



California Independent  
System Operator Corporation

January 11, 2008

The Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

**Re: One Hundred Thirty-Seventh Weekly DMM Report  
on Market Impacts of Amendment No. 66  
Docket No. ER05-718**

Dear Ms. Bose:

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), and Paragraph 27 of the Commission's "Order on Tariff Filing," issued in this docket on September 30, 2005, 112 FERC ¶ 61,352 (2005) ("September 30 Order"), the California Independent System Operator Corporation ("ISO") respectfully submits an original and fourteen copies of the One Hundred Thirty-Seventh Report on Market Impacts of Amendment 66, as prepared by the ISO's Department of Market Monitoring.

An additional copy of this filing is enclosed to be date-stamped and returned in the enclosed, pre-paid Federal Express envelope. If there are any questions concerning this filing, please contact the undersigned.

*Respectfully Submitted,*

**/s/ Sidney Mannheim Davies**  
Sidney Mannheim Davies

Counsel for the California Independent  
System Operator Corporation



California ISO  
Your Link to Power

# **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 Monitoring  
California Independent System Operator  
January 11, 2008

## 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 Regulatory Energy Commission (“Commission”) approved the “pay as bid” settlement rule effective as of March 24, and 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 inter-ties.”

The following report is submitted by DMA in response to the above directive in the Commission’s Order on Amendment 66.<sup>2</sup> This weekly report includes additional data from December 29, 2007 through January 4, 2008, inclusive.<sup>3</sup>

## Report Findings

### ***Cost Impacts of Amendment No. 66***

Figures 1 and 2 summarize total energy pre-dispatched by the CAISO for market clearing versus CAISO system demand for energy, and the costs associated with overlapping (or off-setting) 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.

As shown in Figure 1, 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. Since the effective date of Amendment 66, an average of only about 29 MW of off-setting inc and dec bids have been pre-dispatched each hour, as opposed to an average of about 600 MW per hour in the month prior to implementation of Amendment 66. Between December 29 and January 4, an average of about 33 MW of off-setting inc and dec bids have been pre-dispatched each hour to clear the market.

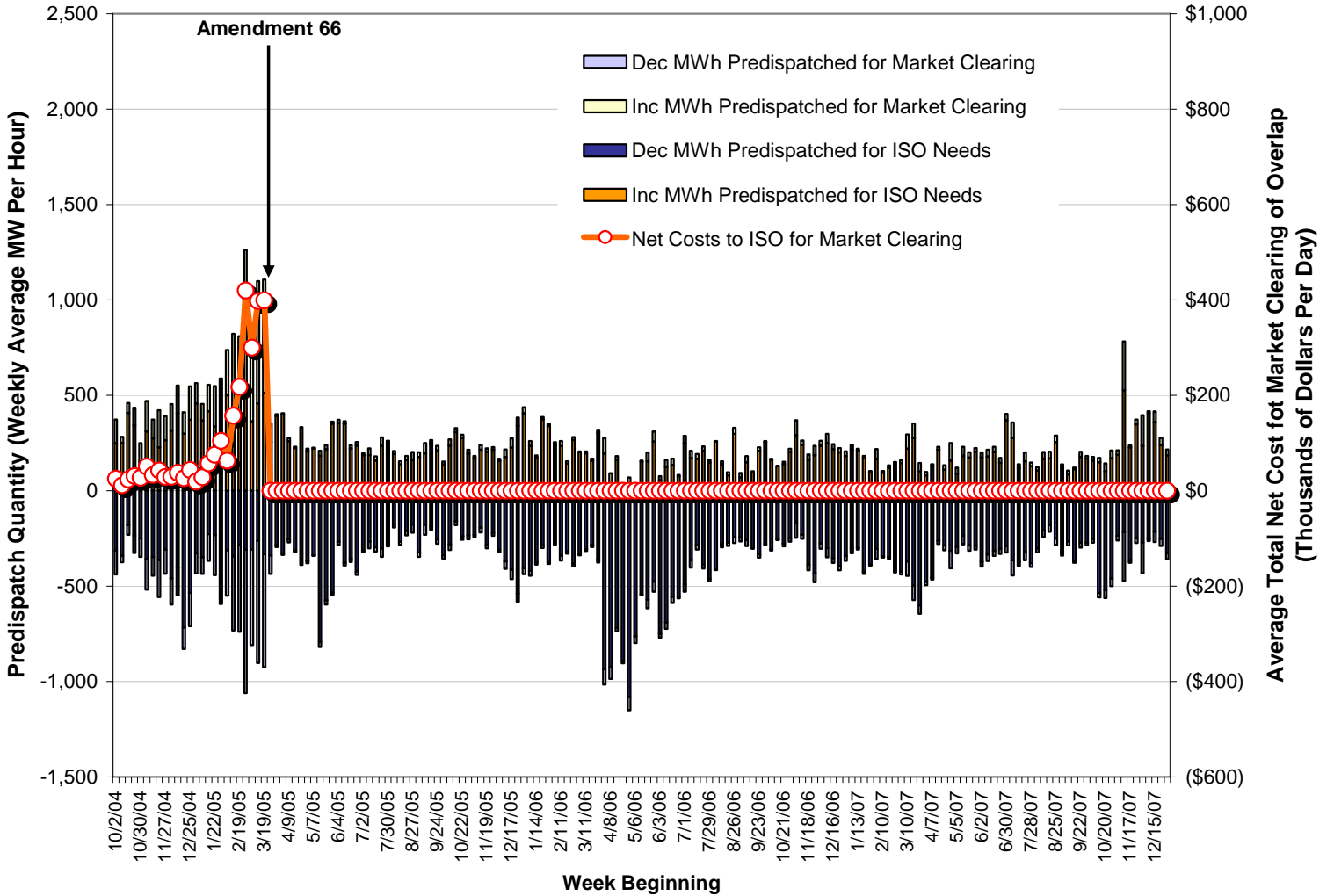
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<sup>1</sup> Under the “bid or better” settlement rule, inter-tie bids for incremental energy pre-dispatched by the CAISO prior to each operating hour were paid the higher of their bid price or the *ex post* real time market clearing price. Inter-tie 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.

<sup>2</sup> Under 2005 internal reorganization, the Department of Market Analysis (“DMA”) is now known as the Department of Market Monitoring (“DMM”).

<sup>3</sup> 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.

**Figure 1. Average Hourly Volume of Bids Pre-Dispatched by the CAISO  
and Average Daily Costs to CAISO of Market Clearing  
(By Week Since Phase1B Implementation)**



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

| Week<br>Beginning   | Market Clearing<br>(Average MW/hour) |            | Net CAISO Imbalance<br>Energy (Average<br>MW/hour) |             | Average Daily Net Costs<br>(Thousands per Day) |                |
|---|--------------------------------------|------------|--|-------------|--|----------------|
|   | Inc                                  | Dec        | Inc  | Dec         | Market<br>Clearing                             | Net ISO Energy |
| 10/2/2004   | 129                                  | -129       | 106  | -180        | \$25   | (\$690)        |
| 10/9/2004   | 45                                   | -45        | 105  | -197        | \$20   | \$14           |
| 10/16/2004  | 57                                   | -57        | 291  | -49         | \$25   | \$326          |
| 10/23/2004  | 104                                  | -104       | 194  | -102        | \$40   | \$177          |
| 10/30/2004  | 100                                  | -100       | 46   | -174        | \$28   | (\$132)        |
| 11/6/2004   | 162                                  | -162       | 135  | -202        | \$51   | (\$17)         |
| 11/13/2004  | 112                                  | -112       | 75   | -253        | \$40   | (\$130)        |
| 11/20/2004  | 202                                  | -202       | 74   | -244        | \$44   | (\$128)        |
| 11/27/2004  | 128                                  | -128       | 102  | -189        | \$28   | (\$52)         |
| 12/4/2004   | 143                                  | -143       | 128  | -273        | \$32   | (\$127)        |
| 12/11/2004  | 149                                  | -149       | 179  | -225        | \$37   | \$4            |
| 12/18/2004  | 117                                  | -117       | 99   | -481        | \$30   | (\$332)        |
| 12/25/2004  | 182                                  | -182       | 133  | -344        | \$44   | (\$166)        |
| 1/1/2005  | 107                                  | -107       | 376  | -58         | \$19   | \$467          |
| 1/8/2005  | 88                                   | -88        | 224  | -137        | \$29   | \$162          |
| 1/15/2005   | 144                                  | -144       | 265  | -83         | \$62   | \$261          |
| 1/22/2005   | 224                                  | -224       | 231  | -74         | \$74   | \$198          |
| 1/29/2005   | 267                                  | -267       | 156  | -167        | \$104  | \$40           |
| 2/5/2005  | 238                                  | -238       | 368  | -82         | \$63   | \$385          |
| 2/12/2005   | 388                                  | -388       | 278  | -123        | \$155  | \$246          |
| 2/19/2005   | 468                                  | -468       | 224  | -105        | \$224  | \$216          |
| 2/26/2005   | 765                                  | -765       | 353  | -94         | \$424  | \$419          |
| 3/5/2005  | 508                                  | -508       | 196  | -126        | \$298  | \$143          |
| 3/12/2005   | 641                                  | -641       | 297  | -92         | \$400  | \$375          |
| 3/19/2005*  | 599                                  | -599       | 253  | -169        | \$399  | \$190          |
| <i>Change from "Bid or Better" to "As-Bid" Settlement</i> |                                      |            |  |             |  |                |
| <b>3/26/2005</b>  | <b>22</b>                            | <b>-22</b> | <b>224</b>   | <b>-87</b>  | -  | <b>\$211</b>   |
| <b>4/2/2005</b>   | <b>14</b>                            | <b>-14</b> | <b>213</b>   | <b>-140</b> | -  | <b>\$160</b>   |
| <b>4/9/2005</b>   | <b>15</b>                            | <b>-15</b> | <b>130</b>   | <b>-109</b> | -  | <b>\$88</b>    |
| <b>4/16/2005</b>  | <b>8</b>                             | <b>-8</b>  | <b>64</b>  | <b>-219</b> | -  | <b>(\$106)</b> |
| <b>4/23/2005</b>  | <b>10</b>                            | <b>-10</b> | <b>53</b>  | <b>-319</b> | -  | <b>(\$204)</b> |
| <b>4/30/2005</b>  | <b>14</b>                            | <b>-14</b> | <b>28</b>  | <b>-318</b> | -  | <b>(\$208)</b> |
| <b>5/7/2005</b>   | <b>5</b>                             | <b>-5</b>  | <b>42</b>  | <b>-273</b> | -  | <b>(\$144)</b> |
| <b>5/14/2005</b>  | <b>34</b>                            | <b>-34</b> | <b>39</b>  | <b>-631</b> | -  | <b>(\$88)</b>  |
| <b>5/21/2005</b>  | <b>38</b>                            | <b>-38</b> | <b>49</b>  | <b>-450</b> | -  | <b>(\$10)</b>  |
| <b>5/28/2005</b>  | <b>14</b>                            | <b>-14</b> | <b>164</b>   | <b>-287</b> | -  | <b>\$13</b>    |
| <b>6/4/2005</b>   | <b>22</b>                            | <b>-22</b> | <b>215</b>   | <b>-109</b> | -  | <b>\$145</b>   |
| <b>6/11/2005</b>  | <b>29</b>                            | <b>-29</b> | <b>153</b>   | <b>-210</b> | -  | <b>\$21</b>    |
| <b>6/18/2005</b>  | <b>18</b>                            | <b>-18</b> | <b>47</b>  | <b>-280</b> | -  | <b>(\$170)</b> |
| <b>6/25/2005</b>  | <b>19</b>                            | <b>-19</b> | <b>96</b>  | <b>-252</b> | -  | <b>(\$35)</b>  |
| <b>7/2/2005</b>   | <b>11</b>                            | <b>-11</b> | <b>83</b>  | <b>-170</b> | -  | <b>(\$12)</b>  |
| <b>7/9/2005</b>   | <b>37</b>                            | <b>-37</b> | <b>84</b>  | <b>-147</b> | -  | <b>(\$9)</b>   |
| <b>7/16/2005</b>  | <b>22</b>                            | <b>-22</b> | <b>32</b>  | <b>-239</b> | -  | <b>(\$167)</b> |
| <b>7/23/2005</b>  | <b>50</b>                            | <b>-50</b> | <b>105</b>   | <b>-170</b> | -  | <b>(\$30)</b>  |
| <b>7/30/2005</b>  | <b>19</b>                            | <b>-19</b> | <b>82</b>  | <b>-197</b> | -  | <b>(\$98)</b>  |
| <b>8/6/2005</b>   | <b>21</b>                            | <b>-21</b> | <b>87</b>  | <b>-100</b> | -  | <b>\$6</b>     |
| <b>8/13/2005</b>  | <b>15</b>                            | <b>-15</b> | <b>49</b>  | <b>-178</b> | -  | <b>(\$166)</b> |
| <b>8/20/2005</b>  | <b>28</b>                            | <b>-28</b> | <b>65</b>  | <b>-147</b> | -  | <b>(\$127)</b> |
| <b>8/27/2005</b>  | <b>45</b>                            | <b>-45</b> | <b>79</b>  | <b>-93</b>  | -  | <b>(\$34)</b>  |
| <b>9/3/2005</b>   | <b>25</b>                            | <b>-25</b> | <b>79</b>  | <b>-183</b> | -  | <b>(\$148)</b> |
| <b>9/10/2005</b>  | <b>57</b>                            | <b>-57</b> | <b>115</b>   | <b>-77</b>  | -  | <b>\$55</b>    |
| <b>9/17/2005</b>  | <b>17</b>                            | <b>-17</b> | <b>136</b>   | <b>-85</b>  | -  | <b>\$68</b>    |

| Week<br>Beginning | Market Clearing<br>(Average MW/hour) |     | Net CAISO Imbalance<br>Energy (Average<br>MW/hour) |        | Average Daily Net Costs<br>(Thousands per Day) |                |
|-------------------|--------------------------------------|-----|--|--------|--|----------------|
|                   | Inc                                  | Dec | Inc  | Dec    | Market<br>Clearing                             | Net ISO Energy |
| 9/24/2005         | 33                                   | -33 | 89   | -207   | -  | (\$106)        |
| 10/1/2005         | 17                                   | -17 | 17   | -312   | -  | (\$520)        |
| 10/8/2005         | 34                                   | -34 | 93   | -190   | -  | (\$124)        |
| 10/15/2005        | 21                                   | -21 | 203  | -57    | -  | \$332          |
| 10/22/2005        | 19                                   | -19 | 145  | -117   | -  | \$173          |
| 10/29/2005        | 43                                   | -43 | 77   | -148   | -  | (\$44)         |
| 11/5/2005         | 33                                   | -33 | 63   | -137   | -  | (\$62)         |
| 11/12/2005        | 55                                   | -55 | 53   | -122   | -  | (\$60)         |
| 11/19/2005        | 19                                   | -19 | 83   | -180   | -  | (\$95)         |
| 11/26/2005        | 23                                   | -23 | 112  | -110   | -  | \$25           |
| 12/3/2005         | 13                                   | -13 | 52   | -221   | -  | (\$330)        |
| 12/10/2005        | 47                                   | -47 | 33   | -335   | -  | (\$662)        |
| 12/17/2005        | 48                                   | -48 | 77   | -286   | -  | (\$362)        |
| 12/24/2005        | 51                                   | -51 | 101  | -389   | -  | (\$64)         |
| 12/31/2005        | 37                                   | -37 | 204  | -207   | -  | \$174          |
| 1/7/2006          | 27                                   | -27 | 71   | -297   | -  | (\$153)        |
| 1/14/2006         | 13                                   | -13 | 37   | -306   | -  | (\$161)        |
| 1/21/2006         | 30                                   | -30 | 113  | -194   | -  | (\$22)         |
| 1/28/2006         | 13                                   | -13 | 102  | -261   | -  | (\$92)         |
| 2/4/2006          | 27                                   | -27 | 85   | -187   | -  | (\$59)         |
| 2/11/2006         | 27                                   | -27 | 234  | -340   | -  | (\$178)        |
| 2/18/2006         | 13                                   | -13 | 141  | -317   | -  | (\$237)        |
| 2/25/2006         | 15                                   | -15 | 266  | -381   | -  | (\$112)        |
| 3/4/2006          | 4                                    | -4  | 202  | -335   | -  | (\$111)        |
| 3/11/2006         | 10                                   | -10 | 196  | -306   | -  | (\$126)        |
| 3/18/2006         | 11                                   | -11 | 158  | -285   | -  | (\$84)         |
| 3/25/2006         | 18                                   | -18 | 301  | -359   | -  | (\$138)        |
| 4/1/2006          | 82                                   | -82 | 195  | -934   | -  | (\$227)        |
| 4/8/2006          | 62                                   | -62 | 31   | -905   | -  | (\$335)        |
| 4/15/2006         | 17                                   | -17 | 164  | -720   | -  | (\$230)        |
| 4/22/2006         | 13                                   | -13 | 0  | -892   | -  | (\$180)        |
| 4/29/2006         | 70                                   | -70 | 0  | -1,080 | -  | (\$83)         |
| 5/6/2006          | 36                                   | -36 | 0  | -762   | -  | (\$274)        |
| 5/20/2006         | 47                                   | -47 | 154  | -570   | -  | (\$267)        |
| 5/27/2006         | 54                                   | -54 | 257  | -476   | -  | (\$84)         |
| 6/3/2006          | 21                                   | -21 | 55   | -751   | -  | (\$179)        |
| 6/10/2006         | 36                                   | -36 | 125  | -689   | -  | (\$6)          |
| 6/17/2006         | 33                                   | -33 | 136  | -556   | -  | (\$420)        |
| 6/24/2006         | 7                                    | -7  | 77   | -557   | -  | (\$431)        |
| 7/1/2006          | 40                                   | -40 | 248  | -491   | -  | (\$214)        |
| 7/8/2006          | 40                                   | -40 | 170  | -363   | -  | (\$280)        |
| 7/15/2006         | 26                                   | -26 | 168  | -283   | -  | (\$280)        |
| 7/22/2006         | 23                                   | -23 | 210  | -386   | -  | (\$105)        |
| 7/29/2006         | 13                                   | -13 | 147  | -462   | -  | (\$456)        |
| 8/5/2006          | 4                                    | -4  | 257  | -412   | -  | (\$384)        |
| 8/12/2006         | 17                                   | -17 | 138  | -281   | -  | (\$220)        |
| 8/19/2006         | 17                                   | -17 | 80   | -272   | -  | (\$163)        |
| 8/26/2006         | 32                                   | -32 | 298  | -243   | -  | (\$100)        |
| 9/2/2006          | 23                                   | -23 | 69   | -243   | -  | (\$182)        |
| 9/9/2006          | 31                                   | -31 | 150  | -259   | -  | (\$147)        |
| 9/16/2006         | 3                                    | -3  | 99   | -301   | -  | (\$162)        |
| 9/23/2006         | 17                                   | -17 | 210  | -334   | -  | (\$175)        |

| Week<br>Beginning | Market Clearing<br>(Average MW/hour) |     | Net CAISO Imbalance<br>Energy (Average<br>MW/hour) |      | Average Daily Net Costs<br>(Thousands per Day) |                |
|-------------------|--------------------------------------|-----|--|------|--|----------------|
|                   | Inc                                  | Dec | Inc  | Dec  | Market<br>Clearing                             | Net ISO Energy |
| 9/30/2006         | 6                                    | -6  | 255  | -278 | -  | (\$44)         |
| 10/7/2006         | 6                                    | -6  | 162  | -308 | -  | (\$152)        |
| 10/14/2006        | 3                                    | -3  | 128  | -256 | -  | (\$131)        |
| 10/21/2006        | 14                                   | -14 | 138  | -278 | -  | (\$206)        |
| 10/28/2006        | 18                                   | -18 | 202  | -249 | -  | (\$8)          |
| 11/4/2006         | 80                                   | -80 | 290  | -168 | -  | \$148          |
| 11/11/2006        | 22                                   | -22 | 241  | -230 | -  | \$23           |
| 11/18/2006        | 29                                   | -29 | 162  | -389 | -  | (\$157)        |
| 11/25/2006        | 49                                   | -49 | 187  | -431 | -  | (\$252)        |
| 12/2/2006         | 27                                   | -27 | 235  | -277 | -  | (\$12)         |
| 12/9/2006         | 49                                   | -49 | 250  | -300 | -  | (\$37)         |
| 12/16/2006        | 27                                   | -27 | 217  | -353 | -  | (\$191)        |
| 12/23/2006        | 23                                   | -23 | 200  | -394 | -  | (\$190)        |
| 12/30/2006        | 26                                   | -26 | 181  | -342 | -  | (\$198)        |
| 1/6/2007          | 26                                   | -26 | 215  | -302 | -  | (\$155)        |
| 1/13/2007         | 8                                    | -8  | 211  | -300 | -  | (\$193)        |
| 1/20/2007         | 13                                   | -13 | 170  | -423 | -  | (\$323)        |
| 1/27/2007         | 7                                    | -7  | 96   | -387 | -  | (\$353)        |
| 2/3/2007          | 53                                   | -53 | 166  | -305 | -  | (\$244)        |
| 2/10/2007         | 8                                    | -8  | 95   | -343 | -  | (\$271)        |
| 2/17/2007         | 11                                   | -11 | 122  | -348 | -  | (\$258)        |
| 2/24/2007         | 7                                    | -7  | 144  | -422 | -  | (\$368)        |
| 3/3/2007          | 16                                   | -16 | 144  | -423 | -  | (\$306)        |
| 3/10/2007         | 75                                   | -75 | 221  | -372 | -  | (\$96)         |
| 3/17/2007         | 75                                   | -75 | 278  | -498 | -  | (\$224)        |
| 3/24/2007         | 45                                   | -45 | 100  | -601 | -  | (\$183)        |
| 3/31/2007         | 17                                   | -17 | 81   | -478 | -  | (\$274)        |
| 4/7/2007          | 10                                   | -10 | 128  | -456 | -  | (\$193)        |
| 4/14/2007         | 16                                   | -16 | 214  | -263 | -  | (\$78)         |
| 4/21/2007         | 25                                   | -25 | 109  | -288 | -  | (\$183)        |
| 4/28/2007         | 93                                   | -93 | 158  | -314 | -  | (\$86)         |
| 5/5/2007          | 35                                   | -35 | 86   | -294 | -  | (\$217)        |
| 5/12/2007         | 46                                   | -46 | 183  | -235 | -  | (\$124)        |
| 5/19/2007         | 28                                   | -28 | 173  | -287 | -  | (\$186)        |
| 5/26/2007         | 19                                   | -19 | 204  | -290 | -  | (\$158)        |
| 6/2/2007          | 27                                   | -27 | 174  | -372 | -  | (\$158)        |
| 6/9/2007          | 35                                   | -35 | 179  | -334 | -  | (\$175)        |
| 6/16/2007         | 27                                   | -27 | 203  | -314 | -  | (\$107)        |
| 6/23/2007         | 27                                   | -27 | 146  | -305 | -  | (\$210)        |
| 6/30/2007         | 35                                   | -35 | 368  | -289 | -  | \$330          |
| 7/7/2007          | 80                                   | -80 | 277  | -365 | -  | (\$79)         |
| 7/14/2007         | 21                                   | -21 | 119  | -374 | -  | (\$382)        |
| 7/21/2007         | 45                                   | -45 | 155  | -319 | -  | (\$106)        |
| 7/28/2007         | 19                                   | -19 | 129  | -381 | -  | (\$217)        |
| 8/4/2007          | 18                                   | -18 | 106  | -304 | -  | (\$153)        |
| 8/11/2007         | 37                                   | -37 | 166  | -207 | -  | (\$147)        |
| 8/18/2007         | 34                                   | -34 | 170  | -181 | -  | (\$57)         |
| 8/25/2007         | 34                                   | -34 | 255  | -251 | -  | \$82           |
| 9/1/2007          | 19                                   | -19 | 119  | -321 | -  | (\$263)        |
| 9/8/2007          | 20                                   | -20 | 86   | -266 | -  | (\$203)        |
| 9/15/2007         | 9                                    | -9  | 112  | -368 | -  | (\$243)        |
| 9/22/2007         | 27                                   | -27 | 177  | -272 | -  | (\$120)        |

| Week<br>Beginning | Market Clearing<br>(Average MW/hour) |      | Net CAISO Imbalance<br>Energy (Average<br>MW/hour) |      | Average Daily Net Costs<br>(Thousands per Day) |                |
|-------------------|--------------------------------------|------|--|------|--|----------------|
|                   | Inc                                  | Dec  | Inc  | Dec  | Market<br>Clearing                             | Net ISO Energy |
| 9/29/2007         | 14                                   | -14  | 168  | -273 | -  | (\$80)         |
| 10/6/2007         | 21                                   | -21  | 157  | -252 | -  | (\$113)        |
| 10/13/2007        | 23                                   | -23  | 150  | -537 | -  | (\$475)        |
| 10/20/2007        | 43                                   | -43  | 101  | -520 | -  | (\$382)        |
| 10/27/2007        | 41                                   | -41  | 169  | -460 | -  | (\$238)        |
| 11/3/2007         | 25                                   | -25  | 188  | -236 | -  | (\$63)         |
| 11/10/2007        | 256                                  | -256 | 527  | -218 | -  | \$438          |
| 11/17/2007        | 13                                   | -13  | 224  | -364 | -  | (\$297)        |
| 11/24/2007        | 26                                   | -26  | 348  | -248 | -  | \$112          |
| 12/1/2007         | 162                                  | -162 | 234  | -271 | -  | \$218          |
| 12/8/2007         | 11                                   | -11  | 406  | -253 | -  | \$282          |
| 12/15/2007        | 56                                   | -56  | 359  | -214 | -  | \$166          |
| 12/22/2007        | 37                                   | -37  | 240  | -252 | -  | (\$59)         |
| 12/29/2007        | 33                                   | -33  | 183  | -327 | -  | (\$205)        |

**Figure 2. Average Hourly Volume of Bids Pre-Dispatched by the CAISO  
And Average Daily Costs to CAISO of Market Clearing  
(By Day)**



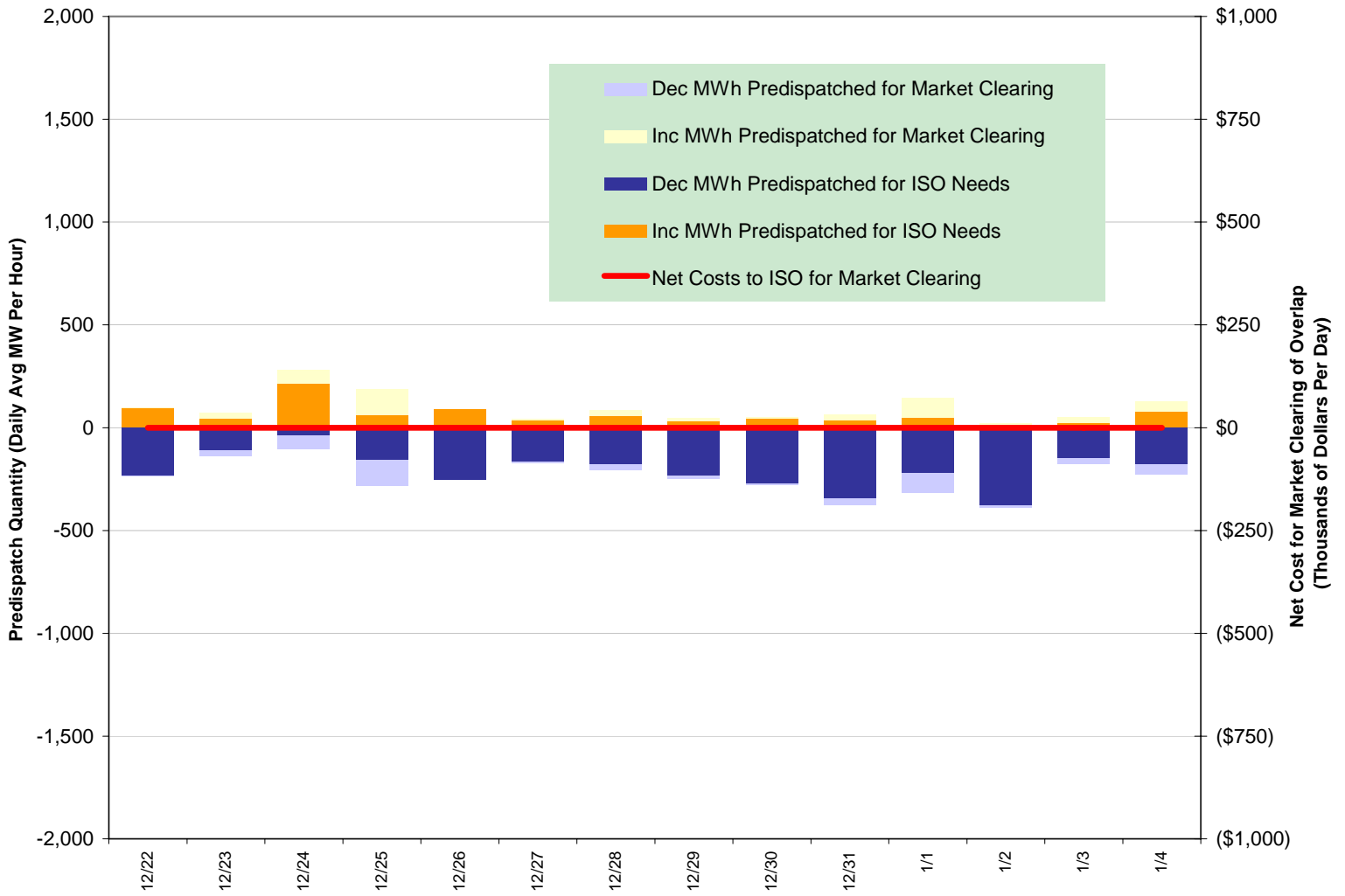
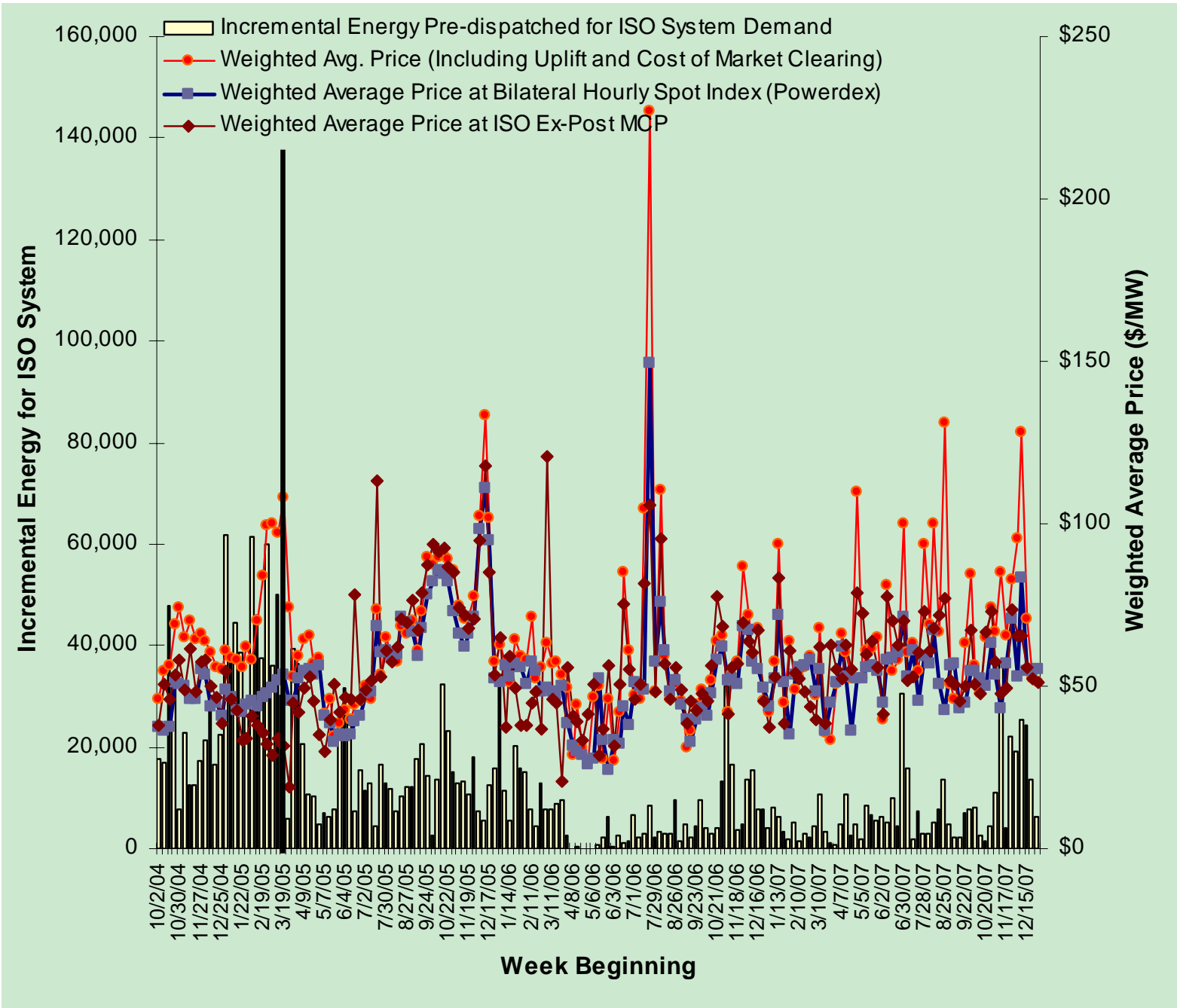


Figure 3 summarizes the total cost of net incremental energy purchased by the CAISO for CAISO system needs (i.e. net energy pre-dispatched when the sum of all pre-dispatched bids was positive, indicating the CAISO was a net purchaser of imbalance energy in the pre-dispatch process). The average price paid for pre-dispatched incremental energy was about \$51/MWh between December 29 and January 4. The weighted average price of incremental energy pre-dispatched by the CAISO calculated at the ex post price in the CAISO's real time market was about \$51/MWh during this period. The weighted average price reported for hourly spot market transactions in bilateral markets (Powerdex) during hours when the CAISO was a net importer of pre-dispatched energy was \$55/MWh.

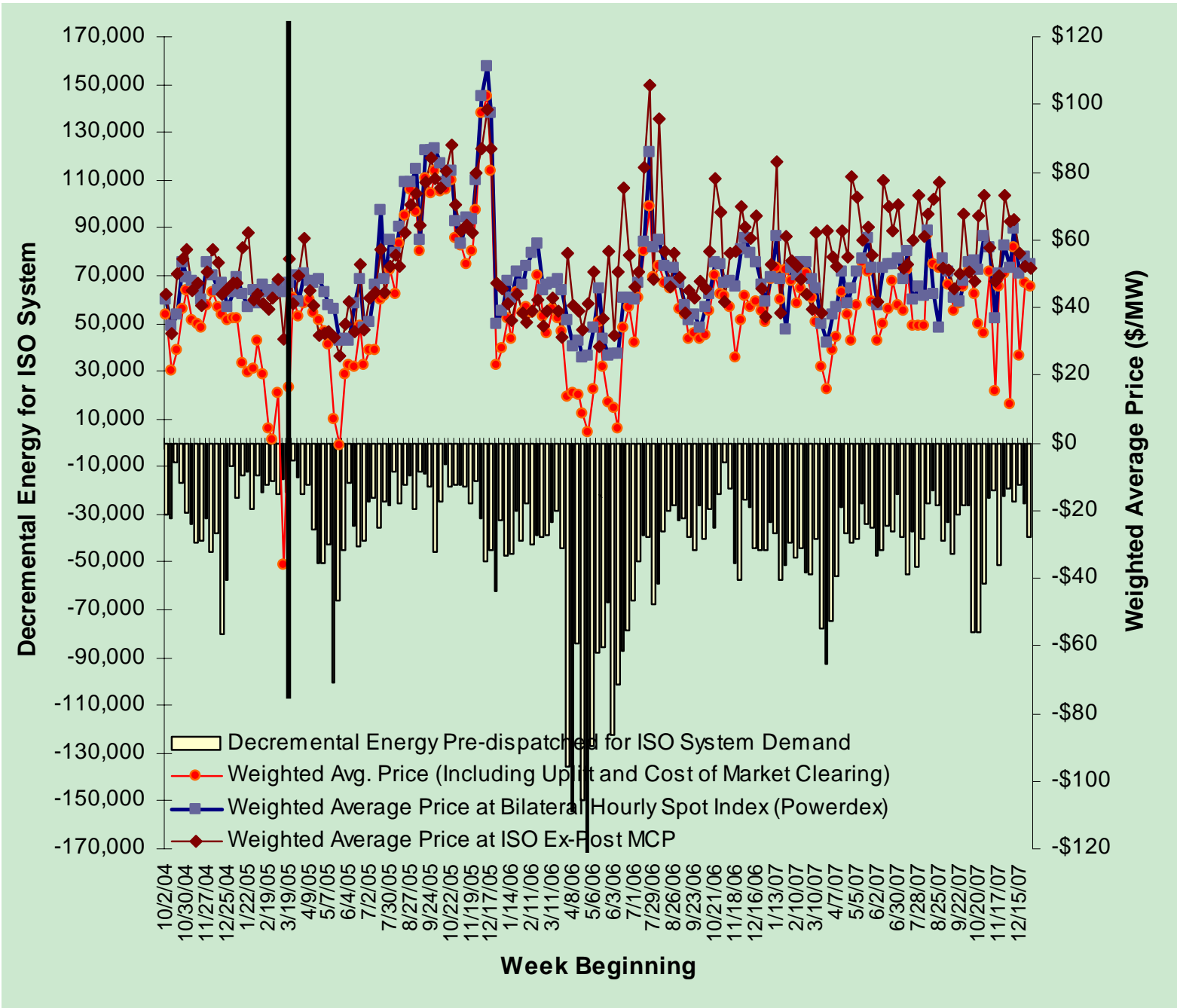
Figure 4 summarizes the total cost of net decremental energy sold by the CAISO for system needs (i.e. net energy pre-dispatched when the sum of all pre-dispatched bids was negative, indicating the CAISO was a net seller of imbalance energy in the pre-dispatch process).

Energy prices received by the CAISO for net decremental energy pre-dispatched averaged about \$46/MWh between December 29 and January 4. The weighted 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 \$51/MWh. The weighted average price reported for hourly spot market transactions in bilateral markets (Powerdex) during hours when the CAISO was a net exporter of pre-dispatched energy was \$53/MWh.

**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 CAISO System Demand**



## ***Inter-tie Bid Sufficiency and Liquidity***

Figure 5 shows the daily total volumes of incremental and decremental inter-tie bids since October, 2004, including the period between December 29 and January 4, categorized by bid price levels. Figure 6 shows these same bid data, but highlights the average hourly volume of net incremental bids submitted during weekdays on a weekly basis.

As shown in Figures 5 and 6, the volume of inter-tie bids received by the CAISO dropped slightly immediately after implementation of Amendment 66, but subsequently increased to a level almost equal to the volume of bids received during the week prior to implementation of Amendment 66 by the first week in May, 2005. Bid volumes, in both the import and export directions, have increased on average in the first half of 2006 compared with both 2004 and 2005.

As noted in previous reports, the CAISO has not experienced problems in terms of bid insufficiency or liquidity of incremental energy import bids since the switch to an "as-bid" market under Amendment 66. This report includes some additional analysis of overall trends in imports and import/export bid sufficiency.

Figures 7 and 8 provide a summary of the total supply of imports on a weekly basis, including average hourly imports scheduled by participants (Final Hour Ahead Schedules), plus incremental energy bids and pre-dispatched by the CAISO.<sup>4</sup> As shown in Figure 7, while the total volume of incremental energy import bids may have decreased since Amendment 66, the total overall supply of imports scheduled or bid into the ISO system has increased significantly over this time due to a significant increase in imports scheduled directly by participants. In addition, as shown in both Figures 7 and 8, the volume of incremental energy import bids has also remained extremely high relative to the quantity of import bids actually pre-dispatched by the CAISO.

Figure 9 provides a similar summary of the total supply of decremental energy bids on inter-ties (exports) since October 2004. Again, these data show that the volume of decremental energy bids on interties has also remained very high relative to the quantity of dec bids actually pre-dispatched by the ISO.

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<sup>4</sup> Analysis of import supplies is based on peak Hours Ending 13-20, while analysis of export (dec) bids and pre-dispatches is based on off-peak Hours Ending 1-8, following the time periods suggested by Powerex in a recent filing as the most appropriate hours for such analysis (*Protest of Powerex Corp*, filed on June 8, 2005 in protest of the ISO's Comprehensive Market Redesign Proposal, May 13, 2005, ER02-1656-026, pp 12-13).

Figure 5. Inter-tie Bid Quantities and Prices

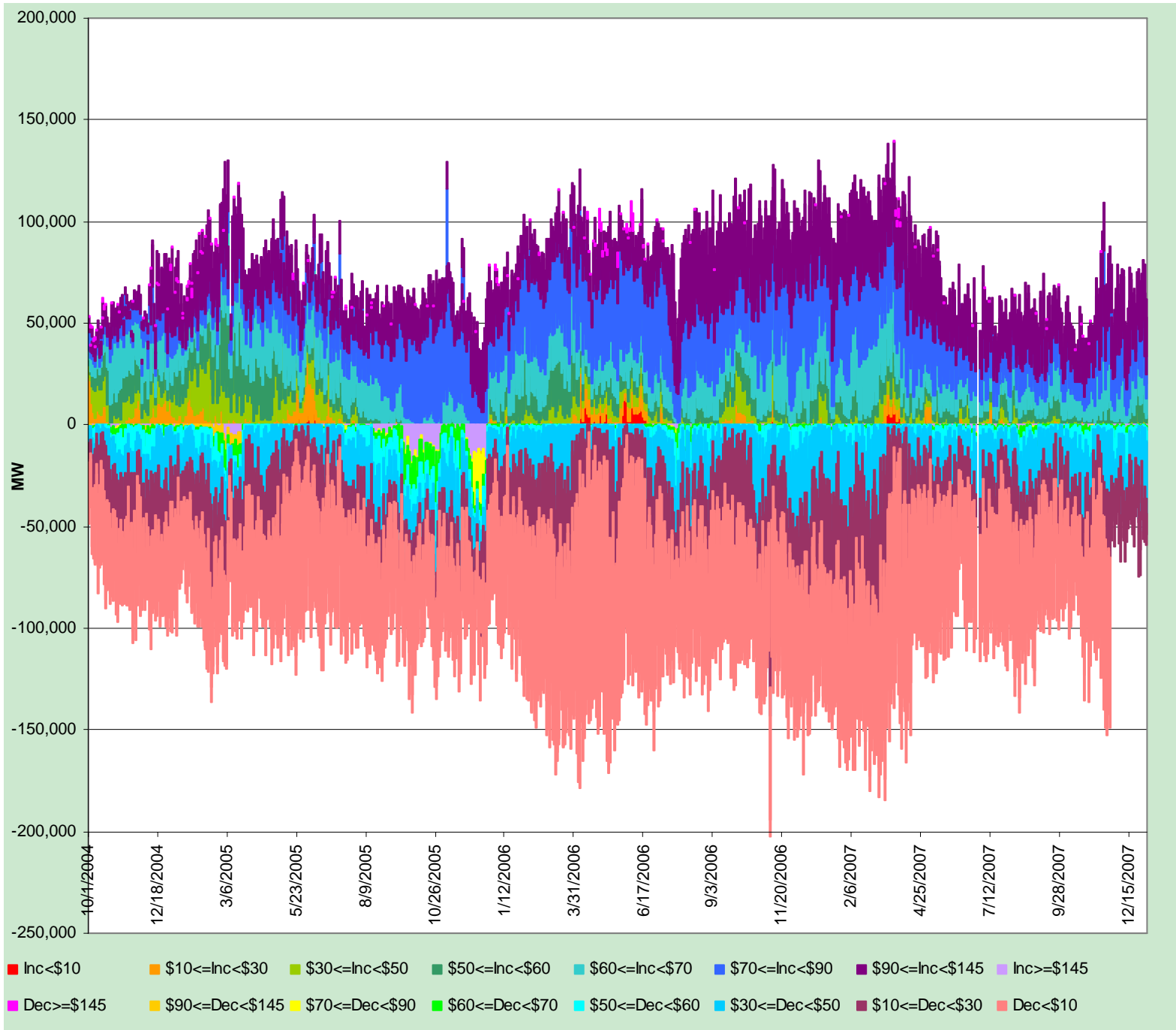
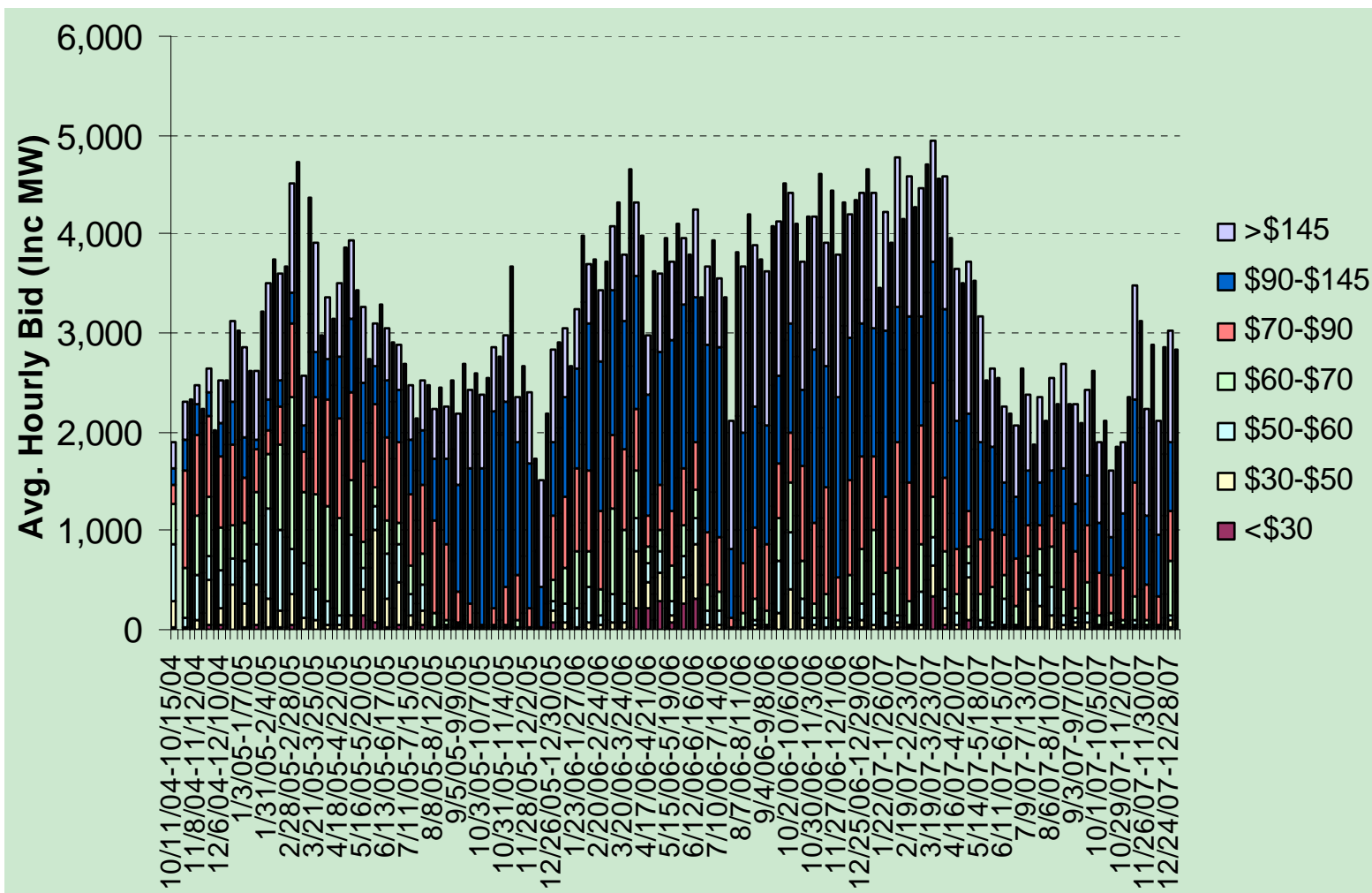
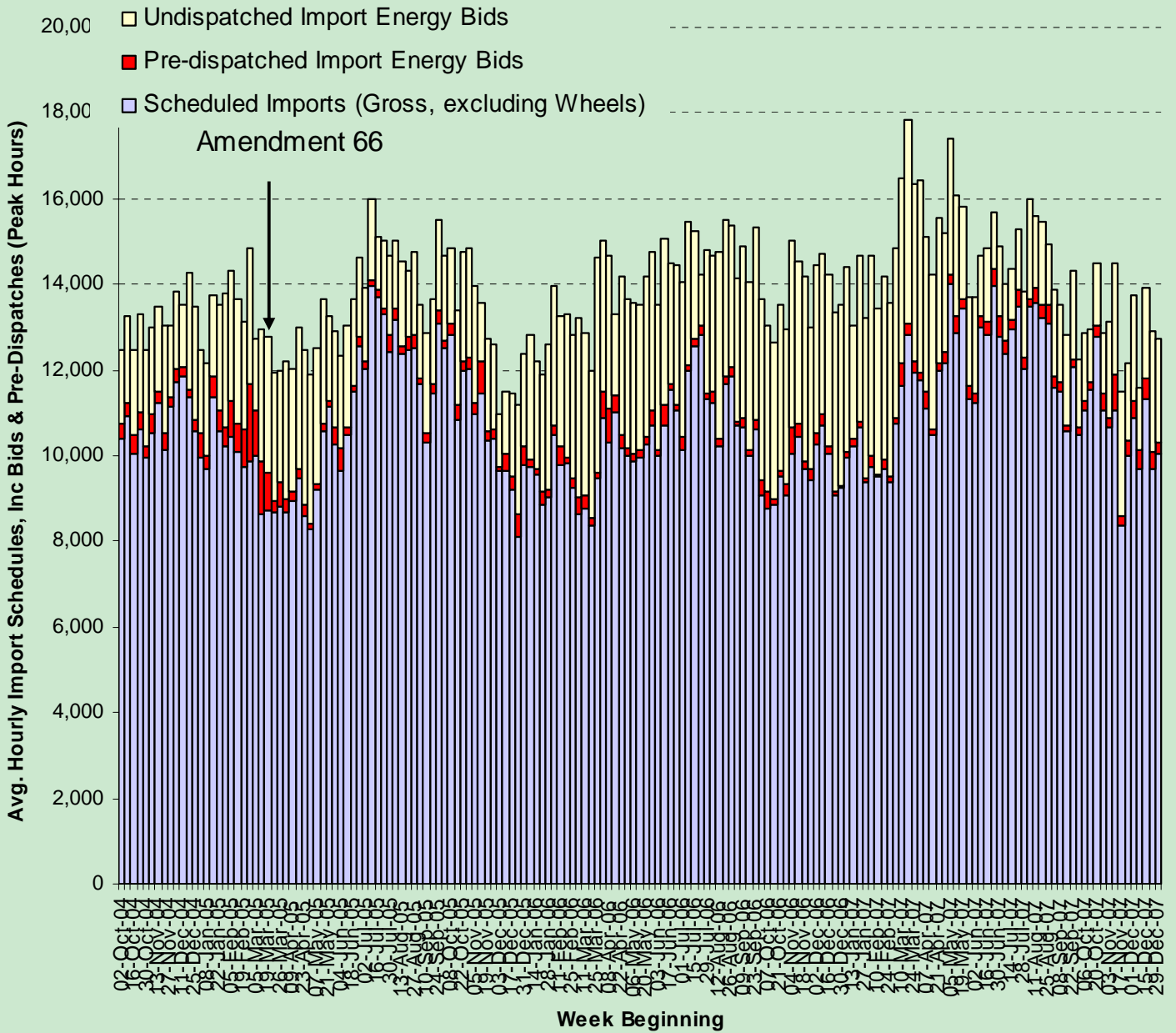


Figure 6. Inter-Tie Bid Quantities and Prices for Incremental Energy  
 Hourly Averages (Weekdays Only)



**Figure 7. Gross Scheduled Imports, Real Time Energy Import Bid Volumes, and Pre-Dispatched Imports  
Hourly Averages (Peak Hours 13-20)**





**Figure 8. Net Scheduled Imports, Real Time Energy Import Bid Volumes, and Pre-Dispatched Imports**

**Hourly Averages (Peak Hours 13-20)**

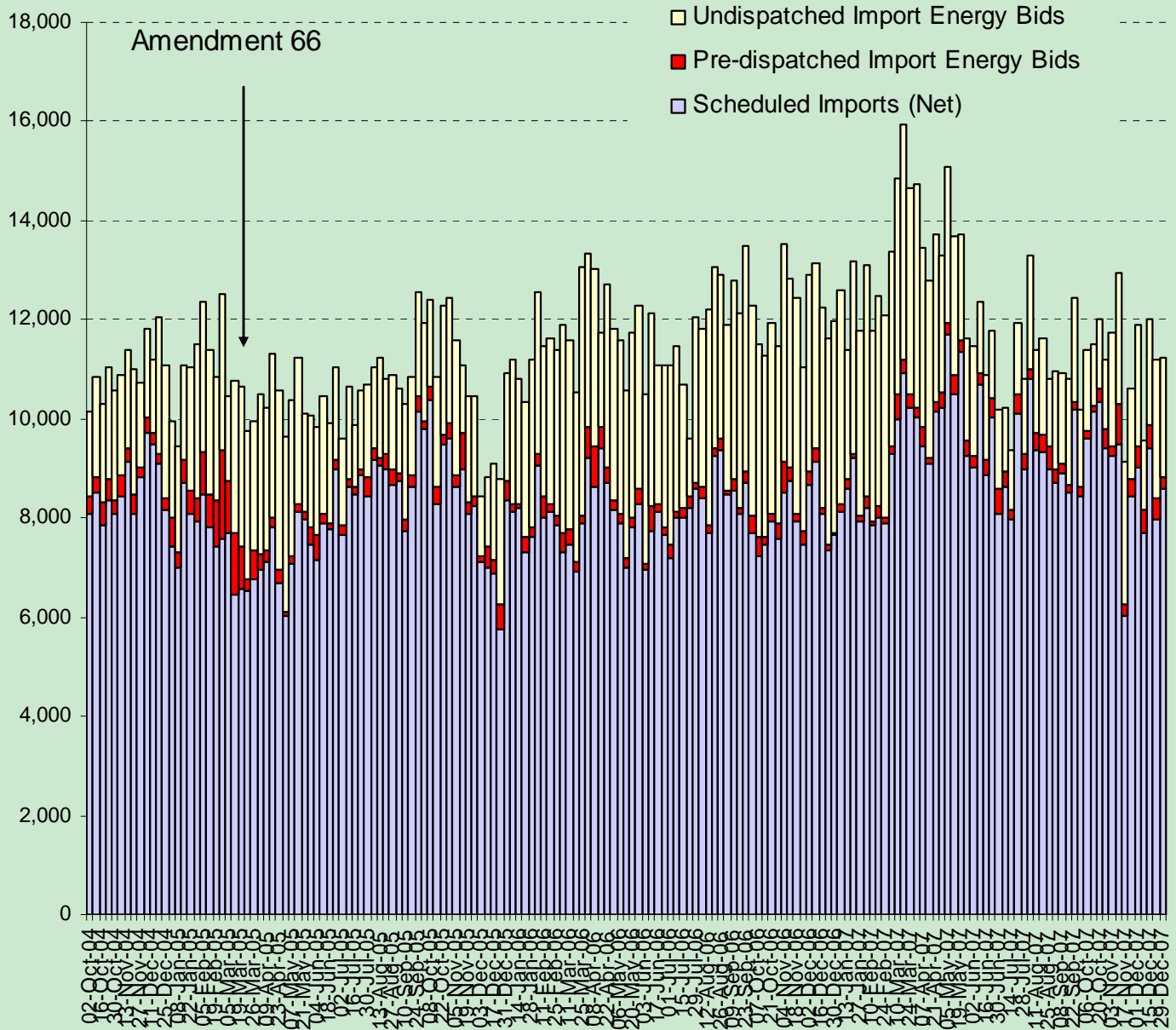
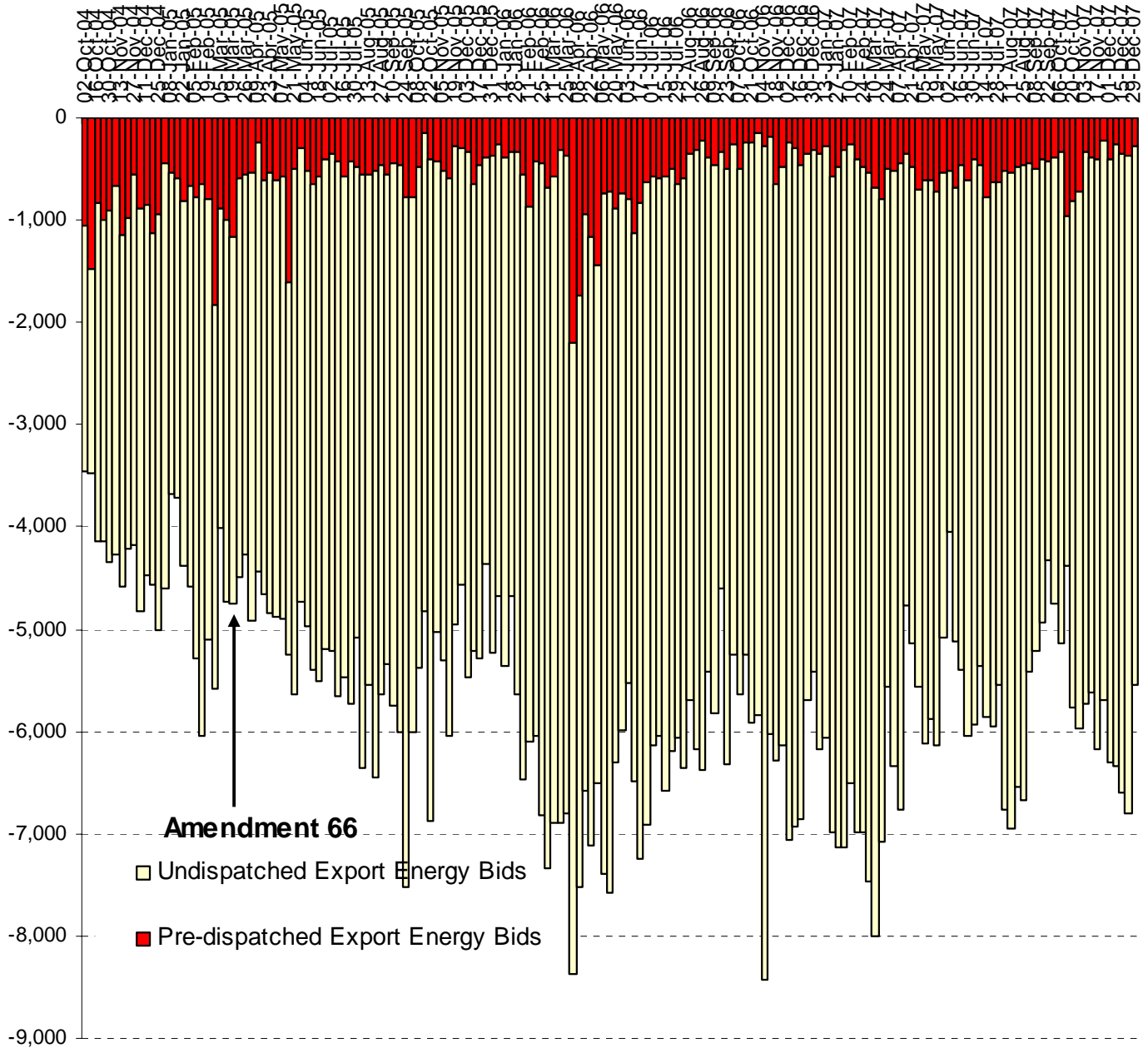


Figure 9. Real Time Energy Export (Dec) Bid Volumes  
And Pre-Dispatched Exports  
Hourly Averages (Off-Peak Hours 1-8)



Tables 2 and 3 and Figures 10 and 11 provide additional analysis requested by Powerex that the Commission directed the ISO to include in weekly reports in its September 13, 2005 Order on Amendment 66.

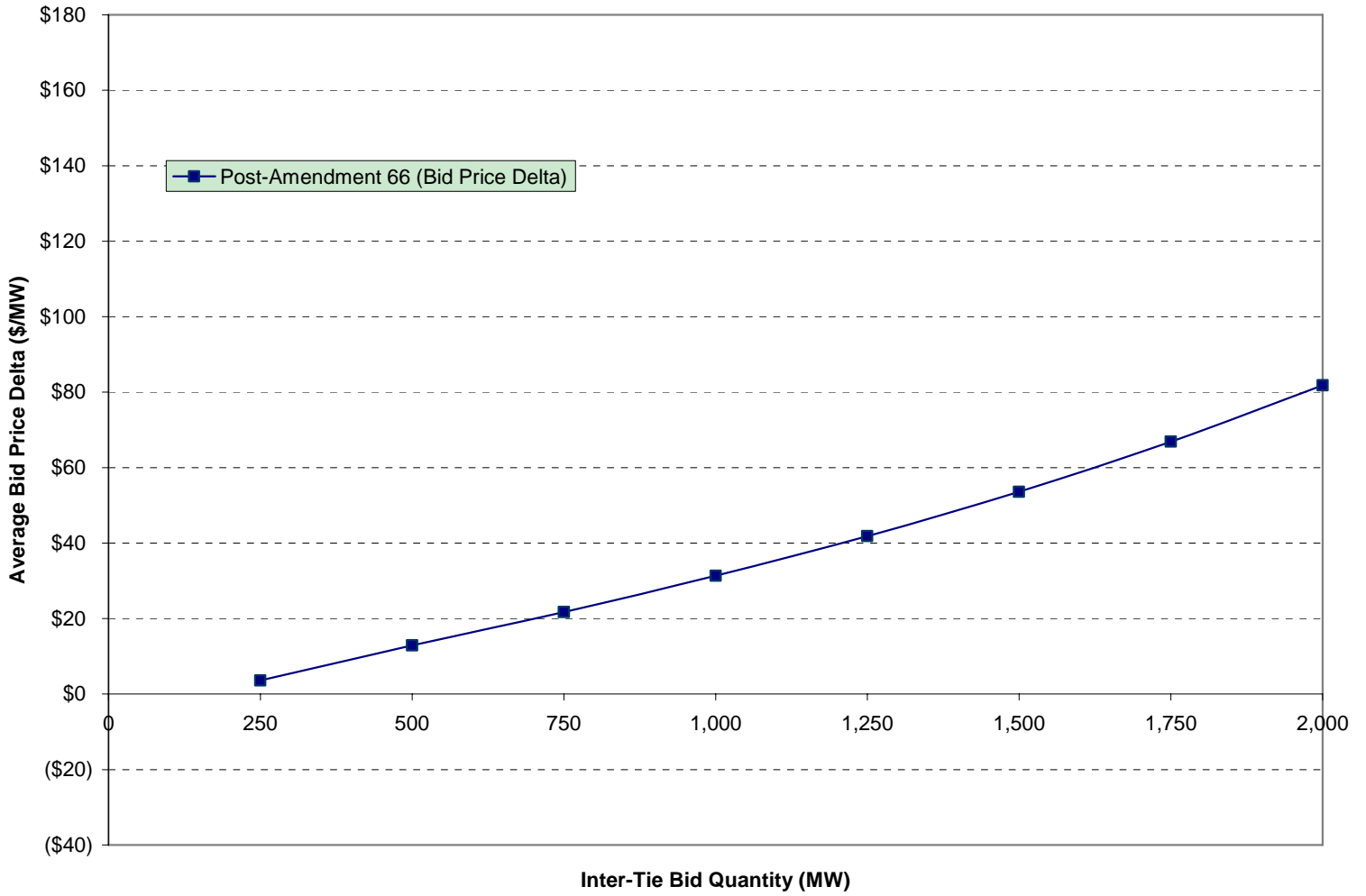
**Table 2. Costs for Net Pre-Dispatched Energy (DMM Approach)**

| Month                        | <u>Incremental Energy</u> |                 |                | <u>Decremental Energy</u> |                 |                  |
|------------------------------|---------------------------|-----------------|----------------|---------------------------|-----------------|------------------|
|                              | Avg. Pre-Dispatch Cost    | Bilateral Index | Difference     | Avg. Pre-Dispatch Cost    | Bilateral Index | Difference       |
| October '04                  | \$57.74                   | \$45.22         | \$12.53        | \$31.93                   | \$42.68         | (\$10.75)        |
| November '04                 | \$66.85                   | \$53.44         | \$13.41        | \$37.34                   | \$46.05         | (\$8.71)         |
| December '04                 | \$59.59                   | \$50.39         | \$9.19         | \$39.22                   | \$48.29         | (\$9.08)         |
| January '05                  | \$59.29                   | \$47.85         | \$11.45        | \$26.05                   | \$47.14         | (\$21.09)        |
| February '05                 | \$69.32                   | \$48.13         | \$21.19        | \$18.89                   | \$42.40         | (\$23.51)        |
| March '05                    | \$103.83                  | \$51.13         | \$52.70        | \$0.64                    | \$45.23         | (\$44.59)        |
| <b>Total (Bid or Better)</b> | <b>\$70.20</b>            | <b>\$48.87</b>  | <b>\$21.34</b> | <b>\$30.69</b>            | <b>\$45.96</b>  | <b>(\$15.27)</b> |
| April '05                    | \$60.36                   | \$52.43         | \$7.94         | \$38.01                   | \$48.44         | (\$10.44)        |
| May '05                      | \$42.06                   | \$36.48         | \$5.58         | \$14.27                   | \$29.43         | (\$15.16)        |
| June '05                     | \$42.63                   | \$37.11         | \$5.52         | \$27.63                   | \$39.08         | (\$11.45)        |
| July '05                     | \$55.22                   | \$54.49         | \$0.72         | \$38.22                   | \$50.78         | (\$12.56)        |
| August '05                   | \$62.37                   | \$65.31         | (\$2.94)       | \$59.60                   | \$69.07         | (\$9.47)         |
| September '05                | \$72.69                   | \$70.31         | \$2.38         | \$65.12                   | \$80.40         | (\$15.28)        |
| October '05                  | \$90.90                   | \$86.49         | \$4.42         | \$75.64                   | \$84.61         | (\$8.97)         |
| November '05                 | \$79.63                   | \$71.31         | \$8.33         | \$54.60                   | \$67.29         | (\$12.68)        |
| December '05                 | \$83.95                   | \$81.35         | \$2.60         | \$69.64                   | \$83.75         | (\$14.11)        |
| January '06                  | \$64.30                   | \$55.99         | \$8.31         | \$33.78                   | \$44.13         | (\$10.35)        |
| February '06                 | \$61.87                   | \$56.03         | \$5.83         | \$40.70                   | \$53.29         | (\$12.59)        |
| March '06                    | \$57.70                   | \$51.55         | \$6.15         | \$34.64                   | \$47.46         | (\$12.82)        |
| April '06                    | \$60.48                   | \$41.33         | \$19.15        | \$11.60                   | \$25.24         | (\$13.64)        |
| May '06                      | \$58.52                   | \$33.53         | \$24.99        | \$14.86                   | \$26.91         | (\$12.05)        |
| June '06                     | \$52.63                   | \$43.03         | \$9.60         | \$14.88                   | \$26.60         | (\$11.73)        |
| July '06                     | \$121.93                  | \$96.05         | \$25.87        | \$42.34                   | \$55.01         | (\$12.67)        |
| August '06                   | \$112.71                  | \$72.45         | \$40.26        | \$52.83                   | \$58.56         | (\$5.73)         |
| September '06                | \$43.95                   | \$39.82         | \$4.12         | \$34.27                   | \$42.00         | (\$7.73)         |
| October '06                  | \$56.10                   | \$48.85         | \$7.24         | \$39.06                   | \$45.69         | (\$6.63)         |
| November '06                 | \$53.60                   | \$57.53         | (\$3.93)       | \$29.87                   | \$46.95         | (\$17.08)        |
| December '06                 | \$71.26                   | \$59.95         | \$11.31        | \$40.92                   | \$52.39         | (\$11.47)        |
| January '07                  | \$67.32                   | \$58.07         | \$9.25         | \$45.09                   | \$50.23         | (\$5.14)         |
| February '07                 | \$57.98                   | \$57.61         | \$0.37         | \$46.45                   | \$52.87         | (\$6.42)         |
| March '07                    | \$74.38                   | \$54.87         | \$19.52        | \$25.82                   | \$37.20         | (\$11.38)        |
| April '07                    | \$61.81                   | \$56.10         | \$5.71         | \$28.89                   | \$40.25         | (\$11.36)        |
| May '07                      | \$93.75                   | \$61.91         | \$31.84        | \$43.12                   | \$52.37         | (\$9.25)         |
| June '07                     | \$51.80                   | \$57.40         | (\$5.60)       | \$34.28                   | \$46.49         | (\$12.21)        |
| July '07                     | \$84.87                   | \$66.09         | \$18.78        | \$34.99                   | \$48.51         | (\$13.51)        |
| August '07                   | \$117.82                  | \$57.47         | \$60.35        | \$46.82                   | \$47.48         | (\$0.66)         |
| September '07                | \$53.77                   | \$51.59         | \$2.18         | \$42.71                   | \$47.70         | (\$4.99)         |
| October '07                  | \$86.06                   | \$57.59         | \$28.48        | \$38.11                   | \$57.44         | (\$19.32)        |
| November '07                 | \$103.24                  | \$66.38         | \$36.86        | \$32.65                   | \$51.30         | (\$18.65)        |
| December '07                 | \$110.19                  | \$72.13         | \$38.06        | \$30.18                   | \$56.25         | (\$26.07)        |
| <b>Total (As-Bid)</b>        | <b>\$71.55</b>            | <b>\$60.01</b>  | <b>\$11.54</b> | <b>\$32.96</b>            | <b>\$44.63</b>  | <b>(\$11.67)</b> |

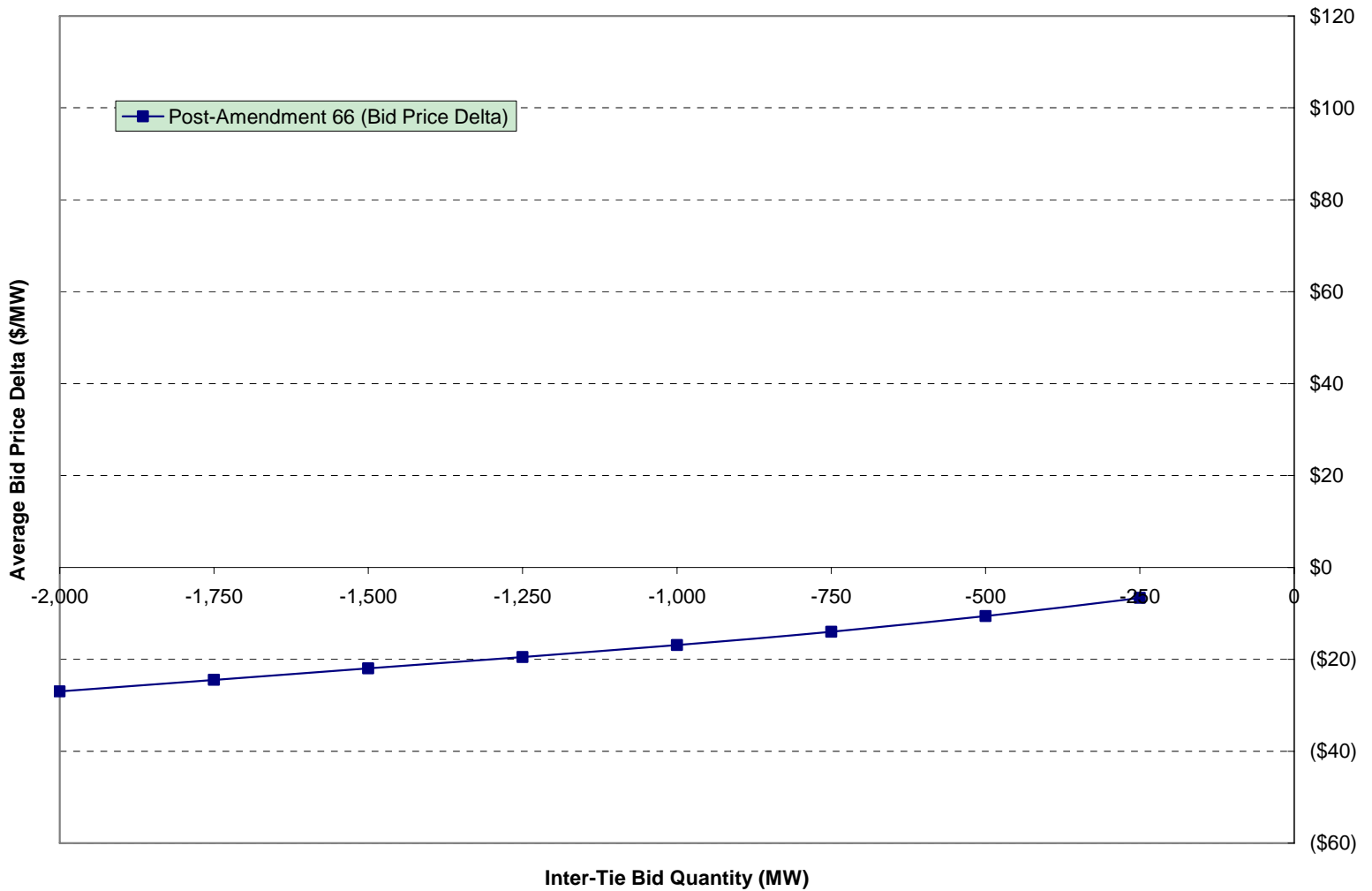
**Table 3. Costs for Gross Pre-Dispatched Energy (Powerex Approach)**

| Month                        | Incremental Energy     |                 |               | Decremental Energy     |                 |                  |
|------------------------------|------------------------|-----------------|---------------|------------------------|-----------------|------------------|
|                              | Avg. Pre-Dispatch Cost | Bilateral Index | Difference    | Avg. Pre-Dispatch Cost | Bilateral Index | Difference       |
| October '04                  | \$54.47                | \$45.79         | \$8.69        | \$37.89                | \$44.25         | (\$6.36)         |
| November '04                 | \$54.20                | \$49.79         | \$4.41        | \$41.21                | \$46.72         | (\$5.51)         |
| December '04                 | \$52.86                | \$49.51         | \$3.35        | \$41.59                | \$48.42         | (\$6.83)         |
| January '05                  | \$54.53                | \$47.43         | \$7.09        | \$38.44                | \$46.90         | (\$8.46)         |
| February '05                 | \$53.94                | \$46.95         | \$6.99        | \$37.21                | \$45.25         | (\$8.04)         |
| March '05                    | \$61.08                | \$50.68         | \$10.40       | \$36.40                | \$49.67         | (\$13.27)        |
| <b>Total (Bid or Better)</b> | <b>\$55.99</b>         | <b>\$48.52</b>  | <b>\$7.47</b> | <b>\$38.71</b>         | <b>\$47.29</b>  | <b>(\$8.58)</b>  |
| April '05                    | \$58.41                | \$52.12         | \$6.29        | \$38.92                | \$48.64         | (\$9.71)         |
| May '05                      | \$43.79                | \$37.99         | \$5.80        | \$15.88                | \$29.99         | (\$14.11)        |
| June '05                     | \$42.80                | \$38.05         | \$4.75        | \$29.20                | \$39.60         | (\$10.40)        |
| July '05                     | \$53.30                | \$54.74         | (\$1.44)      | \$39.44                | \$51.39         | (\$11.96)        |
| August '05                   | \$62.36                | \$66.38         | (\$4.02)      | \$60.03                | \$69.07         | (\$9.03)         |
| September '05                | \$72.02                | \$70.78         | \$1.24        | \$66.05                | \$78.78         | (\$12.73)        |
| October '05                  | \$88.96                | \$85.95         | \$3.01        | \$76.07                | \$84.43         | (\$8.36)         |
| November '05                 | \$72.84                | \$70.69         | \$2.15        | \$54.88                | \$67.63         | (\$12.75)        |
| December '05                 | \$79.43                | \$81.82         | (\$2.39)      | \$69.76                | \$83.63         | (\$13.87)        |
| January '06                  | \$60.29                | \$55.25         | \$5.04        | \$34.63                | \$44.83         | (\$10.20)        |
| February '06                 | \$56.97                | \$56.48         | \$0.50        | \$40.80                | \$53.62         | (\$12.81)        |
| March '06                    | \$54.46                | \$50.65         | \$3.80        | \$35.31                | \$47.47         | (\$12.16)        |
| April '06                    | \$38.68                | \$38.72         | (\$0.04)      | \$12.66                | \$25.90         | (\$13.24)        |
| May '06                      | \$40.48                | \$31.56         | \$8.92        | \$15.66                | \$27.10         | (\$11.44)        |
| June '06                     | \$47.28                | \$42.44         | \$4.84        | \$16.01                | \$27.24         | (\$11.23)        |
| July '06                     | \$103.45               | \$85.46         | \$18.00       | \$45.71                | \$56.55         | (\$10.84)        |
| August '06                   | \$96.68                | \$69.29         | \$27.38       | \$52.78                | \$58.58         | (\$5.79)         |
| September '06                | \$41.09                | \$41.45         | (\$0.36)      | \$34.49                | \$42.10         | (\$7.61)         |
| October '06                  | \$54.56                | \$49.56         | \$5.01        | \$39.43                | \$45.95         | (\$6.52)         |
| November '06                 | \$53.56                | \$56.86         | (\$3.30)      | \$34.04                | \$48.43         | (\$14.39)        |
| December '06                 | \$62.01                | \$59.11         | \$2.90        | \$40.79                | \$52.93         | (\$12.14)        |
| January '07                  | \$60.78                | \$55.97         | \$4.80        | \$45.26                | \$50.32         | (\$5.07)         |
| February '07                 | \$52.10                | \$55.53         | (\$3.43)      | \$46.47                | \$52.92         | (\$6.45)         |
| March '07                    | \$50.07                | \$47.47         | \$2.60        | \$26.90                | \$37.84         | (\$10.94)        |
| April '07                    | \$67.98                | \$56.81         | \$11.18       | \$32.36                | \$41.56         | (\$9.20)         |
| May '07                      | \$72.83                | \$58.29         | \$14.54       | \$44.97                | \$52.82         | (\$7.85)         |
| June '07                     | \$58.09                | \$58.22         | (\$0.12)      | \$37.49                | \$47.74         | (\$10.25)        |
| July '07                     | \$78.44                | \$62.87         | \$15.57       | \$39.59                | \$49.75         | (\$10.16)        |
| August '07                   | \$96.47                | \$55.50         | \$40.97       | \$48.97                | \$48.17         | \$0.81           |
| September '07                | \$53.46                | \$52.61         | \$0.85        | \$43.41                | \$48.14         | (\$4.74)         |
| October '07                  | \$66.80                | \$57.88         | \$8.92        | \$39.12                | \$57.49         | (\$18.38)        |
| November '07                 | \$81.23                | \$60.88         | \$20.35       | \$37.28                | \$51.72         | (\$14.44)        |
| December '07                 | \$88.02                | \$66.49         | \$21.52       | \$33.81                | \$55.90         | (\$22.09)        |
| <b>Total (As-Bid)</b>        | <b>\$65.19</b>         | <b>\$58.32</b>  | <b>\$6.87</b> | <b>\$34.66</b>         | <b>\$45.55</b>  | <b>(\$10.89)</b> |

**Figure 10. Average Bid Price Deltas for Incremental Energy  
(December 2007)**



**Figure 11. Average Bid Price Deltas for Decremental Energy  
(December 2007)**



## **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 above-captioned 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 18th day of January, 2008 at Folsom, California.

**/s/ Melissa Hicks**  
Melissa Hicks