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April 22, 2005

The Honorable Magalie Roman Salas Secretary Federal Energy Regulatory Commission 888 First Street, N.E. Washington, D.C. 20426

### Re: Second Weekly DMA Report on Market Impacts of Amendment No. 66 Docket No. ER05-718

Dear Secretary Salas:

Pursuant to Paragraph 21 of the Commission's "Order on Tariff Filing" issued in this docket on April 7, 2005, 111 FERC ¶ 61,008 (2005), the California Independent System Operator Corporation ("ISO") respectfully submits an original and fourteen copies of the second weekly Report on Market Impacts of Amendment 66, as prepared by the ISO's Department of Market Analysis. Two additional copies of this filing are enclosed to be date-stamped and returned to our messenger. If there are any questions concerning this filing please contact the undersigned.

Respectfully Submitted,

Michael Kunselman

Counsel for the California Independent System Operator Corporation

#### **Certificate of Service**

I hereby certify that I have this day served a copy of this document upon all parties listed on the official service list compiled by the Secretary in the abovecaptioned proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated this 22<sup>nd</sup> day of April, 2005 at Folsom in the State of California.

Gene L. Waas (916) 608-7049



## Report on Market Impacts of Amendment 66: "As-Bid" Settlement of Pre-dispatched Inter-tie Bids for Real Time Energy

Prepared by the Department of Market Analysis California Independent System Operator April 21, 2005

#### Background

In Amendment No. 66, the California Independent System Operator ("CAISO") proposed to modify the CAISO Tariff so that bids for incremental and decremental energy on inter-ties with neighboring control areas that are pre-dispatched by the CAISO are settled under a "pay as bid" rule. With this modification, bids would be paid (or pay the CAISO) their original bid price, rather than the "bid or better" in effect since October 1, 2004.<sup>1</sup>

In its April 7, 2005 Order on Amendment No. 66, the Federal Energy Regulatory Commission ("Commission") approved the "pay as bid" settlement rule effective as of March 24, 2005 until the earlier of September 30, 2005 or the effective date of a long-term solution filed and accepted by the Commission.<sup>2</sup> The Commission also ordered the CAISO's Department of Market Analysis ("DMA") to file weekly reports on the market effects of these interim tariff provisions, including "the liquidity and sufficiency of bids at the interties, "until the earlier of the effective date of a future tariff change implementing a long-term solution or September 30, 2005.

The following report is submitted by DMA in response to the above directive in the Commission's Order on Amendment 66. As the second weekly report submitted following approval of Amendment 66, the report focuses on the changes in dispatches and costs in the first three weeks since the March 24 effective date of Amendment 66, compared to the months and weeks leading up to the change from the "bid or better" to the "as bid" settlement rules on March 24th.<sup>3</sup> This second report also contains additional information on import quantities and prices before and after Amendment 66.

This second weekly report includes additional data for the week April 9 through April 15.<sup>4</sup>

#### **Report Findings**

#### Costs Impacts of Amendment No. 66

Figures 1 and 2 summarize total energy pre-dispatched by the CAISO for market clearing versus ISO system demand for energy, and the costs associated with overlapping (or offsetting) incremental ("inc") and decremental ("dec") bids dispatched to clear the market. Table 1 summarizes these same data by week since implementation of Phase 1B on October 1, 2004. These data show the following with respect to the effectiveness of the Amendment 66 interim

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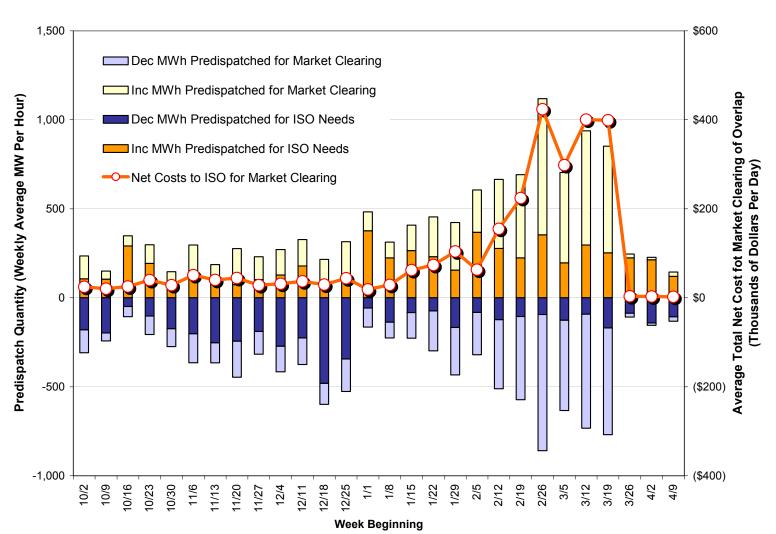
Under the "bid or better" settlement rule, inter-tie bids for incremental energy pre-dispatched by the CAISO prior to each operating hour were paid the higher of their bid price or the ex post real time market clearing price. Inter-tie bids for decremental energy pre-dispatched by the CAISO paid the lower of their bid price or the ex post real time market clearing price. See Amendment No. 66 Transmittal Letter.

California Independent System Operator Corporation, 111 FERC ¶ 61,008 (2005) ("Amendment 66 Order").

A detailed explanation of the methodology used to calculate costs included in this report was provided in Appendix A of DMA's first weekly report submitted pursuant to Amendment 66 on April 15, 2005.

The 7-day lag between the most recent data in this report and the filing date of this report reflects the time needed for post-operational checks and changes done as part of the CAISO settlement process, as well as time needed to prepare and review the report. ISO\GC\DMA\EWH

solution:



#### Figure 1. Average Hourly Volume of Bids Pre-Dispatched by the CAISO and Average Daily Costs to ISO of Market Clearing

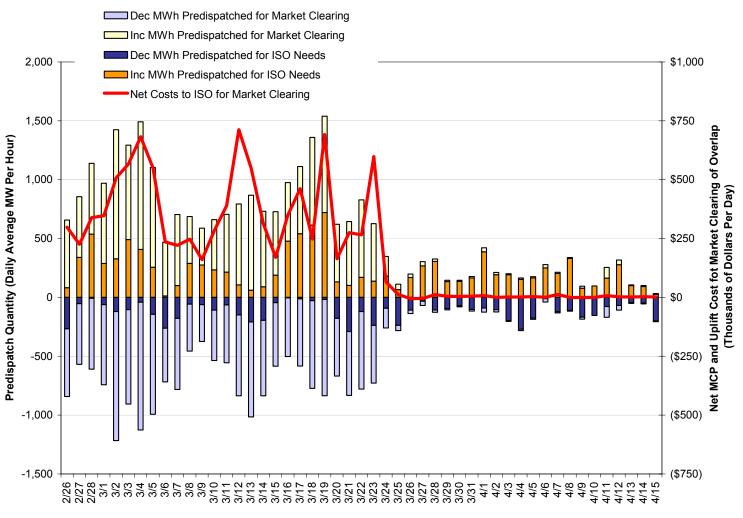


	•		•			
	Market Clearing (Average MW/hour)		Net ISO Imbalance Energy (Average		Average Daily Net Costs (Thousands per Day)	
		_	MW/hou	,	•••	
Week	Inc	Dec	Inc	Dec	Market	Net ISC
Beginning	100	400	400	400	Clearing	Energy
10/2/2004	129	-129	106	-180	\$25	-\$69
10/9/2004	45	-45	105	-197	\$20	\$14
10/16/2004	57	-57	291	-49	\$25	\$32
10/23/2004	104	-104	194	-102	\$40	\$17
10/30/2004	100	-100	46	-174	\$28	-\$132
11/6/2004	162	-162	135	-202	\$51	-\$1
11/13/2004	112	-112	75	-253	\$40	-\$130
11/20/2004	202	-202	74	-244	\$44	-\$12
11/27/2004	128	-128	102	-189	\$28	-\$52
12/4/2004	143	-143	128	-273	\$32	-\$12
12/11/2004	149	-149	179	-225	\$37	\$4
12/18/2004	117	-117	99	-481	\$30	-\$33
12/25/2004	182	-182	133	-344	\$44	-\$16
1/1/2005	107	-107	376	-58	\$19	\$46
1/8/2005	88	-88	224	-137	\$29	\$16
1/15/2005	144	-144	265	-83	\$62	\$26
1/22/2005	224	-224	231	-74	\$74	\$19
1/29/2005	267	-267	156	-167	\$104	\$4
2/5/2005	238	-238	368	-82	\$63	\$38
2/12/2005	388	-388	278	-123	\$155	\$24
2/19/2005	468	-468	224	-105	\$224	\$21
2/26/2005	765	-765	353	-94	\$424	\$41
3/5/2005	508	-508	196	-126	\$298	\$14
3/12/2005	641	-641	297	-92	\$400	\$37
3/19/2005*	599	-599	253	-169	\$399	\$19
	Change fro	om "Bid o	r Better" to "A	s-Bid" Set	tlement	
3/26/2005	22	-22	224	-87	-	\$21
4/2/2005	14	-14	214	-141	-	\$15
4/9/2005	25	-25	120	-107	-	\$7

#### Table 1. Weekly Summary Data (Before and After Amendment 66)

\* Average for week beginning 3/19/05 includes data for 3/19 - 3/23 only. Data for 3/24 - 3/25 excluded from weekly average since during these two days Amendment 66 was in effect.

#### Figure 2. Average Hourly Volume of Bids Pre-Dispatched by the CAISO and Average Daily Costs to CAISO of Market Clearing



(By Day, Starting One Month Prior to Amendment 66)

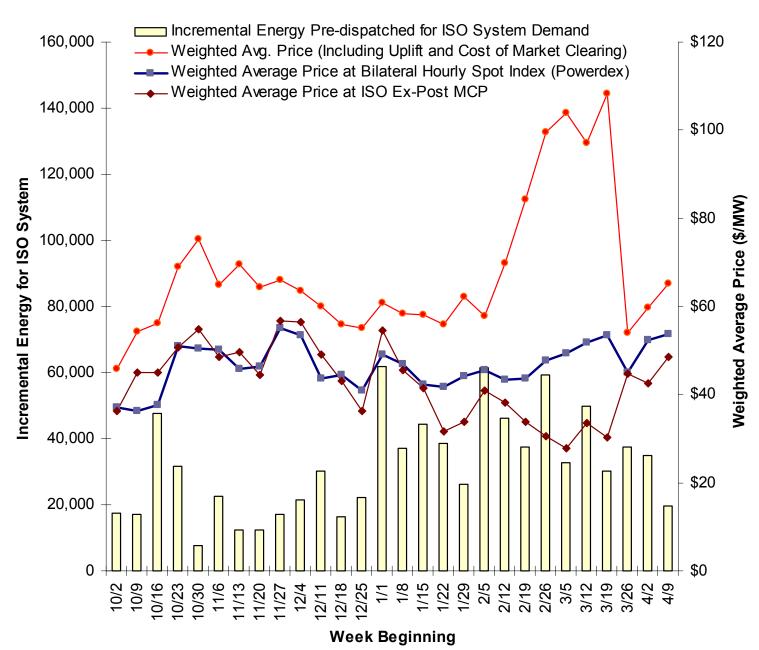
- The amount of "overlapping" inc and dec bids cleared by the CAISO dropped dramatically as soon as the CAISO moved from the "bid or better" settlement rule to the "as bid" settlement rule. In the three weeks since the effective date of Amendment 66. an average of only about 20 MW of off-setting inc and dec bids have been predispatched each hour, as opposed to an average of about 600 MW per hour in the month prior to implementation of Amendment 66. During the week of April 9-15, an average of only about 25 MW of off-setting inc and dec bids have been pre-dispatched each hour.
- Costs the CAISO associated with "clearing the market" by dispatching all "overlapping" inc and dec bids (beyond CAISO system demand) have been essentially eliminated under the "as bid settlement rule", since revenues received by the CAISO for dec bids pre-dispatched to clear the market meet or exceed payments for off-setting inc bids predispatched to clear the market.<sup>5</sup> As noted in the CAISO Amendment 66 tariff filing, the costs attributable to clearing of overlapping (or off-setting) inc and dec bids averaged about \$400,00 per day in the month prior to Amendment 66. Thus, savings from Amendment 66 may be estimated at about \$400,000 per day. 6

Figure 3 summarizes the total cost of net incremental energy purchased by the CAISO for CAISO system needs (*i.e.* net energy pre-dispatched when the sum of all pre-dispatched bids was positive, indicating the CAISO was a net purchaser of imbalance energy in the pre-dispatch process). Figure 4 summarizes the total cost of net decremental energy purchased by the CAISO for CAISO system needs (*i.e.* net energy pre-dispatched when the sum of all predispatched bids was negative, indicating the CAISO was a net seller of imbalance energy in the pre-dispatch process). In order to compare the net price paid and received for net incremental and decremental energy by the CAISO from inter-tie bids to prices outside and inside of the CAISO system, the value of the incremental and decremental energy pre-dispatched by the CAISO was also calculated based on a bilateral price index for hourly spot market transactions (Powerdex Weekly Subscription Service) and at the CAISO's real time ex-post prices. As shown in Figure 3 and 4, in the weeks leading up to the approval of Amendment 66, the costs associated with clearing the market significantly increased the degree to which the CAISO "bought high and sold low" relative to reported bilateral prices in the regional hourly spot markets. However, as displayed in Figures 3 and 4, in the two weeks since implementation of Amendment 66, prices paid by the CAISO for net incremental energy and received by the CAISO for net decremental energy have tracked more closely the average reported bilateral prices in the regional hourly spot markets.

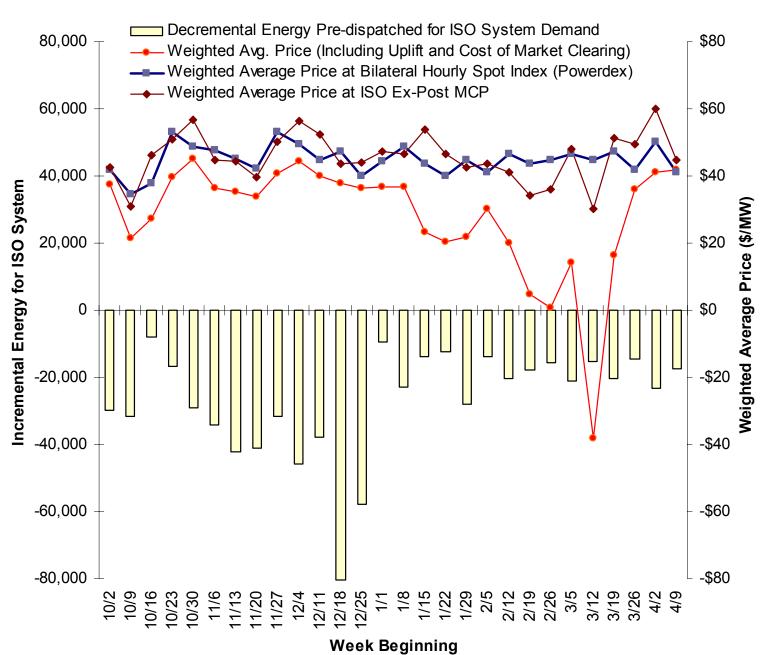
<sup>5</sup> After the change to the "as-bid" settlement rule, minor net costs from market clearing result from the fact that the methodology used to calculate net costs based on total overall average price for all inc and dec energy pre-dispatched in hour. Thus, when incremental energy exceeds decremental energy pre-dispatched, the weighted average price per MWh of incremental energy may exceed the weighted average price of all decremental bids pre-dispatched. In practice, market clearing would be revenue neutral or produce small positive net revenue. However, due to the very small volume of off-setting inc and dec bids pre-dispatched under the "as-bid" rule (i.e. 19 MW per our) any net revenues from clearing the market on an "as-bid" basis would be minimal.

The bulk of these savings would reduce charges to Load Serving Entities ("LSEs") within the ISO, since uplift charges are allocated to Schedule Coordinators ("SCs") based on a combination of negative uninstructed deviations and total load. ISO\GC\DMA\EWH

#### Figure 3. Total Net Cost of Incremental Energy Pre-dispatched for CAISO System Demand



#### Figure 4. Total Net Cost of Decremental Energy Pre-dispatched for ISO System Demand



As shown in Figure 3, during hours when the CAISO was a net purchaser of energy on the interties, the net price ultimately paid by the CAISO for pre-dispatched incremental energy used to meet CAISO system demand (including costs associated with inc and dec bids pre-dispatched to clear the market) has consistently exceeded the price of energy reported in bilateral hourly spot markets (see Figure 3). In the four weeks prior to approval of Amendment 66, the net price ultimately paid by the CAISO for net incremental energy purchased for CAISO system demand increased to an average of \$100/MWh, compared to an average reported bilateral price of \$50/MWh. However, in the three weeks since implementation of Amendment 66, the net price paid by the CAISO for net incremental energy has been much closer to prices reported for the bilateral hourly spot markets. During the week of April 9-15, the net price ultimately paid by the CAISO for net incremental energy purchased for CAISO system demand averaged \$65/MWh, compared to a weighted average reported bilateral price of \$53/MWh and a weighted average ex post price in the CAISO's real time energy market of \$48/MWh.

Similarly, as shown in Figure 4, during hours when the CAISO was a net seller of energy on the inter-ties, the net price ultimately received by the CAISO for pre-dispatched decremental energy used to meet CAISO system demand (including costs associated with inc and dec bids predispatched to clear the market) has consistently been lower than the price of energy reported in bilateral hourly spot markets (see Figure 4). Again, however, in the four weeks prior to implementation of Amendment 66, the net price ultimately received by the CAISO for net decremental energy began to increase and has, since then, been much closer to prices reported in bilateral spot markets for hourly energy. During the week of April 9-15, the net price received by the CAISO for net decremental energy sold as a result of CAISO system conditions averaged \$41/MWh, which was approximately equal to the weighted average reported price for hourly spot market transactions in bilateral markets. The weighed average price of this decremental energy pre-dispatched by the CAISO calculated at the ex post price in the CAISO's real time market was about \$45/MWh.

#### Inter-tie Bid Sufficiency and Liquidity

Figure 5 shows the daily total volumes of incremental and decremental intertie bids during the period March 1 to April 15, 2005, categorized by bid price levels. Figure 6 shows the same bid volumes, but categorizes bids by price levels relative to prices reported for bilateral spot markets for each hour. As shown as Figures 5 and 6, the volume of inter-tie bids for supplemental real time energy submitted to the CAISO over the three weeks since Amendment 66 had dropped slightly, relative to bid volumes in the three weeks prior to Amendment 66. However, much of this drop may be attributable to the fact that bid volumes in the weeks prior to Amendment 66 were inflated by bids submitted in response to the market design flaw which was causing the CAISO to "buy high" and "sell low" and pre-dispatch large volumes of inc and dec bids. For example, as shown in Figure 5, the volume of relatively high priced dec bids has dropped substantially since Amendment 66. In addition, as shown in Figure 5 of the first weekly report on Amendment 66 filed by the CAISO, bid volumes since Amendment 66 have been approximately equal to average bid volumes over the longer period ranging from implementation of Phase 1B on October 1, 2004 through the effective date of Amendment 66 on March 24, 2005.

DMA will be monitoring and analyzing the issues of inter-tie bid sufficiency and liquidity over a longer-term basis, and will include the results of this analysis in future weekly reports.

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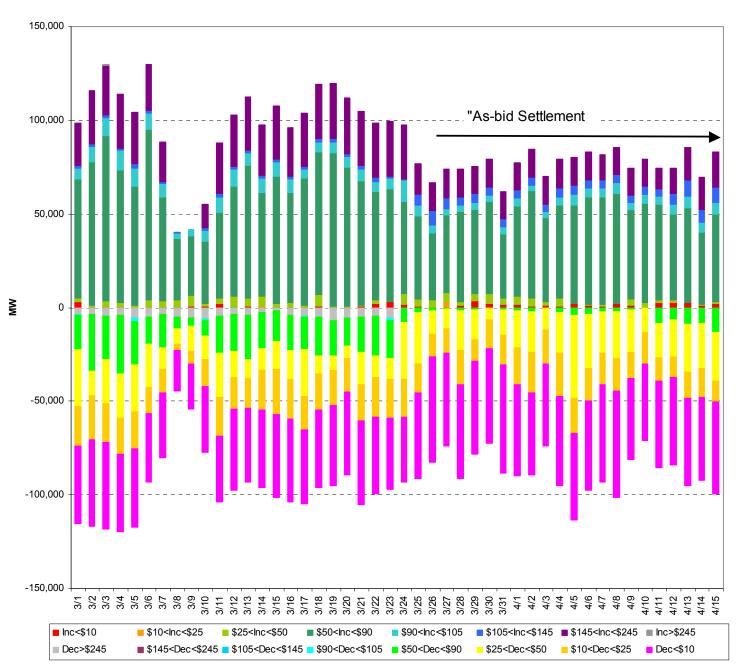
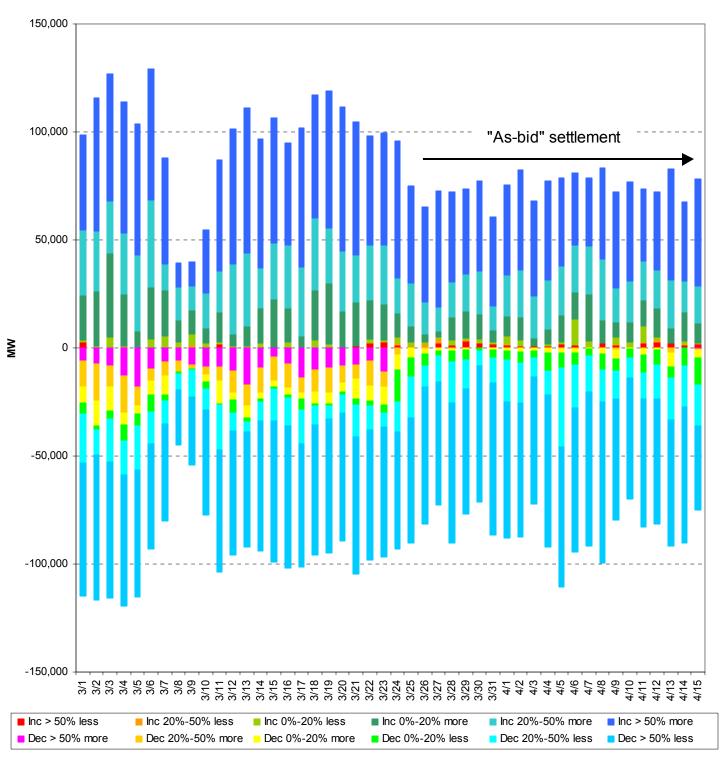


Figure 5. Total Net Cost of Decremental Energy Pre-dispatched for ISO System Demand



### Figure 6. Total Net Cost of Decremental Energy Pre-dispatched for ISO System Demand

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