

# Market Performance Report for December 2007



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California ISO  
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Board of Governors  
General Session  
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# Market Highlights

The full Market Performance Report is available at <http://www.caiso.com/179d/179ddbce22760.html>

- December was generally quiet
- The Balancing Energy Market saw an increased number of ramping spikes
- The Inter-zonal Congestion Market saw high costs once again, continuing a recent trend

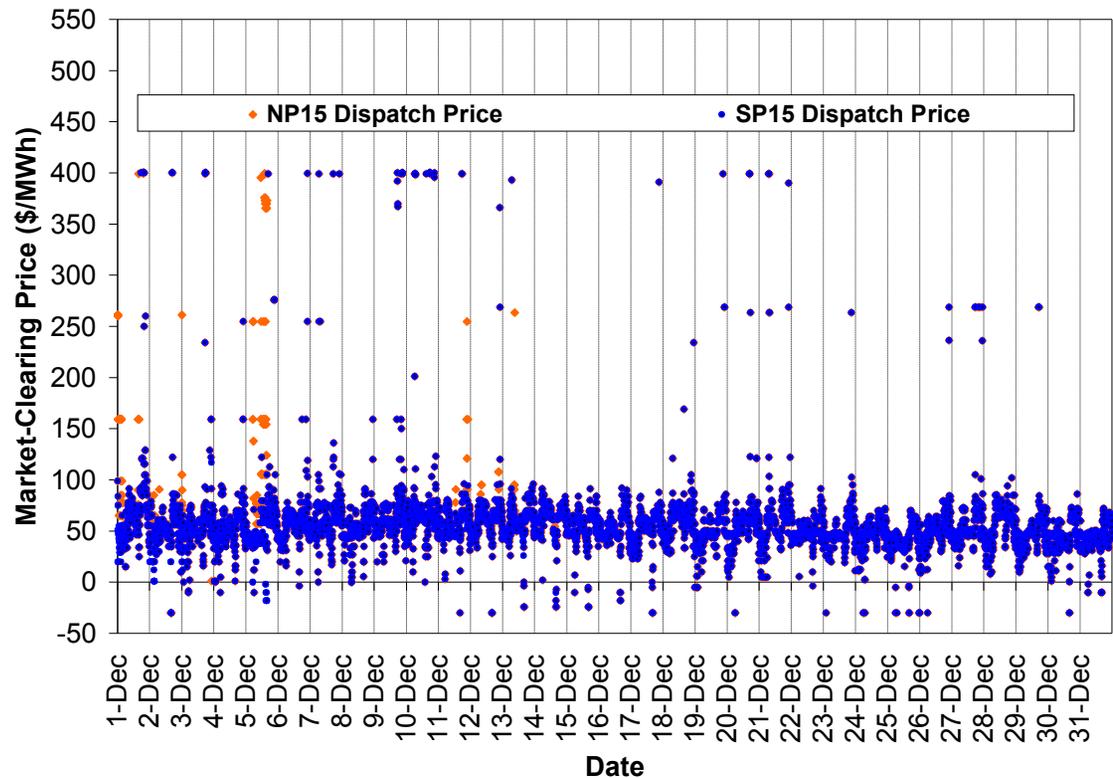
# Monthly Market Performance Metrics for 2007

Monthly Metrics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Average Gas Price	\$6.57	\$7.26	\$6.53	\$7.19	\$7.27	\$6.89	\$6.14	\$5.93	\$5.73	\$6.80	\$7.05	\$7.00	\$6.70
Average On-Peak Contract Price	\$63.32	\$64.25	\$54.90	\$64.78	\$75.04	\$68.47	\$71.76	\$71.40	\$59.64	\$71.89	\$64.21	\$70.41	\$66.67
Average Real-Time Price	\$50.35	\$51.25	\$41.75	\$50.24	\$59.14	\$54.85	\$55.84	\$62.44	\$47.22	\$56.59	\$56.95	\$62.84	\$54.12
No. of Price Spikes Over \$250	102	50	131	203	101	77	79	167	10	93	72	122	101
Costs Incurred over \$250 (percent)	24%	13%	24%	33%	22%	18%	14%	24%	3%	27%	16%	29%	21%
AS Cost (\$ per MWh)	\$0.54	\$0.41	\$0.58	\$0.38	\$0.74	\$0.59	\$1.16	\$0.78	\$0.58	\$0.47	\$0.56	0.5	\$0.61
RA Unit Commitment Costs (\$M)	\$2.5	\$1.6	\$1.3	\$2.1	\$1.9	\$3.4	\$4.8	\$3.2	\$2.9	\$4.3	\$5.0	\$5.0	\$3.2
FERC Unit Commitment Costs (\$M)	\$0.7	\$0.3	\$0.7	\$0.1	\$0.0	\$1.4	\$1.4	\$1.4	\$0.8	\$3.8	\$0.6	\$0.1	\$0.9
Inc OOS Redispatch Costs (\$M)	\$2.7	\$1.6	\$1.1	\$1.7	\$1.5	\$1.2	\$2.1	\$1.2	\$1.2	\$4.5	\$2.0	\$3.1	\$2.0
Dec OOS Redispatch Costs (\$M)	\$0.2	\$0.3	\$0.4	\$0.3	\$0.7	\$0.3	\$0.4	\$0.5	\$0.3	\$2.5	\$2.5	\$1.2	\$0.8
Total Interzonal Congestion (\$M)	\$4.0	\$1.8	\$8.1	\$5.0	\$12.5	\$4.5	\$4.2	\$3.1	\$4.3	\$12.9	\$10.3	\$12.3	\$6.9



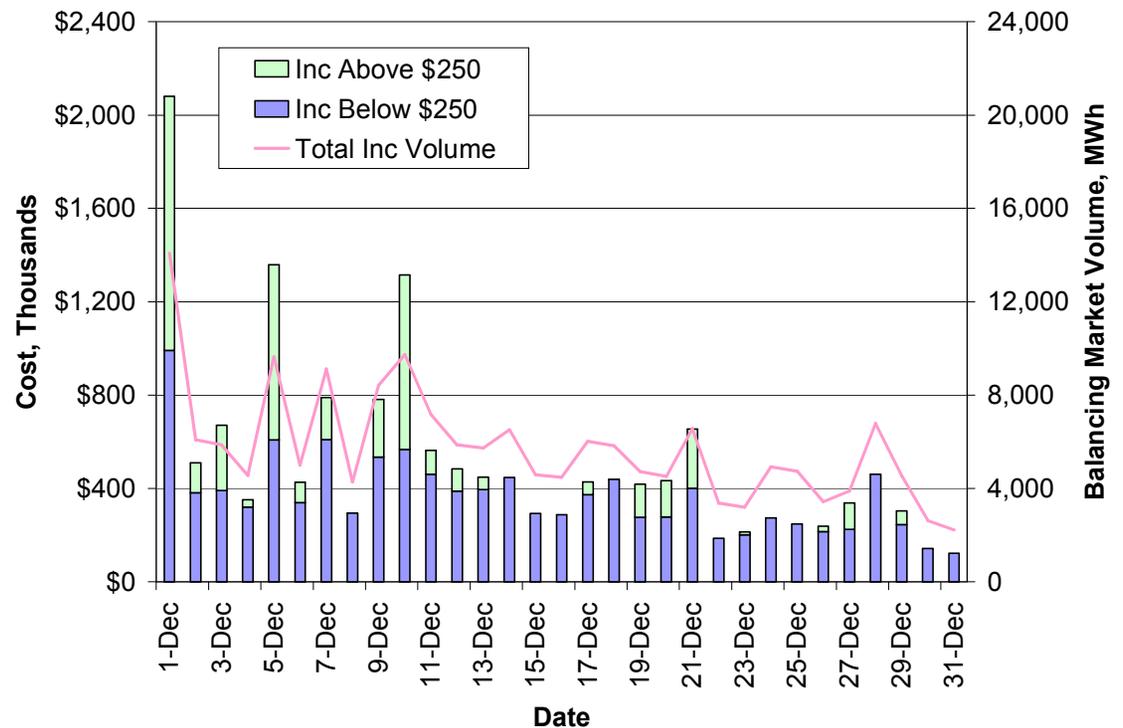
# Real Time Balancing Energy Prices

- For the month, there were 122 intervals of prices over \$250, an increase above November's 72 intervals



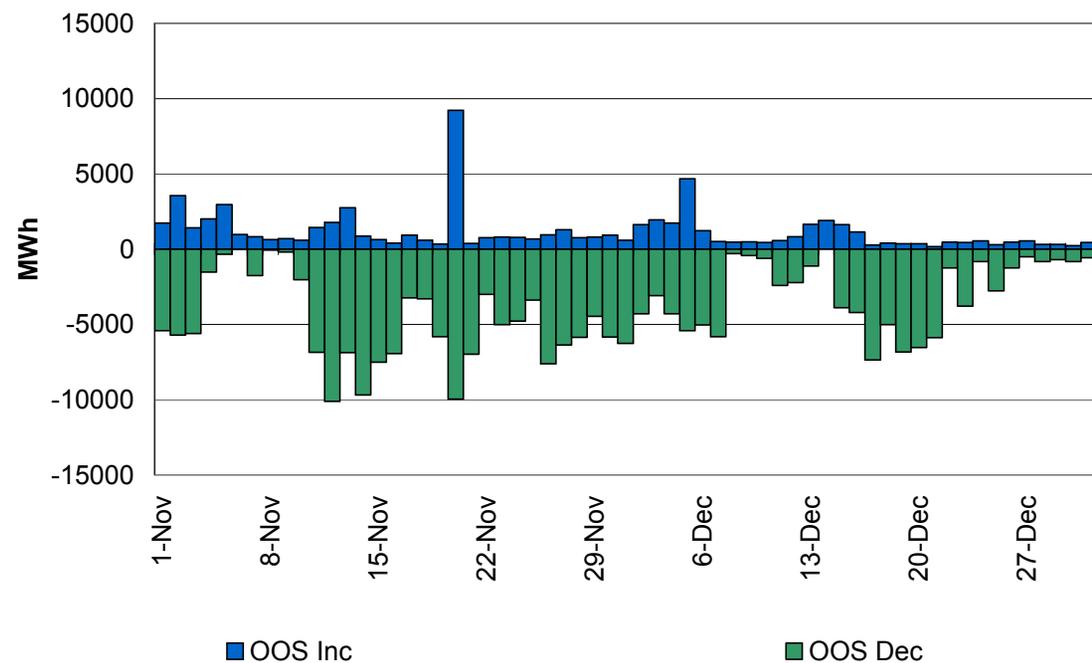
# Cost of Balancing Energy

- 29 percent of all incremental energy expenditures were incurred at prices greater than \$250, up from 16 percent in November
- Total expenditures on incremental energy in December were \$16 million vs. \$17 million in November



# Cost of Out of Sequence (OOS) Energy

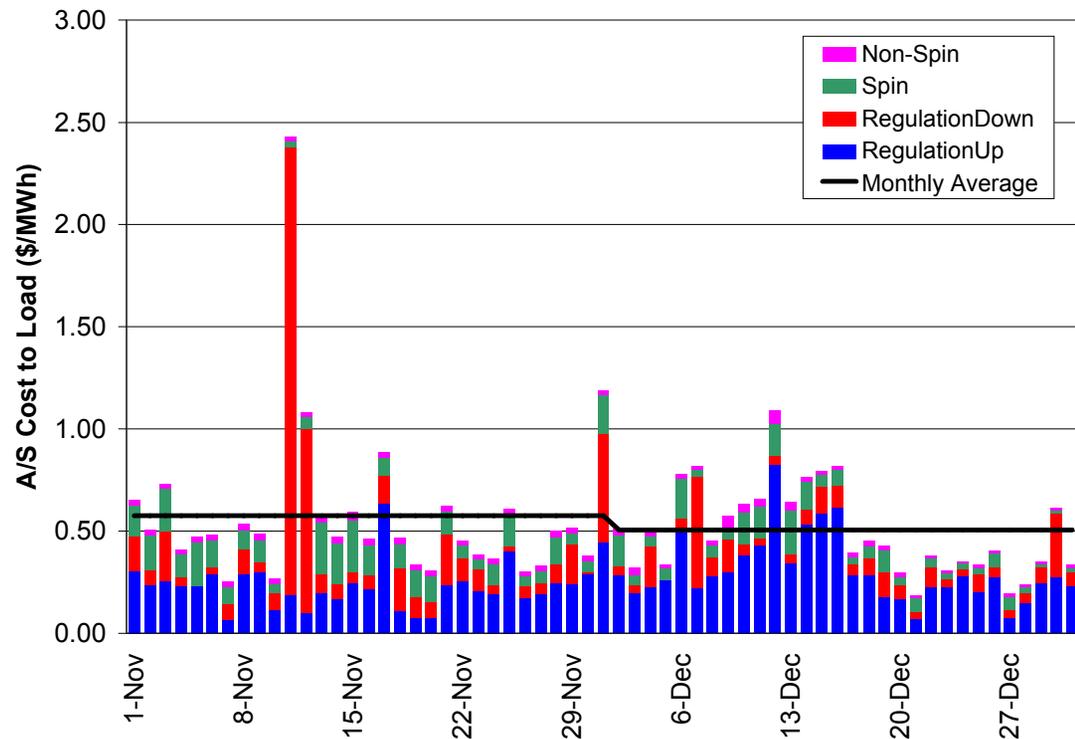
- Both incremental and decremental OOS dispatch volumes declined by about a third in December
- Incremental dispatch costs of \$3.1 million were driven primarily by Intrazonal congestion in the Humboldt area
- Decremental dispatch costs of \$1.2 million were mostly driven by congestion at the Miguel and Imperial Valley transformer banks



Daily OOS MWh – November and December 2007

# Ancillary Services Markets

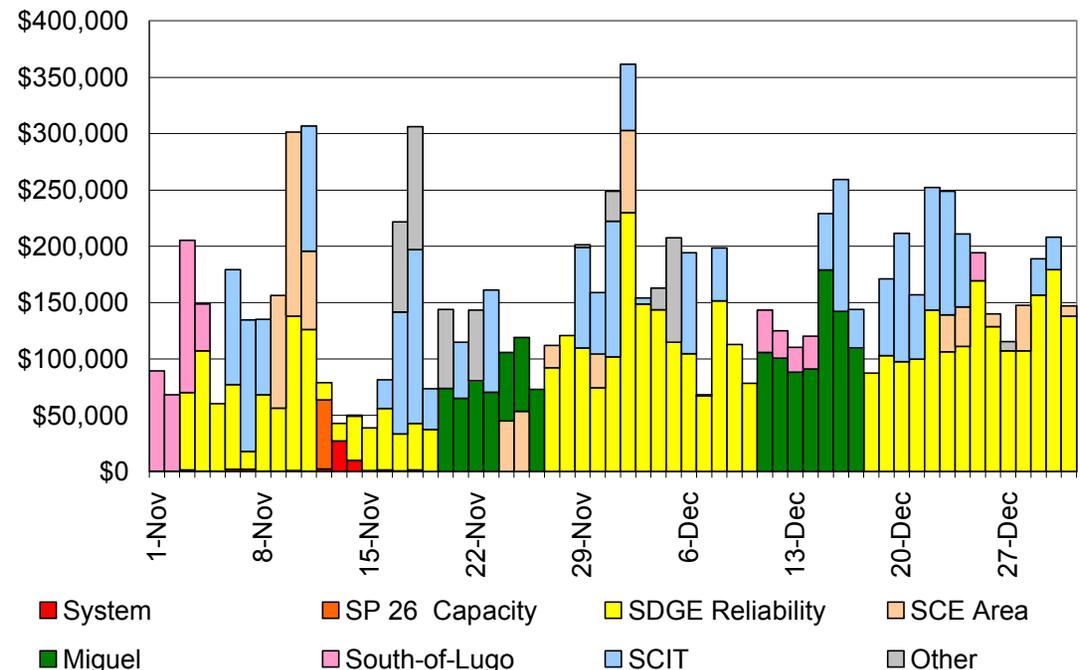
- The monthly average cost-to-load of Ancillary Services decreased to \$0.50 in December from November's \$0.58



	Average Required (MW)				Weighted Average Price (\$/MW)			
	RU	RD	SP	NS	RU	RD	SP	NS
Nov 07	377	364	796	808	\$ 15.09	\$ 12.91	\$ 3.82	\$ 0.84
Dec 07	393	360	843	806	\$ 20.67	\$ 8.18	\$ 2.45	\$ 0.79
	4.0%	-1.2%	6.0%	-0.3%	37.0%	-36.6%	-35.9%	-6.7%

# Unit Commitment Costs

- Total unit commitment costs were \$5 million in December, about the same as November's total
- RA commitments comprised 99% of the total with FERC Must Offer costs totaling less than \$100,000
- The dominant reason for unit commitments was SDG&E reliability at 55% of the total



**Resource Adequacy Commitment Costs  
–November and December 2007**

# Inter-zonal Congestion Costs

- Total inter-zonal congestion costs increased to \$12.6 million in December from \$10.3 million in November
- The majority of congestion costs in December were incurred on the Palo Verde (51%), Eldorado (24%) and Mead branch groups (13 %)

