

Market Performance Report for November 2007



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California ISO
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Board of Governors
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Market Highlights

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

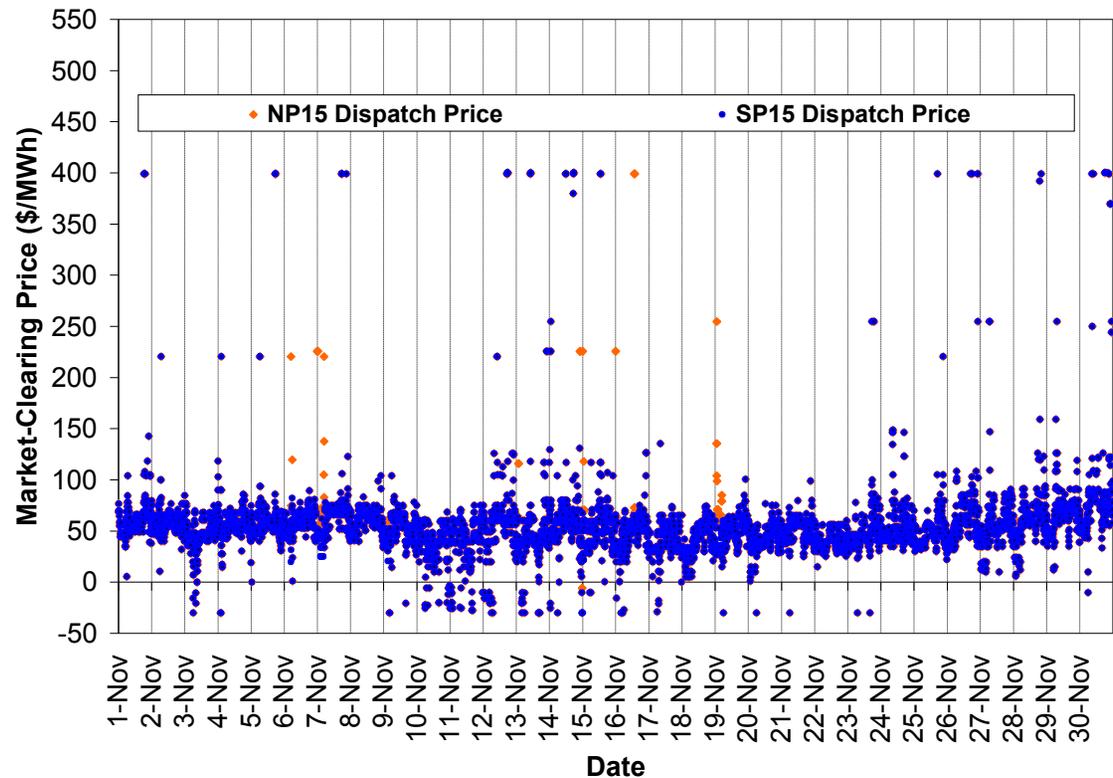
- 🌐 The Balancing Energy market was relatively quiet in November
- 🌐 November's incremental Out of Sequence (OOS) dispatch costs decreased substantially
- 🌐 Total inter-zonal congestion costs decreased to \$10.3 million but remain generally high

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		\$6.67
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		\$66.33
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		\$53.33
No. of Price Spikes Over \$250	102	50	131	203	101	77	79	167	10	93	72		99
Costs Incurred over \$250 (percent)	24%	13%	24%	33%	22%	18%	14%	24%	3%	27%	16%		20%
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		\$0.62
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		\$3.0
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		\$1.0
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		\$1.9
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		\$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		\$6.4

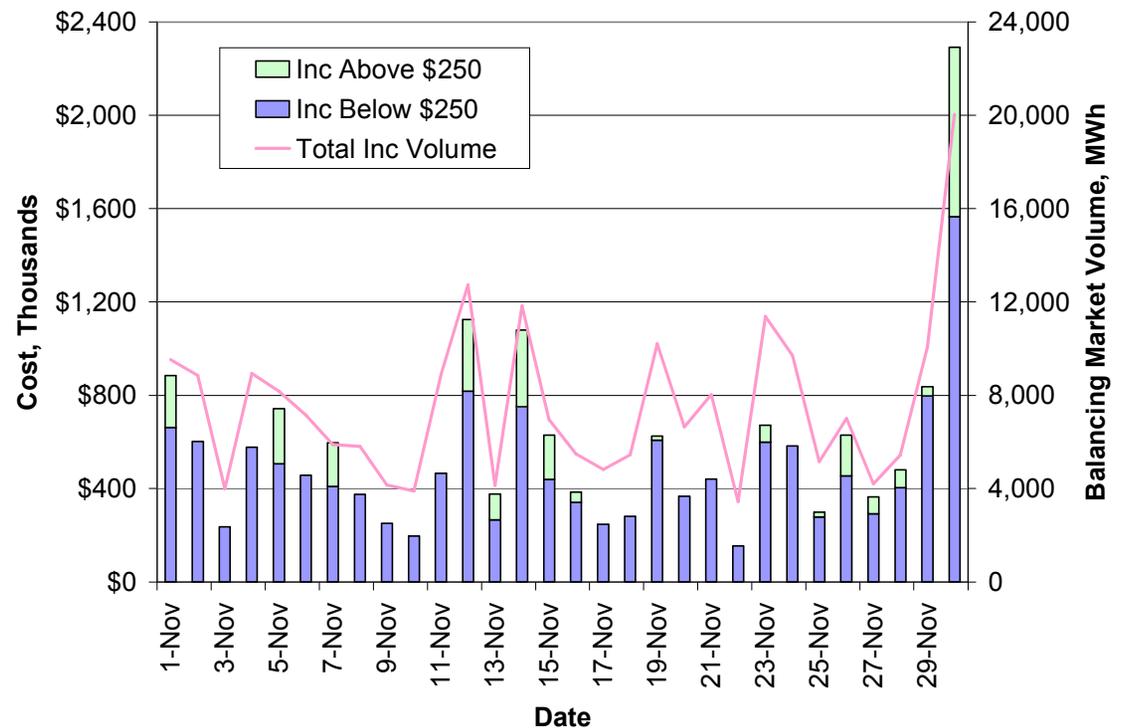
Real Time Balancing Energy Prices

- For the month, there were 72 intervals of prices over \$250, a decline from October's 93 intervals
- Most of November's price events occurred because of under-scheduling in the Hour Ahead, and ramp constrained price spikes



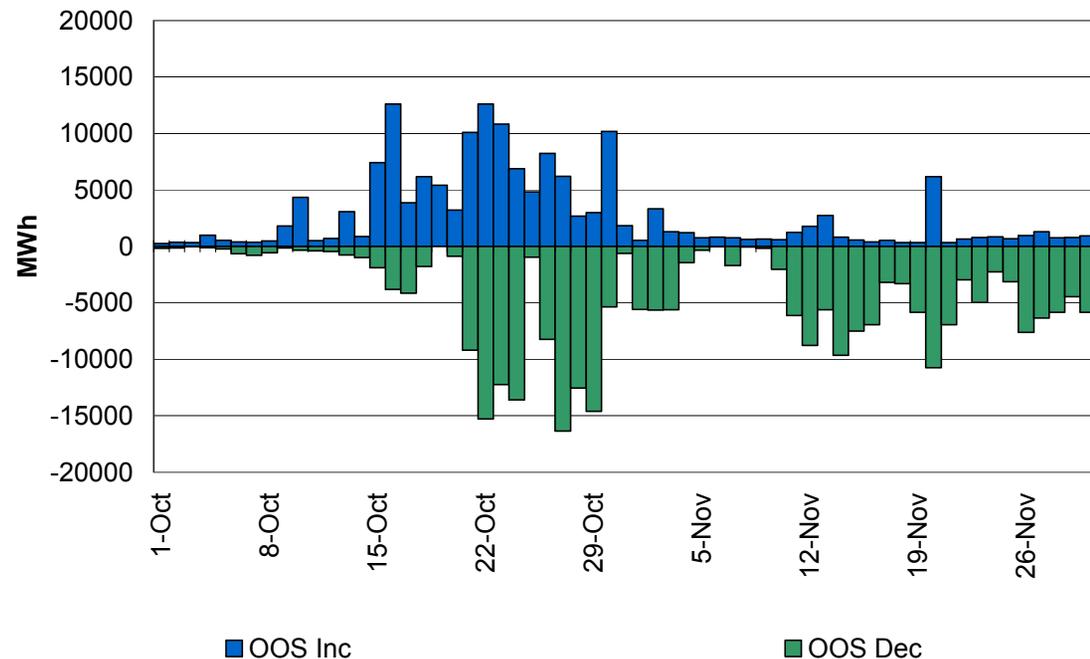
Cost of Balancing Energy

-  Sixteen percent of all incremental energy expenditures were incurred at prices greater than \$250, down from 27 percent in October
-  Total expenditures on incremental energy in November were \$17 million vs. \$20 million in October



Cost of Out of Sequence Energy

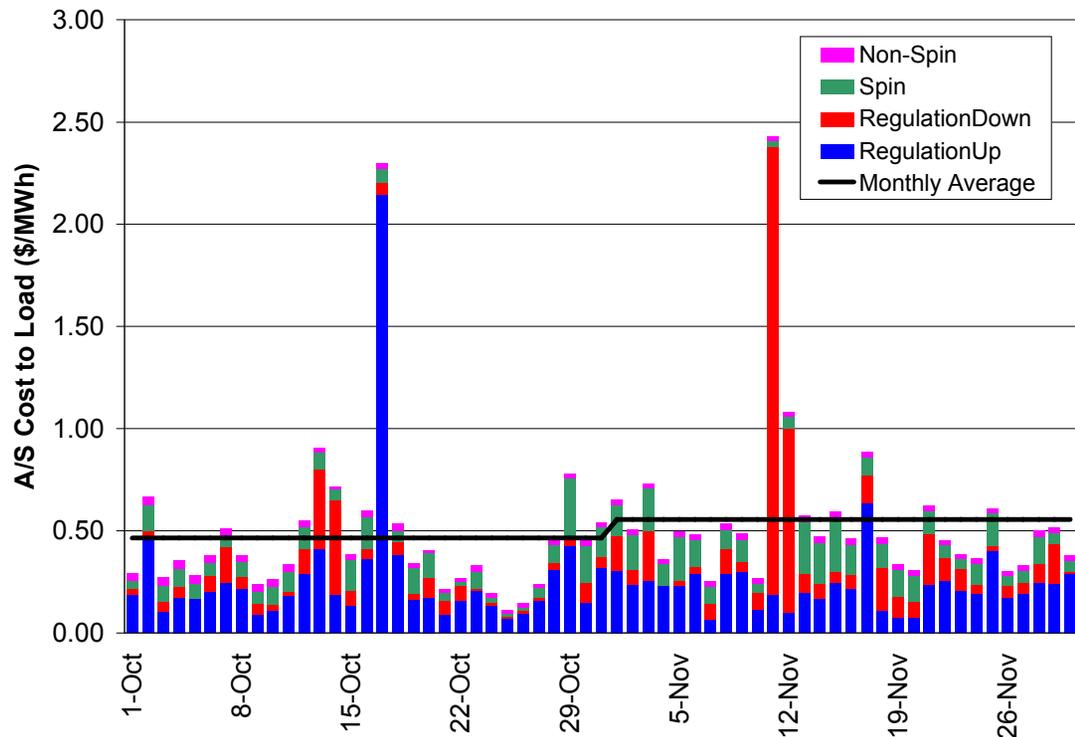
- Incremental dispatch volumes fell by 70% in November to 40,000 MWh from October's 130,000 MWh
- Decremental dispatch volumes increased to 145,000 MWh from October's 130,000 MWh
- Decremental volumes were driven primarily by congestion at the Miguel and Imperial Valley transformer banks



Daily OOS MWh – October and November 2007

Ancillary Services Markets

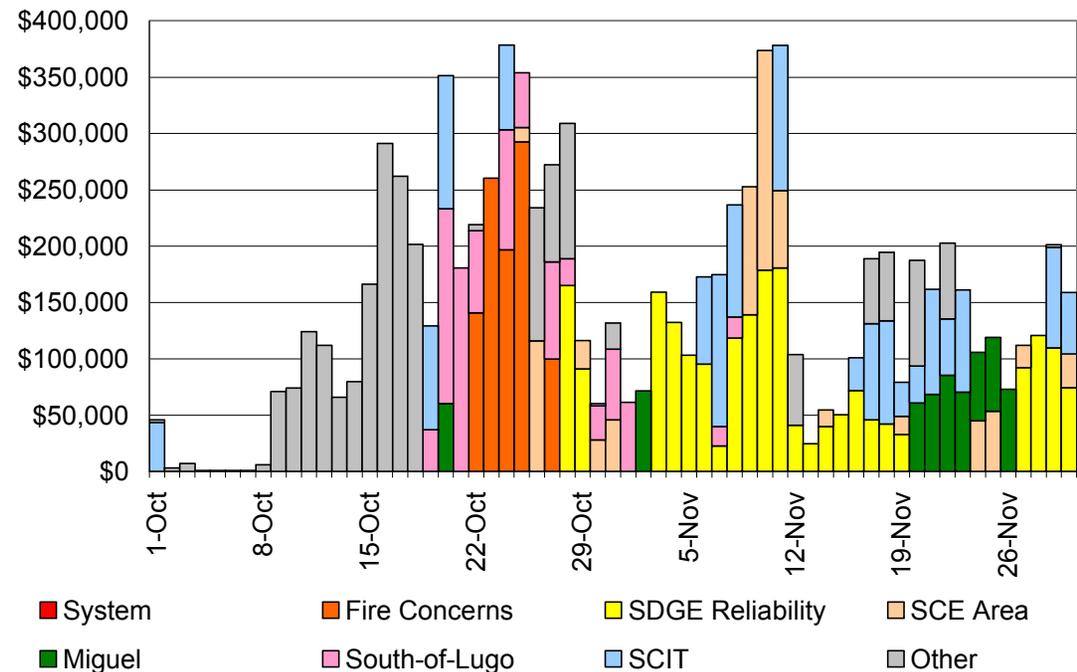
- The monthly average cost-to-load increased to \$0.56/MWh in November from October's \$0.46/MWh
- Average Reg Down prices increased sharply due to thinner bid stacks, particularly on November 11th and 12th



	Average Required (MW)				Weighted Average Price (\$/MW)			
	RU	RD	SP	NS	RU	RD	SP	NS
Oct 07	373	362	786	769	\$ 18.91	\$ 5.26	\$ 2.90	\$ 0.93
Nov 07	377	364	796	808	\$ 15.09	\$ 12.91	\$ 3.82	\$ 0.84
	1.3%	0.8%	1.3%	5.1%	-20.2%	145.3%	31.5%	-9.5%

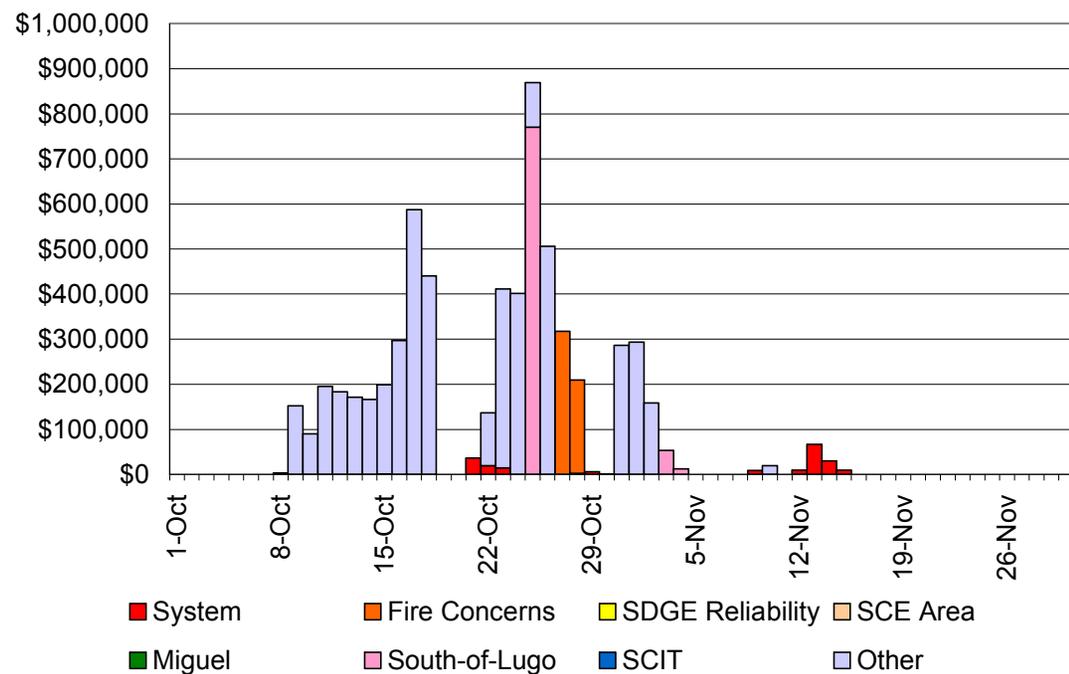
Resource Adequacy (RA) Unit Commitment Costs

- Total unit commitment costs declined to \$5 million in November from \$9 million in October
- The dominant reason for RA commitments was SDG&E Reliability at 42% of the total
- RA costs comprised 88% of total commitment costs



FERC Must Offer Obligation (MOO) Commitment Costs

The total cost of FERC unit commitments for November was under \$600,000, comprising 12% of total unit commitment costs for the month



Inter-zonal Congestion Costs

- Total inter-zonal congestion costs decreased to \$10.3 million in November from \$12.9 million in October
- The IPPDCADLN branch group was de-rated due to scheduled maintenance on the line
- Congestion costs on Path 15 and Palo Verde were largely due to over scheduling and path de-rates motivated by planned and unplanned transmission outages

