December 1, 2006

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

Re: California Independent System Operator Corporation, ER02-1656

Dear Secretary Salas:

The California Independent System Operator Corporation ("CAISO") hereby respectfully submits for filing an original and fourteen copies of a report on the performance of the Automated Mitigation Procedures ("AMP") covering the second and third quarters of 2006. This report is being submitted in accordance with the directive in the Federal Energy Regulatory Commission's ("Commission") July 17, 2002 Order, *California Independent System Operator Corporation,* 100 FERC ¶ 61, 060 (2002) (the "Order"). Please return one file-stamped copy of the report to the CAISO in the enclosed, self-addressed return envelope. The report will also be posted on the CAISO's website at http://www.caiso.com.

The Order pursuant to which the AMP reports have been submitted does not contain an end date for the CAISO's reporting obligation. Timely communication of market activity and analysis from the CAISO Market Monitoring Staff to the Commission's OMOI Staff has increased considerably since the original order. This increased communication has been in the form of monthly conference calls, weekly emails, individual phone calls, and the more timely submission of market data to OMOI Staff as a result of CAISO Tariff Amendment No. 71. The increased communication between the CAISO Staff and the Commission Staff has resulted in more timely and thorough reporting of market events. Given the improved communication between the CAISO Staff and the Commission Staff and the extremely infrequent occurrence of AMP mitigation, the CAISO respectfully requests that the Commission reconsider the requirement for the CAISO to submit quarterly AMP reports and either (1) notify the CAISO that it is no longer obligated to provide these reports to the Commission or (2) provide an expiration date for the reporting requirement.

Thank you for your assistance in this matter.

Respectfully submitted,

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Report on Performance of the Automated Mitigation Procedure
Covering 2006 Q2-Q3
California ISO – December 1, 2006

As directed by the Federal Energy Regulatory Commission ("Commission") in its July 17, 2002 Order,[1] the ISO has prepared this Report on the Performance of the Automated Mitigation Procedure (AMP), covering the second and third quarter of 2006. AMP, proposed by the ISO in its May 1, 2002 Market Redesign 2002 filing, was approved by the Commission with modifications in the July 17 Order. This report provides an accounting of AMP activity for the subject period.

Description of AMP

AMP is an automated procedure designed as part of the ISO's real-time market dispatch software. It was intended to limit the ability of suppliers of energy in the real-time market to exercise market power by offering energy at prices well in excess of production costs. In short, AMP is a three-step algorithm that runs approximately 53 minutes prior to each hour of operation of the real-time market:

1. **Price Screen:** AMP predicts prices for each 15-minute interval of the operating hour based upon submitted bids and predicted imbalance.[2] If any predicted interval price in any ISO congestion zone exceeds $91.87/MWh, AMP applies the Conduct Test.
2. **Conduct Test:** AMP compares each resource's bid to its *Reference Level,* a benchmark generally based upon the resource's rolling average of bids from the previous 90 days. In the event that a bid exceeds its reference level by the lower of $100 or twice the reference level, the resource is said to have failed the Conduct Test.
3. **Impact Test:** AMP substitutes reference levels for all resources that have failed the Conduct Test. AMP then re-calculates the predicted prices based upon this reconstructed supply curve. If the average predicted price over the four 15-minute intervals is $50 above or twice the original predicted price, whichever is lower, the Impact Test is said to have been failed.

In the event that the Impact Test is failed, all resources whose bids failed the Conduct Test are mitigated. That is, their reference levels replace submitted bids for purposes of actual real-time dispatch and pricing.

[1] *California Independent System Operator Corporation*, 100 FERC ¶ 61,060 (2002) (July 17 Order).

[2] AMP actually runs for four 15-minute predicted intervals in each hour, rather than for the 12 actual 5-minute market intervals each hour. This was a design tradeoff that could provide similar predictive value in a computer processing timeframe that was feasible for hourly operation.

Accounting of AMP Activity for 2006 - Q2 and Q3

The following figures and discussion cover the three months, April through September, that comprise the second and third quarter of 2006 with specific attention paid to instances where running AMP resulted in actual bid mitigation. Table 1 below shows some summary statistics for each of these six months. Note that mitigation occurred in a total of nineteen hours during this six month period (three hours in Q2 and 16 hours in Q3).

Table 1: Summary of Conduct and Impact Test Failures: April – September 2006.[3]

Month	Hours in the Month	Hours w/ >= 3 Intervals Priced >= $91.87	Hours with Conduct Test Failures	Impact Test Failures (Mitigation)	Avg. Hourly MCP with Mitigation
April-06	720	92	35	1	$78.51
May-06	744	72	29	2	$35.92
June-06	720	42	1	0	-
July-06	744	42	37	11	$105.39
August-06	744	9	20	5	$66.80
September-06	720	3	6	0	-

The third column in Table 1 shows the number of hours in the month where at least three five-minute intervals were priced at or above $91.87/MWh. This statistic is presented to indicate the number of hours where there was a significant number of intervals priced greater than the Price Screen threshold of $91.87. Note that these prices are actual market outcomes and will be influenced by any mitigation that has occurred, however since mitigation took place in only nineteen hours during this six month period, most of which occurred in Q3, we are able to glean from these figures in how many hours prices were significantly high that AMP may have been triggered by failure of the price screen.[4] Generally, the percent of hours where there were three or more intervals priced over $91.87 ranged from 6% to 13% across the six months and actually the total number of price spikes decreased from Q2 to Q3.

The fourth column in Table 1 shows the number of hours where the Price Screen failed, triggered evaluation of the Conduct Test, and the Conduct Test was failed by one or more generators. In general, there are high priced energy bids submitted in all hours of the month that are high enough that they would likely fail the Conduct Test. Given this, the frequency of hours with Conduct Test failures is also an indication of the frequency of hours where the Price Screen failed as well.

[3] There was a software versioning issue with the execution of AMP during the months of May and June, 2006, that interfered with the proper application of the mitigation procedure. The execution error impacted nine hours during these two months, and preliminary analysis indicates that the impact of this error, in terms of eliminating the impact of the exercise of market power on market clearing prices, was minimal. During nearly all of the affected intervals, the price for imbalance energy was below $90. The ISO continues to evaluate the source and scope of this issue.

[4] Since implementation of RTMA on October 1, 2004, the 15-minute interval prices generated by the price predictor and used in evaluating whether or not the Price Screen was failed are not readily available and can only be viewed by retrieving and reading from RTMA "Saved Cases". This is an extremely cumbersome process and was not undertaken for this summary.

The last two columns in Table 1 show the number of hours in which bids were mitigated as a result of AMP and the average hourly price during those mitigated hours. Bid mitigation occurred in a total of three hours during the second quarter of 2006 and sixteen hours during the third quarter of 2006.

Table 2: AMP Mitigation Detail: April – September 2006.

Date	Hour	Number of Mitigated Units	Hourly Average Load (MW)	Hourly Average MCP ($/MWh)
03-Apr-06	24	22	22,996	$78.51
06-May-06	11	20	25,369	$34.07
20-May-06	2	17	22,232	$37.33
13-Jul-06	17	17	44,519	$188.77
17-Jul-06	16	23	46,005	$33.27
18-Jul-06	16	24	46,217	$67.79
18-Jul-06	18	24	45,206	$62.89
21-Jul-06	14	25	46,750	$193.39
21-Jul-06	17	25	48,929	$188.76
22-Jul-06	15	27	48,139	$75.21
22-Jul-06	18	26	47,195	$103.24
23-Jul-06	13	28	42,159	$53.25
23-Jul-06	17	26	45,668	$47.00
26-Jul-06	17	23	47,291	$145.77
27-Aug-06	17	24	35,511	$44.38
27-Aug-06	19	24	34,862	$19.30
27-Aug-06	22	27	32,408	$69.65
28-Aug-06	16	18	40,919	$162.68
30-Aug-06	16	16	40,382	$38.00

Table 2 shows some summary statistics for the hours where mitigation did occur. Generally, the number of resources that failed the Conduct Test and had there bids mitigated when the Impact Test failed ranged from 16 to 28 resources. Note that during mitigation hours in the second quarter, the hourly load was fairly low ranging from 22,232 MW to 25,369 MW. During the third quarter, the range of hourly load across hours where mitigation occurred was much wider, ranging from 32,408 MW to 48,929 MW.