral] to have serious concerns upon reading of [the Secretary's] announcement that Coral was under a lawful obligation to continue selling power to the CAISO on December 14, 2000." Coral cites precedent in Arizona Electric Power Cooperative, Inc v FERC, 631 F.2d 802 (D.C. Cir. 1980) where the Court of Appeals upheld the Commission's decision to recognize the broader public interests at stake, and its refusal to impose a remedy that would "act 'as an industry-wide deterrent against taking emergency actions'" to protect the public. Coral asserts that if the Commission adopts this aspect of the presiding judge's findings, it will create a precedent that "will signal sellers that when a future crisis arises, they should err on the side of not working with the CAISO to maintain reliability."

71. In addition, Coral argues that the presiding judge exceeded his mandate from the Commission by relying "solely on a legal conclusion, namely, the controlling effect (in his view) of the [CA]ISO's failure to certify to DOE that an emergency existed on that day [December 14]."<sup>26</sup> Accordingly, Coral contends that the Commission should ignore the presiding judge's rulings and consider Coral's comments de novo.

### Discussion

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<sup>26</sup>Coral Initial Comments at 9.

72. In light of our summary adoption of the presiding judge's criteria, the Commission agrees with Trial Staff that the issue of burden of proof is a red herring. Those who meet the criteria applied by the presiding judge to establish which transactions qualify as section 202(c) transactions have met the burden of proof. Those that cannot meet this criteria, did not meet the burden of proof.

73. Regarding Coral's claimed transactions on December 13 and 14, 2000, under the December 14, 2000 DOE Order, the Attachment A entities were not required to deliver energy until 12 hours after the CAISO had filed a certification of emergency with DOE, which it did not do until December 20. Accordingly, the presiding judge's strict interpretation of the DOE Orders cannot be faulted. While we are sensitive to arguments that the Secretary's December 13 announcement may have confused the issue prior to release of his December 14 Order, the fact remains that no legal obligation on generators could attach before that order was actually issued, and under the DOE order itself, no legal obligation on generators attached until 12 hours after the CAISO filed a certification of emergency with DOE. Furthermore, there is no reason this finding should act as a deterrent against taking emergency actions because it will not harm Coral. Coral's sales on December 13 and 14 will be mitigated to a just and reasonable price; *i.e.*, a price that strikes the appropriate balance between buyers' and sellers' interests. On balance, the Commission finds that the presiding judge's proposed finding on this issue was reasonable and we will adopt it.<sup>27</sup>

## **Phase 2, I.A. Did the CAISO and PX correctly rerun their Settlement and Billing Processes?**

### **1. What is the appropriate pre-mitigation data to use as a baseline for applying the Mitigated Market Clearing Prices (MMCPs) litigated as Issue 1 in this proceeding in order to calculate refunds?**

74. The presiding judge found that this is a catch-all issue that raises various concerns that are more specifically addressed elsewhere in his findings. Accordingly, his specific findings are addressed elsewhere in this order.

#### **a. Cut Off Date For Adjustments--What cutoff date, if any, should be set for adjustments to the settlement records for these proceedings?**

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<sup>27</sup>Similarly, the factual predicate upon which Coral's argument rests regarding the presiding judge's authority to draw a "legal conclusion" is moot because we have adopted the presiding judge's criteria. Irrespective of whether the presiding judge had the authority to draw a "legal conclusion" regarding the criteria he chose, the Commission has, and has herein exercised such authority.

75. The presiding judge found that the need for a "final snapshot" by the CAISO is addressed under III.A. and E. and III.C. We address those finding infra.

**b. Mislogged Transactions - Which, if any, transactions were mislogged by the CAISO, and how should such transactions be accounted for?**

**c. Combined Settlements Database – Should a pre-mitigation database that combines all transaction records be created? If so, when should it be created, who should create it, and how should costs be covered?**

#### Presiding Judge's Proposed Findings

76. As with the similar discussion under Phase 1, I.D.2.c and d, where the issue of the potential effect of mislogging on the calculation of MMCP was addressed, the presiding judge found that the CA Generators had failed to demonstrate that mislogging of OOS non-congestion transactions resulted in the CAISO establishing incorrect historical MCPs. Accordingly, he found that there was no need to recalculate historical MCPs or to create a revised pre-mitigation database.

#### Comments

77. CSG and CA Generators continue to argue that, under relevant Commission orders, the CAISO must recalculate pre-mitigation MCP for all intervals where there was mislogging regardless of whether the mislogging was likely to have had any impact. CA Parties and CAISO continue to oppose this view.

#### Discussion

78. Under Phase 1, I.D.2.c and d, we have already addressed this issue and found that any mislogging that has already been identified must be corrected. It follows that the historical MCP must be recalculated and a revised database must be created. Any costs for this activity should be passed through the CAISO Grid Management Charge.

**i. Energy Imports - Did the CAISO improperly mitigate imported energy based on intervals as opposed to hourly average MMCPs?**

79. We will adopt the presiding judge's finding that the CAISO improperly mitigated imported energy based on 10-minute intervals when it should have used hourly average MMCPs. Among other things, our orders directed the presiding judge to make findings of

fact regarding the mitigated price in each hour of the Refund Period.<sup>28</sup> Furthermore, we will summarily adopt the presiding judge's uncontested finding that the hourly MMCP will be the simple average of the six interval MMCPs in each hour. There is no basis to treat Energy Imports differently from other types of energy. In fact, Energy Imports with minimum run times due to WSCC rules appear to be very similar to combustion turbines with minimum run times (see Section Phase 1, I.D.2.i. above). In both cases, CAISO Operating Procedure M-403 addresses the dispatch and settlement of these types of energy and provides that if such minimum run time energy is selected, it will be "pre-dispatched" in each of the intervals of the entire hour. Further, Imported Energy is eligible to set both the BEEP Interval Price in each of the six intervals, and the Hourly Ex Post Price if the next resource is not dispatched within the period. This is essentially the same procedure CAISO follows for combustion turbines with minimum run times. Accordingly, both types of minimum run-time energy can set the interval MMCPs that will be averaged to arrive at the hourly MMCP that will ultimately mitigate the price paid to all sellers in that hour. We believe the presiding judge's finding reflects this understanding.

**m. Charge Types 401 and 481 – How Should Charge Types 401 and 481 be mitigated or adjusted, if at all?**

Background

80. A charge type (CT) is a code that describes a particular activity for which a scheduling coordinator is charged or credited. CT 401 is associated with the cost of instructed imbalance energy; that is, energy produced when the CAISO instructs a scheduling coordinator to deviate from its forward schedule and change a resource's output.<sup>29</sup> CT 481 is associated with the excess cost of instructed imbalance energy. In other words, all costs for instructed energy up to the MCP were classified as CT 401 and any costs in excess of the MCP were classified as CT 481. Thus the "dividing line" between the two CTs is the MCP. The CAISO accounts for these two components of instructed energy costs separately because ultimately, through a process described in the proposed findings at paragraph 577, the CAISO allocates these costs to different customers; CT 401 is allocated to all customers while CT 481 is ultimately allocated to entities who under-scheduled, and thus contributed to the need for instructed imbalance energy.

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<sup>28</sup>See, e.g., July 25 Order at 61,520.

<sup>29</sup>December 12 Proposed Findings at paragraph 574.

Presiding Judge's Proposed Findings

81. The presiding judge found that the California Generators' proposal to leave unchanged the allocation of CAISO costs for transactions exempt from mitigation by maintaining the MCP as the dividing line between Charge Types 401 and 481, rather than changing the dividing line to the MMCP, achieves a just and reasonable result. When the CAISO ran its mitigation calculations, it substituted the MMCP for the MCP, thus lowering the portion of the cost of imbalance energy that was charged to the entire market and increasing the portion of the cost that was charged under Charge Type 487 to entities that underscheduled.

Comments

82. Trial Staff and the CAISO state that the CAISO's substitution of the MMCP for the MCP as the dividing line for how these Charge Types would be apportioned did not change the price for the entire market and did not create an inappropriate refund obligation; it merely changed the accounting for who will pay approximately \$3 million for imbalance energy needed during the period. In their reply, the CA Generators state that the presiding judge correctly concluded that the application of CT 401 and 481 by the CAISO to transactions exempt from mitigation creates a mitigation effect that results in obligations for scheduling coordinators that would not otherwise occur and, therefore, the end result is not just and reasonable.

Discussion

83. We disagree with the presiding judge's proposed finding on this issue. Accordingly, we find that the CAISO properly followed its tariff by using the clearing price as the dividing line for apportioning instructed imbalance energy costs between CT 401 and 481. During the refund period, as a result of this proceeding, the clearing price was the MMCP, not the MCP. A change in the dividing line that determines the allocation of the parties that will pay for these Charge Types does not result in mitigation of exempt transactions. We therefore direct the CAISO to use the MMCP as the dividing line for apportioning costs between CT 401 and 481.

**n. Charge Type 485 -- Were Charge Type 485 penalties properly mitigated or adjusted and, if not, how should these penalties be adjusted and calculated?**

### Background

84. CT 485 is associated with penalties assessed to participating generators who failed to respond to CAISO dispatch instructions during system emergencies. The penalty is primarily based on twice the highest price paid for energy in each hour by the CAISO to any other entity, applied to each MWh of deviation from the dispatch instruction.<sup>30</sup>

85. For purposes of this proceeding, the CAISO reduced all Charge Type 485 penalties to twice the MMCP in each hour. Other parties argued that, under its tariff, it should have reflected the highest cost energy it purchased, whether in or out of the mitigated market. Accordingly, they argued that CERS and 202(c) purchase prices should have been incorporated into the CT 485 penalty calculation whenever they were higher than the MMCP.

### Presiding Judge's Proposed Findings

86. The presiding judge found that the CAISO Tariff does not require the calculation of the CT 485 penalties to incorporate either Section 202(c) or CERS transactions that are exempt from mitigation. Regarding CERS transactions, the presiding judge found that they were not actually sales to the CAISO. Rather, they actually involved CERS serving its own load as a scheduling coordinator. Since the CAISO never actually purchased CERS energy, he found that the CERS transactions were clearly irrelevant to the calculation of penalties (paragraph 610). Regarding 202(c) transactions, the presiding judge relied on the fact that rates for these transactions are outside the scope of this proceeding.

### Comments

87. Trial Staff and the CA Parties state that the CAISO Tariff does not support the presiding judge's finding that penalties for non-compliance with CAISO dispatch orders are to be calculated using only mitigated transactions. Trial Staff states that if a Participating Generator failed to respond to a CAISO dispatch order, then the CAISO might have been forced to secure replacement energy from non-mitigated sources so the penalty should follow the tariff and be based on the highest price paid to any entity. The CA Generators state that the presiding judge was correct in finding that transactions

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<sup>30</sup>However, if the CAISO is required to call for involuntary curtailment of firm load during the system emergency, an additional charge of \$1,000/MWh will be applied to each MWh of deviation from the dispatch instruction.

outside the scope of this proceeding, such as 202(c) and non-spot sales, should be disregarded in the recalculation of CT 485 penalties.

#### Discussion

88. We find that the CAISO incorrectly reduced all CT 485 penalties to twice the MMCP in each hour. The CAISO Tariff requires the calculation of the penalty amount to be based on "twice the highest price for Energy, per MWh, paid in each hour by the [CA]ISO to any other entity." As discussed above, the CAISO Tariff does not limit the calculation of the penalty amount to a price obtained solely from the types of spot market transactions that are mitigated in this proceeding. Thus, consistent with the tariff, we find that 202(c) transactions should be incorporated into the calculation of CT 485 penalties. However, we will adopt the presiding judge's finding that CERS transactions were not sales to the CAISO and thus should not be incorporated into this calculation.

#### **B. Did the [Cal]PX correctly rerun its settlements and billing processes?**

##### Presiding Judge's Proposed Finding

89. The presiding judge found that the PX had correctly rerun its settlements and billing processes. In particular, the presiding judge found that SMUD had failed to establish that the PX incorrectly determined SMUD's refund liability. The presiding judge stated that in all other respects, the August 26 joint stipulation reflects the agreement of several PX market participants that the PX accurately reflected transactions during the refund period.

##### Comments

90. In its comments, SMUD states that the Commission should reject the presiding judge's findings on SMUD's refund liability because he misinterpreted certain PX exhibits and calculations. SMUD states that the PX filed three iterations of relevant exhibits and that the effect of the third version of the PX calculation of refund liability was to eliminate \$1.6 million in refunds that the PX had earlier calculated was owed to SMUD, and instead impose an additional \$1.6 million in refund liability against SMUD. SMUD contends that the presiding judge mistakenly relied on one of the earlier PX exhibits that reflected \$1.6 million in refunds that were owed to SMUD when he rejected SMUD's claim because he believed that it was SMUD that misinterpreted the PX's exhibits and calculations. SMUD states that the presiding judge, in relying on this misinterpretation, never reached the merits of SMUD's argument that the PX erroneously imposed additional refund liability against SMUD based on SMUD's purchases from the PX spot markets.

91. The PX does not dispute SMUD's statement that the presiding judge relied, in part, on data from a superseded PX exhibit. However, the PX contends that, despite this fact, the finding is correct. The PX used the correct data, as supplied by the CAISO, when it calculated SMUD's refund liability. Accordingly, the PX states that the Commission should uphold the presiding judge's proposed finding that the PX accurately reran its data with respect to SMUD's refund liability.

92. In its reply comments, Trials Staff argues that the most prudent course of action at this point may be to defer any attempt to address this dispute and instead to put in place procedures to ensure that PX's final compliance figures are clear and accurate.

### Discussion

93. We will adopt Trial Staff's proposal and defer making a finding on the accuracy of the PX's rerun of its settlements and billing data as it concerns SMUD's refund liability until after the PX compliance filing detailing these calculations. Once the PX submits its rerun of its settlements and billing data to the Commission, SMUD will have an opportunity to review and contest the PX's figures. Otherwise, we will adopt the presiding judge's findings that the PX has correctly rerun its settlements and billing processes.

## **2. Block Forwards – How should Block Forward Transactions be handled and how, if at all, should that affect the mitigation of PX Day-Ahead Transactions?**

### Presiding Judge's Proposed Findings

94. The presiding judge found that the PX properly excluded block forward transactions scheduled for delivery in its day-ahead market from the total day-ahead volumes as those transactions were long-term, non-spot transactions that are not subject to mitigation.

### Comments

95. Trial Staff points out that the PX recognized that it made a nine percent error in its calculations to exclude block forward contracts (by including with the true block forward amounts certain transactions that actually should have been mitigated) and that the Commission should correct this error. PX commits to correct this error.

### Discussion



96. We direct the PX in its rerun of settlements and billing processes to correct the nine percent error in its calculations to exclude block forward transactions. In all other respects, we find that the PX properly excluded block forward transactions scheduled for delivery in its day-ahead market from the total day-ahead volumes because those transactions were long-term, non-spot transactions that are not subject to mitigation.

**3. Application of Breakpoint – Did the PX properly apply the \$150/MWh breakpoint for January 2001 transactions?**

97. We will adopt the presiding judge's finding that the PX properly applied the \$150/MWh breakpoint for January 2001 transactions as directed by the May 15, 2002 Order, but we direct the PX to ensure that suppliers' transactions, including those of Coral Power, are properly mitigated. Coral Power states that the presiding judge incorrectly summarized data from a hearing exhibit in the appendix to his proposed findings. In this appendix, the presiding judge relied on hearing exhibit data when he attempted to provide refund figures that "do not reflect the \$150/MWh breakpoint" for the transactions in question. Coral Power states that the judge was incorrect because the exhibit and the judge's appendix reflect the \$150/MWh breakpoint. Accordingly, we direct the PX in its compliance filing to ensure that Coral Power and other suppliers' transactions are properly mitigated.

**II. What Emissions Amounts Should Be Offset Against Refund Calculations?**

**A. What emissions amounts, if any, should be offset against refund calculations?**

Background

98. The July 25 Order permitted generators to recover their demonstrable emissions costs incurred during the refund period and directed the development of a hearing record on such emissions costs.<sup>31</sup> Demonstrable emissions costs, including credits required to comply with certain emissions restrictions and actual and verifiable environmental compliance fees, would not be recovered through the MMCP, but would be netted against the seller's refund liability.

Presiding Judge's Proposed Findings

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<sup>31</sup>July 25 Order at 61,519.

99. The presiding judge found that, generally, LSEs are eligible to recover demonstrable emissions costs.<sup>32</sup> Further, the presiding judge found that Duke supported its claimed CAISO NOx emissions costs of \$137,656, Dynegy supported its claim to recover emissions costs of \$14,413,489 and Williams adequately supported its claims for \$17,847,842 of NOx costs incurred in sales to the CAISO during the refund period.<sup>33</sup> We will summarily adopt these findings above and we need not discuss them further.

100. However, the presiding judge found that Burbank did not adequately support its claimed emissions costs. He explained that Burbank's underlying data provided to Trial Staff did not include specific hourly data, which would support Burbank's aggregated MWh of generation and NOx production. The presiding judge noted that after requesting and receiving additional data from Burbank, Trial Staff determined that there were discrepancies in the amounts reported for "Total NOx/lbs Emissions" and the monthly amounts for "Total NOx Production."<sup>34</sup> The presiding judge found that he was not able to verify the accuracy of Burbank's allocation of NOx credit purchases to the CAISO and PX due to the lack of detailed hourly generation and NOx emissions data from some of Burbank's generating units, necessary to calculate the NOx lbs/MWh during the hours Burbank provided energy to the CAISO and PX. Thus, the presiding judge could not determine whether Burbank's allocation of NOx emission costs to the CAISO and PX was reasonable. Consequently, he found that none of Burbank's claimed emissions costs could be used by Burbank to offset any potential refund liability.

101. The presiding judge also directed Reliant (and some other sellers with similar circumstances, including Pasadena but not LADWP) to recalculate their emissions costs on a pro rata basis, as described by Trial Staff.<sup>35</sup> Trial Staff argued that since Reliant's Etiwanda units, generally, were the highest cost units among its California generators, and had relatively high emissions rates, Reliant tended to allocate a disproportionate amount of emissions to its PX sales. Further, Trial Staff stated that over 80 percent of such costs computed for the refund period were allocated by Reliant to PX sales. Trial Staff thus recommended that Reliant be required to allocate the computed emissions of the Etiwanda units pro rata across the combined PX sales and its bilateral sales. The presiding judge accepted Trial Staff's explanation that pro rata allocation essentially assumes that all generators are dispatched to meet the total load, or combined load of the PX, and the other

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<sup>32</sup>See December 12 Proposed Findings at paragraphs 730-35.

<sup>33</sup>Those costs are listed on Ex. ISO-30, pp. 19-20.

<sup>34</sup>See Id. at paragraph 744.

<sup>35</sup>See Id. at paragraphs 748-49.

bilateral transactions to the CAISO, which were made on a portfolio basis. Thus, he found that Reliant should be required to recalculate its emissions costs on a pro rata basis as described by Trial Staff.

102. Similarly, the presiding judge found that Pasadena should not have allocated all of its RECLAIM Trading Credits (RTC) costs from the refund period to its CAISO sales but should recalculate taking into account all of its non-native load off-system sales.<sup>36</sup> Further, the presiding judge found that, to the extent its zero-cost RTCs are not used to serve native load, LADWP should factor their zero-cost into the per-unit costs applied in its analysis of emissions costs, so that the computation will only reflect the amount of purchased RTCs that LADWP actually used. Lastly, he found that because the Commission's orders are express that emissions costs are not included in the MMCP, Trial Staff's recommendation - - that sellers, including LADWP and Pasadena should recover NO[x] emission costs in only the mitigated hourly interval -- is inappropriate.<sup>37</sup>

### Comments

103. The CA Parties argue that the Commission should either adopt their proposal to allocate emission costs over all output of a generator (and only use as offsets those costs incurred during a mitigated interval) or direct generators who made emissions claims that included costs from outside the refund period to limit their claims to costs incurred during the period. On reply, Trial Staff opposes the CA Parties proposal for a pro rata allocation of emissions costs. Trial Staff argues that such an allocation for the refund period would probably lead to under-recovery and undue burden on native load customers and argues for upholding the presiding judge's case-by-case review.

104. In its reply comments, CSG states that it opposes the CA Parties' proposal to allocate emissions costs to all load, both within and exporting from California. CSG argues that the June 19 Order determined that consumers in California are the beneficiaries of clean air and thus, they should pay the associated emissions costs.

105. In their reply comments, the CA Generators argue that the presiding judge was correct in his findings. In particular, the CA Generators contend that the CA Parties seek to annualize emissions costs for the sole purpose of incorporating the lower costs of emissions during periods outside of the refund period in order to lower the total amount of emissions costs eligible for offset in this proceeding.

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<sup>36</sup>See Id. at paragraphs 750-57.

<sup>37</sup>See Id. at paragraphs 758-60.

106. Pasadena strongly disagrees with the presiding judge's conclusion that it should not have allocated all of its RTC costs from the refund period to its CAISO sales, but should recalculate taking into account all of its non-native load off-system sales. In its initial comments, Pasadena states that the record is clear that it had enough emissions credits to cover all of its non-CAISO sales and that whatever it purchased was for the CAISO sales and should be allocated entirely to them. Pasadena states that its opportunity costs for foregone sales of surplus initially-allocated credits should be offset against any potential refund obligation. In their initial comments, the CA Parties oppose both of Pasadena's requests and Burbank argues that it adequately supported its claim.

107. On reply, Trial Staff argues that Pasadena's non-native load bilateral sales are no different from its CAISO sales and thus should not have been allocated free emission credits before CAISO sales. Trial Staff argues that the record does not make it clear when these bilateral sales took place or what portion of Pasadena's emissions were related to one type of sale versus any other. Trial Staff also opposes Pasadena's opportunity cost proposal because Trial Staff states that opportunity costs are not "actual and verifiable" emissions costs. Trial Staff also reiterates that Burbank failed to adequately support its claims.

108. In its reply comments, Pasadena states that neither the CA Parties nor Trial Staff produced any evidence to show that sellers calculated their bids over time to spread their emissions costs ratably over each hour. Accordingly, emissions costs could not reasonably be a component of the hourly proxy price and should be collected as an offset. Pasadena also argues that the CA Parties have not adduced evidence to refute Pasadena's showing that it had sufficient emissions credits to cover all its sales except sales to the CAISO during the refund period.

109. In their initial comments, the CA Generators argued that their "stacking" allocation method better comports with how they operated than the presiding judge's pro rata allocation method. The CA Generators point out that they have submitted into the record an exhibit that reflects the presiding judge's pro rata allocation method so that no new recalculation should be necessary. On reply, Trial Staff states that its objection is with Reliant's (CA Generator's) stacking approach.

110. In its initial comments, LADWP states that it did not object to recalculating its RTC purchase costs as directed by the presiding judge. However, LADWP notes that the presiding judge did not directly address the portion of its emission's cost claims that dealt with a civil penalty assessed against LADWP by the SCAQMD due to emissions associated with its sales to the CAISO and PX during the refund period. LADWP states

that it wants the Commission to rule that those costs can be offset against refund amounts. On the other hand, the CA Parties, would like the Commission to rule that such costs are prohibited as offsets. However, Trial Staff supports LADWP's request for clarification and argues that the portion of the civil penalty allocated by LADWP to CAISO/PX sales is appropriate for offset.

### Discussion

111. We will adopt the presiding judge's finding that Burbank did not adequately support its claimed emissions costs.<sup>38</sup> The record is clear that discrepancies and inconsistencies exist in Burbank's evidence and data regarding allocation of NOx emission costs to the CAISO and PX, and Burbank has made no meaningful effort to explain those inconsistencies.

112. We will also adopt the presiding judge's decision that Reliant should be required to recalculate its emissions costs on a pro rata basis, as described in the presiding judge's proposed findings.<sup>39</sup> However, we clarify that CA Generators' existing pro rata allocation exhibit may be used and we will not require the same information to be refiled.

113. Regarding allocation of emissions costs, as a general matter, we find that zero-cost emissions credits are granted to sellers for their native load and any that remain after serving the native load should be allocated among all non-native load sales on a pro rata basis. Similarly, the cost of purchased emissions credits should be allocated pro rata among all load not served with zero-cost credits. Accordingly, the Commission will adopt the presiding judge's determination that Pasadena's RTC purchase costs should be allocated pro rata to all non-native load sales, not just to CAISO sales.<sup>40</sup> We will also adopt the presiding judge's holding that, to the extent that LADWP retained zero-cost RTCs in the year 2000 and 2001 that were not used for native-load customers, their zero-cost should be factored into the per-unit costs applied in LADWP's emission's cost analysis.<sup>41</sup> However, we clarify that the civil penalty assessed against LADWP by the

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<sup>38</sup>See Id. at paragraphs 742-45.

<sup>39</sup>See Id. at paragraphs 746-49.

<sup>40</sup>See Id. at paragraph 750-52.

<sup>41</sup>See Id. at paragraph 753-57.

SCAQMD is appropriate for offset.<sup>42</sup> We also agree with Trial Staff that opportunity costs are not appropriately included as emission's costs for recovery through this mechanism.

## **B. How should emissions costs be applied?**

### Background

114. The Commission's July 25 Order found that emissions costs were not included in the mitigated market clearing price and adopted the Chief Judge's recommendation that a seller's demonstrable emissions costs should be subtracted from its respective and discrete refund liability, consistent with the methodology established in the June 19 Order.<sup>43</sup> The Commission's July 25 Order directed sellers to submit, during the hearing, their emissions costs incurred during the refund period for subtraction from their respective liabilities. The December 19 and May 15 Orders affirmed this direction.

115. The parties submitted their discrete emissions costs and the presiding judge's proposed findings in II.A. reflect determinations on the appropriate demonstrable emission costs that each, with the exception of Burbank, is eligible to offset against its respective refund liability and the extent to which each of those sellers must recalculate those emissions costs. He stated that the PX is a SC in the CAISO's real-time market (Ex. ISO-31) and its transactions throughout the refund period are shown on Ex. ISO-30. The aggregate refund liability of each seller/SC is shown on Ex. ISO-30.

### Presiding Judge's Proposed Findings

116. Thus, the presiding judge found that the simplest way to apply emission costs eligible for recovery under II.A. is to apply them as an offset against a seller/SC's total refund ultimately found and shown on a corrected version of Ex. ISO-30 at 19-20, as an offset to the discrete refund liability of the individual seller/SC.<sup>44</sup> We will summarily adopt this finding, and we need not discuss it further.

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<sup>42</sup>See Id. at paragraph 758-60.

<sup>43</sup>June 19 Order at 61,519.

<sup>44</sup>See December 12 Proposed Findings at paragraph 761.

117. The presiding judge also rejected Trial Staff's position that emissions costs incurred by a party during intervals when its sale price was not subject to mitigation, should not be included in the offset to refunds because the non-mitigated sale price should be deemed to already recover those costs. The presiding judge further found that it was unnecessary to address different, more complex, and broader applications of emissions costs that are posed by several participants that are beyond the scope of the Commission's orders and directions applicable to the offset of emission costs against an individual seller's discrete refund liability.

#### Comments

118. In its initial comments, Trial Staff states that the presiding judge erred in one respect. Trial Staff argues, and the CA Parties appear to agree, that its proposal would only figure in costs incurred during intervals when a generator's sale price was not mitigated and that all other emissions costs should be netted from refunds.

119. The PX replies that Trial Staff's proposal, while seemingly reasonable in theory, is impossible in practice because the data would not support such a breakdown. The PX claims the data available on emissions costs measures those costs over a monthly period for all units. The PX states that if the Commission reverses the presiding judge on this issue, additional specific guidance will be needed.

120. The CA Generators reply that the presiding judge correctly rejected the CA Parties' and Trial Staffs' argument that emissions costs can only be recovered during hours in which the MMCPs are lower than the price actually received by the particular generator historically, i.e., when the MMCPs require the particular generator to make a refund. The CA Generators also argue that the Commission should state who will ultimately pay for the emissions costs. Specifically, the CA Generators contend that, while the Commission did not expressly address the methodology for allocating the emission costs during the refund period, the Commission did conclude that during the prospective period these costs should be paid by load-serving entities in proportion to CAISO Gross Control Area load.

#### Discussion

121. The Commission will adopt the presiding judge's rejection of Trial Staff's proposal. Given the limitations of the PX data on emissions costs, the proposal is unworkable.

122. Regarding CA Generators' request for clarification, we agree that customers are ultimately responsible for the emissions costs expended to serve them. Thus we will adopt the same allocation procedure for the refund period that we have already adopted for the prospective period.

**III. What refund amounts are owed by each supplier, and what amounts are currently owed to each supplier by the CAISO, PX, the investor owned utilities, and the State of California?**

123. The presiding judge found that the parties' illustrative calculations of amounts claimed to be owed to them by the CAISO and/or the PX provide little confidence of their accuracy.<sup>45</sup> Further, he found that the Commission's orders make it clear that the CAISO's settlement re-run data and the PX's refund calculations will be used to calculate refunds, not third-party data, to form the basis of any offsets (*i.e.* the amounts to be refunded against the payments past due). We will summarily adopt these findings and we need not discuss them further.

**A. How should refunds and amounts owed and owing be computed? and**

**E. Should bilateral obligations that look through the CAISO and PX markets be determined, and, if so, how should they be determined?**

Presiding Judge's Proposed Findings

124. The presiding judge stated that the Commission's July 25 Order requires findings of "the amount currently owed to each supplier (with separate quantities due from each entity) by the CAISO, the investor owned utilities, and the State of California."<sup>46</sup> Once the Commission determines the mitigated prices, the CAISO and the PX can figure out what the CAISO's SCs and PX market participants owe or are owed. Further, he stated that the CAISO provided a matrix that showed what each SC would owe or be owed on a net basis each month upon application of the CAISO's MMCPs. The presiding judge explained that these calculations must be kept separate as an SC's ID may be for an entity acting on its own behalf and another ID may be for that entity's role as a SC for others. Thus, he stated, like the CAISO, the PX would need to do new calculations once the final MMCPs are determined and that the CAISO and PX calculations would need to be based on the payments received and the disputes resolved as of the time of the compliance filings required by the presiding judge's proposed findings. The presiding judge held that the CAISO and the PX shall develop post-mitigation matrices similar to their pre-mitigation matrices.

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<sup>45</sup>Id. at Paragraph 765.

<sup>46</sup>July 25 Order at 61,520.



125. The presiding judge also explained that the July 25 Order did not address bilateralization of refund liability and that the record establishes that the CAISO and PX tariffs do not permit bilateralization of refund obligations as proposed by the CA Parties, CSG, and the California Generators. He stated that the bilateralization proposals create a distinctly different set of obligations, are not fully developed on the record as made, and fail to address clearly how to overcome the many complexities that the proponents recognize are presented but not fully addressed by these proposals. Thus, the presiding judge agreed with Trial Staff, that, "considering the complexities involved, it seems most reasonable to resettle the markets using the information and funds available to the CAISO and the PX. Once all available funds have been disbursed, any remaining obligations could be allocated to individual Scheduling Coordinators and Market Participants."<sup>47</sup> Therefore, the presiding judge rejected proposals to try to derive bilateral refund obligations between individual buyers and sellers from the settlement data, which is not set up to support such determinations.

### Comments

126. Modesto argues that the oldest outstanding invoice to the CAISO and PX should be used to calculate the amount owed because the CAISO can not match funds received to exact service rendered. In its reply comments, the PX opposes Modesto's suggestion that refunds should be applied against the oldest outstanding invoice because this new proposal (first submitted in Modesto's initial comments) has no support in the record.

127. In its initial comments, CSG continues to argue for bilateralization, even though it admits that it would require a complex process to achieve bilateralization. CSG states that it is not arguing for bilateralization with respect to particular sales; just establishment of bilateral obligations. AEPCO, on the other hand, states that it strongly supports the judge's finding on this point. The PX and Modesto separately support the presiding judge's finding, but seek clarification that a statement contained in the findings endorsing a Trial Staff proposal to essentially bilateralize any obligations remaining after all available funds are disbursed, will not be accepted by the Commission. The PX emphasizes that the outcome of this proceeding should finally conclude the refund proceeding and, in no event should any remaining obligations be assigned to the PX.

128. In their initial comments, the CA Parties also argue for bilateralization. They claim that bilateralization is what the July 25 Order directed. They argue that, absent bilateralization, the refunds due to buyers who have paid their invoices may be used to offset payments due to buyers who have not paid their invoices. On reply, the CA Parties

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<sup>47</sup>Staff RB at 52.

reiterate their position, but make clear that they do not agree with the specific bilateralization proposal advanced by CSG.

129. In their reply comments, Modesto argues that the CAISO and PX tariffs do not permit bilateralization, that many market participants were contracted only with their SCs, not with the PX or other market participants, so bilateralization is not possible and would further complicate an already complex process. On reply, the PX also continues to argue against attempting to determine bilateral obligations from markets that never operated that way. The PX states that if the Commission chooses to direct the derivation of bilateral obligations, specific guidance as to implementation will be needed. The PX also argues that, regardless of whether or not bilateralization is directed, the PX should be released from its market-level liabilities.

130. On reply, the CAISO continues to take no position on bilateralization, aside from noting that its systems cannot determine such bilateral obligations. However, if bilateralization is ordered, the CAISO argues that such obligations should be a complete substitute for obligations vis-a-vis the markets. On reply, CSG argues that CA Parties bilateralization approach is flawed because it would contravene the relevant Dec. 19 Order by calculating bilateral refunds separately from bilateral obligations. Lastly, the CA Generators continue to argue against bilateralization.

### Discussion

131. The Commission will adopt the presiding judge's findings regarding bilateralization of refund obligations.<sup>48</sup> We agree that the bilateralization proposals create a distinctly different set of obligations, are not fully developed on the record and fail to address clearly how to overcome the many complexities that the proponents recognize are presented by these proposals. Thus, we will adopt the presiding judge's holding that it is reasonable to resettle the markets using the information and funds available to the CAISO and the PX.

132. As to the requests for clarification from the PX and Modesto regarding Trial Staff's proposal to essentially bilateralize any obligations remaining after all available funds are disbursed, we will address the issue, if it actually arises, following the final compliance filing. Until that time, this issue is speculative and not ripe for review.

### **C. How should the cash positions of parties in the CAISO and PX markets (including cash held by the PX) be accounted for, if at all?**

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<sup>48</sup>See December 12 Proposed Findings at paragraphs 769-88.

133. The presiding judge found that, in order to obtain an end result that is just and reasonable, consistent with the July 25 and December 19 Orders, the actual cash positions of parties in the CAISO and PX markets should be based upon a snap-shot, taken on a Commission-determined cut-off date for the CAISO and the PX to perform a post-mitigation settlement rerun, establishing the actual payments of cash that any market participant made to or from the CAISO and PX as of that date.<sup>49</sup> Further, the cut-off date for refund purposes should be as close in time as possible to the final compliance filing recommended by the presiding judge.

### Comments

134. In its initial comments, the NCPA asks the Commission for clarification that this cut-off date does not also serve as a drop-dead date for outstanding contractual disputes. They state that they want the Commission to make it clear that parties maintain their dispute resolution rights under the tariff or relevant contracts.

### Discussion

135. The Commission will adopt the presiding judge's holding that the actual cash positions of parties in the CAISO and PX markets should be based on a cut-off date as close as possible to the final compliance filing recommended by the judge.<sup>50</sup> The actual cut-off date will be determined at the time the Commission makes a final determination regarding the settlements and billing process calculations. We also clarify that dispute resolution, to the extent it does not interfere with the decisions made in this order, is unaffected.

### **D. How should interest be calculated and applied?**

136. The presiding judge stated that the July 25 and December 19 Orders directed the calculation of interest on refunds and amounts (receivables) past due using the methodology for interest calculations described under Section 35.19a of the Commission's rules and regulations.<sup>51</sup> He explained that the CA Generator witness Tranen proposed to

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<sup>49</sup>Id. at paragraphs 790-99.

<sup>50</sup>See Id. at paragraph 790.

<sup>51</sup>18 C.F.R. § 35.19a(2002). See July 25 Order at 61,157; and December 19 Order at 62,223. The Commission's interest rate is an average prime rate for each calendar quarter. The quarterly interest rates are posted on the Commission's website at

calculate interest separately for the CAISO and PX markets, which the presiding judge agreed was appropriate. However, the further step Tranen proposed of combining the CAISO and PX markets and interest for the entire refund period, was inappropriate because, he explained, the CAISO and PX markets and tariffs are discrete and should continue to be discrete particularly as concerns the calculation of interest.<sup>52</sup> The presiding judge rejected proposals to calculate interest different from the Commission's 35.19a methodology, consistent with the July 25 and December 19 Orders. He also found that interest on unpaid balances should be assessed from the date the payment was due. He further noted that the Commission reserved for itself, and that the CAISO and PX agreed, the right to determine at a later date what to do regarding cash shortfalls that could result from applying 35.19a interest, instead of actual earned interest (particularly as regards funds held in the PX's Settlement Clearing Account).

### Comments

137. In its initial comments, the CAISO reiterates its concern that the Commission should preserve the revenue neutrality of the CAISO, regardless of which approach the Commission eventually decides to take in dealing with refund shortfalls. The CA Generators request clarification that interest should always be calculated from the date that an excess payment was either made or due. In particular, they state that they are concerned about intervals where the original billing is subsequently adjusted with the result that a new charge is assessed for the same interval. The CA Generators state that they want the Commission to make it clear that interest on any excessive part of this new charge would be accrued from the due date of the new charge, which could be much later than the due date for the charge under the original billing. On reply, the CAISO states that it strongly opposes the CA Generators' request for clarification because they state that their proposal is unworkable. The CAISO argues that its settlement system does not work on a transaction matching basis but, rather, aggregates monthly activity for all market services in a single invoice.

138. In their initial comments, the CA Parties and the PX generally agree with the presiding judge's findings on interest but seek certain specific exceptions. They explain that they would like refunds associated with amounts held in the PX Settlement Clearing Account to be assessed based on the actual interest earned. The CA Parties state that when SoCal Edison paid off its PX invoices, it paid interest at the approved PX tariff rate of two

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<sup>51</sup>(...continued)  
[www.ferc.gov/gas/interest.htm](http://www.ferc.gov/gas/interest.htm).

<sup>52</sup>See December 12 Proposed Findings at paragraph 800.

points above prime. The CA Parties state that they want the Commission to order the PX to refund the portion of interest paid by SoCal that exceeded the Commission's 35.19a interest rate.

139. On reply, the PX reiterates its request that actual interest earned be used in place of 35.19a interest, where applicable. The CA Generators and CSG argue against proposals that would calculate interest for the chargeback amounts based on actual interest earned, instead of 35.19a interest. Regarding any shortfall between actual and 35.19a interest, CSG attributes much of the blame to the PX, which failed to provide for interest for the first five months that it held these funds. CSG thus argues that any shortfalls should be allocated to the PX.

### Discussion

140. The Commission will adopt the presiding judge's proposed finding that interest on both refunds and unpaid balances will be calculated in the manner required by the Commission's July 25 Order; i.e., calculated under Section 35.19a of the Commission's regulations.<sup>53</sup>

141. Regarding arguments that actual interest should be used in place of 35.19a interest in certain circumstances, we disagree. The fact that the balances held by the PX for market participants have been earning some level of interest is immaterial to the question of what interest rate applies to refunds and unpaid balances under our Regulations and Orders. The parties who owe refunds or unpaid balances are subject to the interest rate our Regulations provide. Whatever interest has been earned on their behalf by the PX will serve to reduce the portion of their overall obligations that they must pay themselves but the underlying obligation remains to pay the full amount of interest that our Regulations require. Accordingly, we clarify that actual interest earned on money held in the PX accounts at issue should be allocated to market participants with positive balances in the accounts,<sup>54</sup> in proportion to the size of those balances, for purposes of refund calculation. Furthermore, to the extent that there is a difference between the resulting amounts of interest and the total interest due for each participant as calculated under Section 35.19a, the participant will be responsible for making up this difference.

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<sup>53</sup>See Id. at paragraph 800.

<sup>54</sup>Only those market participants with positive balances have contributed the principal upon which actual interest has been earned.

142. Regarding CA Parties argument that SoCal Edison should receive a refund of a portion of the PX Tariff interest it paid when it paid off its PX invoices, we will clarify. First, as discussed above, we will adopt the presiding judge's finding that Section 35.19a interest should apply to unpaid balances. This means that, despite the fact the CAISO and PX Tariffs both contain their own provisions for interest on late payments, for purposes of this proceeding we are overriding those provisions and applying the same interest rates to both unpaid balances and refunds. Accordingly, if, like certain other participants, SoCal Edison had chosen to wait until the conclusion of this proceeding to pay off its PX invoices, it would clearly face 35.19a interest. We agree that its decision to pay those invoices early should not be allowed to impact the final interest rate it paid for the period of time from when the invoices were due until when the invoices were paid. Accordingly, we direct the PX to refund any interest collected from SoCal Edison, associated with service during the refund period, in excess of the amount that would have been collected under Section 35.19a of our Regulations.

143. Further, we will adopt the presiding judge's findings that interest shall be calculated separately for the CAISO and PX markets and shall not be recombined. Lastly, we will adopt the presiding judge's holding that the CA Parties and PX proposals with regard to the calculation of interest on PX chargeback amounts and settlement trust accounts are beyond the scope of the issues set for hearing.

## **F. What are the results of properly applying the above methodologies?**

### Presiding Judge's Proposed Findings

144. The presiding judge found that the final refund obligations will reflect appropriate offsets and interest when the final compliance filings, as recommended by him and approved by this Commission, are filed. He stated that no useful public purpose would be served by addressing the illustrative calculations or proposed refund liabilities submitted by many parties, at this point in the proceedings. We will summarily adopt this finding and we need not discuss it further.

### Comments

145. CSG renews its argument that refunds due for neutrality overcharges should be incorporated into this proceeding. CSG notes that the presiding judge excluded consideration of this issue earlier in the proceeding, apparently because complaint proceedings have already been established to address this issue (Docket Nos. EL00-111 and EL01-84). However, CSG urges the Commission to address the issue of refunds due for neutrality overcharges here, because it is germane to the question of who owes what to

whom. On reply, CA Parties and CAISO support the presiding judge's exclusion of this issue from this proceeding because it is already the subject of a separate proceeding. On the other hand, on reply, Enron adopts CSG's argument on this issue.

146. Redding stresses that the compliance filing must be subject to full and open review to fully preserve participants' due process rights. While NCPA recognizes that the presiding judge's Appendix is only illustrative, NCPA notes, for the record, that it is based on an outdated exhibit and erroneously excludes the total amounts due to NCPA. LADWP, on the other hand, argues that the calculation of pre-mitigation amounts due will not change as a result of the ordered re-runs of the settlement process and argues that the Commission should approve the pre-mitigation amounts due to LADWP in this order.

#### Discussion

147. The Commission declines to address the neutrality overcharge issue in this proceeding. That issue is appropriately addressed in its own proceeding. In response to Redding, we clarify that the final compliance filing will be subject to full and open review. Accordingly, we find that the factual predicate upon which NCPA bases its concern regarding an outdated exhibit relied upon by the presiding judge is moot. The parties' ability to review the final compliance filing will ensure that no erroneous exhibits impact the results. Finally, we disagree with LADWP that pre-mitigation amounts due can not change. At least one of our findings, regarding the mislogging issue, has the potential to change the pre-mitigation amounts due. Thus it is appropriate to wait until the final compliance filing to rule on pre-mitigation amounts due.

#### **IV. What company-specific policy issues, not addressed above, affect the calculation of refunds and amounts owing?**

C. CERS. We will adopt the presiding judge's finding that refunds associated with CAISO charges satisfied by CERS are owed to CERS, with the methodology referred to in paragraph 874. We reject the CA Generators request for clarification on the methodology to be used because the CAISO points out that the request calls for special treatment outside of the CAISO's standard settlement process, and notes that there is a separate proceeding addressing the invoicing process in ER02-889<sup>55</sup> which will ensure that all parties, including CERS, will receive refunds of amounts they paid in the CAISO market.

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<sup>55</sup>See California Independent System Operator Corporation, et al., 101 FERC ¶ 61,241 at paragraphs 25 and 26.

J. SoCal Edison. Regarding whether SoCal Edison fully satisfied its refund period invoices from the CAISO and PX, we will adopt the presiding judge's finding that the CAISO has stipulated that SoCal Edison has fully satisfied its refund period invoices for transactions in the CAISO's markets, and that no issue has been raised by the parties or Staff with regard to SoCal Edison's refund liability as a PX market participant. The PX requests clarification that this finding does not excuse SoCal Edison from settling its outstanding obligations with the PX, to which CA parties note that the disputed amounts are not decided here in either parties favor, but are subject to the PX's dispute resolution procedures at this point. We will defer to those dispute resolution efforts on the SoCal Edison obligations.

#### Market Manipulation Allegations Raised Following Additional Discovery

148. In a November 20, 2002 order, the Commission allowed parties in the California refund proceeding, Docket No. EL00-95-000 et al., to conduct additional discovery into market manipulation by various sellers during the period January 1, 2000 to June 20, 2001.<sup>56</sup> This order directed parties to submit additional evidence and propose new and/or modified findings of fact by February 28, 2003. In a subsequent order, the Commission extended the filing deadline until March 3, 2003, with reply comments due by March 20.<sup>57</sup>

149. While our review of these additional allegations is currently ongoing, this process does not prevent us from making findings concerning the just and reasonable mitigated market clearing prices for California for the refund period. Any future Commission findings of energy market manipulation that result from our ongoing review would not result in a resetting of the refund effective date in this proceeding, which is based on the requirements of Section 206 of the Federal Power Act, and would have no impact on the just and reasonable clearing prices developed for the refund period. Rather, depending on the outcome of the Commission's review, the Commission may initiate one or more additional enforcement actions against entities found to have committed market manipulation in violation of the CAISO and PX tariffs. The proposed remedy in such a proceeding would be disgorgement of profits by those entities who are found to have violated one or both of these tariffs. Any such company-specific disgorgement or other appropriate remedies (including requiring the market participant(s) to make the market whole) would be in addition to the refunds associated with the mitigated market clearing prices developed pursuant to this order and could apply to conduct both prior to the refund period and during the refund period.

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<sup>56</sup>San Diego Gas & Electric Co., et al., 101 FERC ¶ 61,186 (2002).

<sup>57</sup>San Diego Gas & Electric Co., et al., 102 FERC ¶ 61,194 (2003).



150. That said, certain additional arguments have been raised regarding the refund methodology in this proceeding. We address those below.

151. CA Parties allege that there is evidence to indicate that the prices for emissions credits were manipulated in similar manner to prices for natural gas and electricity during 2000-2001. Upon review of the trading credit database maintained by the South Coast Air Quality Management District (SCAQMD), the CA Parties allege that some generators may have engaged in "wash" trades in order to both raise the market price of the credits and to create the false impression that the emissions credits market was more active than it actually was. Unlike typical electricity or natural gas "wash" trades, where the parties trade like amounts at the same price, CA Parties argue that these trades constituted wash trades because the parties traded different numbers of credits at different prices per credit, with the net result that no cash changed hands. Among other alleged adverse effects, the CA Parties state that by artificially raising the market price of emissions credits, generators increased the marginal cost for the generating capacity in the SCAQMD, which in turn, increased the overall market-clearing price. As such, the CA Parties state that the Commission should, at a minimum, find that additional investigation into markets where emissions credits were traded is warranted prior to determining any of the sellers' refund obligations. Dynegy answers that five of the six emissions credit trades cited by CA Parties were not wash trades but were instead simple swaps of different types of emissions credits. Because these trades were swaps, Dynegy argues that there is no mystery behind the fact that no cash changed hands. Because these different types of credits have different values per credit, Dynegy argues that there is no mystery behind the fact that the numbers of credits swapped by each side were different. Finally, regarding the last emissions credit trade cited by CA Parties, Dynegy demonstrates that the return trade from Dynegy resulted from the original seller's miscalculation of how many credits it had available for sale.

152. We find that the CA Parties' allegations provide no basis for Commission investigation of the emissions credit market prior to determining sellers' refund obligations. The Commission finds that the emissions credit trades cited by CA Parties have not been shown to be instances of emissions credit market manipulation. Rather, they appear to have been for the most part simple swaps of like values of one type of credit for another. Additionally, the calculation of mitigated market clearing prices approved herein does not incorporate emissions costs. Such costs are netted, company by company, after calculation of company-specific refunds. As discussed above, this order will adopt the presiding judge's findings that certain claimed emissions costs have been adequately supported and can, thus, be netted against the associated company's refund obligation. The CA Parties' allegations provide no basis to depart from this course.

153. CA Parties also argue that exchange transactions should be mitigated during the refund period because the return ratios were excessively high and because the prices in the California market were manipulated. An exchange transaction is a transaction where a party provides energy to the CAISO and the CAISO pays back the energy in kind in subsequent hours at an exchange ratio. CA Parties argue that energy obtained through an exchange transaction has an implicit price based on the return ratio. CA Parties allege that the "sellers" under exchange transactions exercised market power to extort excessive exchange ratios. Further, they state that the CAISO must purchase energy at the market price in order to return the energy owed to the original seller and that these market prices were manipulated. CA Parties suggest a method for mitigating the exchange transactions so that, once mitigated, the transactions would have a 1 to 1 exchange ratio.

154. We will deny CA Parties' request to further mitigate energy exchange transactions. Prices in the dysfunctional California markets during the refund period are mitigated as a result of this proceeding, so power purchased by the CAISO in order to return energy in-kind will be repriced according to the MMCP methodology. Additionally, we disagree that an exchange transaction has an implicit price based on the return ratio. Because the exchange transactions that the CAISO entered into had no up-front stipulated hour for return of energy, it is impossible to attach a monetary value to the energy. Further, exchange transactions generally allowed the CAISO to return the energy in kind within one to two weeks. As such, these transactions would be conducted over a period greater than 24 hours, would not come under the definition of spot market transactions and thus are outside the scope of this proceeding. Finally, we note that the availability of energy from hydro generation, which was within historical norms until late May 2000, began declining rapidly soon thereafter. In the early spring of 2001, based on actual precipitation and snowfall, forecasts of hydro runoff anticipated a short-fall of 100,000 to 125,000 gigawatt-hours.<sup>58</sup> The CA Parties' request to reform the exchange ratio completely ignores the severe energy shortfall in the Pacific Northwest, where most of these energy exchange transactions originated, during the 2001 time period.

### **Settlements and Billing Process Calculations**

155. Because requests for rehearing concerning our findings in this order are due 30 days from the issuance date of this order, we will defer the settlements and billing process

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<sup>58</sup>The actual shortfall in 2001 was 70,000 gigawatt-hours and hydro production was the lowest in recent memory according to US Energy Information Agency data.

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calculations until after the Commission makes a final decision on the matters in this proceeding.<sup>59</sup>

The Commission orders:

(A) The Commission hereby adopts in part and modifies in part, Proposed Findings issued on December 12, 2002 by the presiding administrative law judge in this proceeding and directs the parties in this proceeding to take certain actions, as discussed in the body of this order.

(B) We direct generators that wish to recover fuel costs above the MMCP for spot gas purchases made during the refund period in the CAISO and PX markets to submit within 40 days of the issuance date of this order their actual daily cost of gas information, using the method described in the body of this order.

(C) We direct the staff to convene an on-the-record technical conference within 20 days following the deadline for submission of information described in ordering paragraph (B) above to address issues concerning the information submitted on generators' fuel cost allowances.

By the Commission. Chairman Massey dissenting in part with a separate statement  
( S E A L )                      attached.

Magalie R. Salas,  
Secretary

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<sup>59</sup>See FERC Procedural Rules, 18 C.F.R. § 385.713 (2002).

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

San Diego Gas & Electric Company,  
Complainant,

v.

Docket Nos. EL00-95-045

Sellers of Energy and Ancillary Services Into  
Markets Operated by the California  
Independent System Operator Corporation and the  
California Power Exchange,  
Respondents.

Investigation of Practices of the California  
Independent System Operator and the  
California Power Exchange

Docket Nos. EL00-98-044

(Issued March 26, 2003)

MASSEY, Commissioner, dissenting in part:

With today's order, I believe that we are taking a giant step toward getting refunds into the hands of the customers that bore the brunt of the meltdown of the California electricity market. For that reason, I am generally supportive of the order.

The fundamentals of our refund methodology were set out in our July 25, 2001 order.<sup>1</sup> There are two aspects that methodology that I disagreed with at the time, and developments since then have not convinced me otherwise. One of those aspects is extending a refund obligation to non-public utilities that are otherwise not jurisdictional. Although doing so has strong appeal, especially as a matter of equity, I still do not believe the Commission has this authority.

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The other issue is the inclusion of a 10% creditworthiness adder in determining the mitigated market clearing price that will be used to calculate refunds. My position remains the same, that this adder is not necessary.

For these reasons, I dissent in part from today's order.

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William L. Massey  
Commissioner

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<sup>1</sup>San Diego Gas & Electric Company et al., 96 FERC ¶ 61,120 (2001).