

# Market Performance Report for July 2007



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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/1c27/1c27dd0dcfe0.pdf>

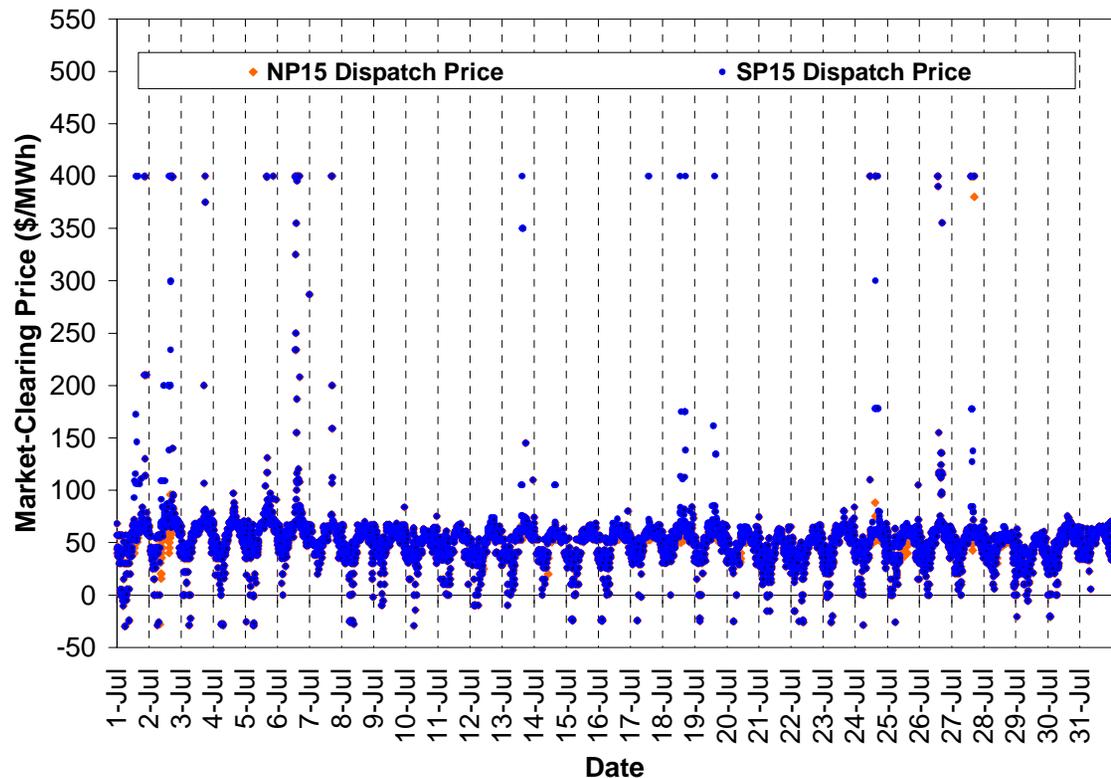
- 🌍 Moderate early July heat wave
- 🌍 Path 26 was derated to about half its normal capacity for about a month starting on July 11<sup>th</sup>
- 🌍 Real-time prices exceeded \$250/MWh in 79 of 8,928 dispatch intervals (.09% of the total), up slightly from 77 in June
- 🌍 Monthly average cost of Ancillary Services nearly doubled

# Monthly Market Performance Metrics for 2007

Monthly Metrics	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Average Gas Price	\$6.78	\$7.32	\$6.48	\$7.19	\$7.25	\$6.88	\$6.28						\$6.88
Average On-Peak Contract Price	\$63.32	\$64.25	\$54.90	\$64.78	\$75.04	\$68.47	\$71.76						\$66.07
Average Real-Time Price	\$50.35	\$51.25	\$41.75	\$50.24	\$59.14	\$54.85	\$55.84						\$51.92
No. of Price Spikes Over \$250	102	50	131	203	101	77	79						106
Costs Incurred over \$250 (percent)	24%	13%	24%	33%	22%	18%	14%						21%
AS Cost (\$ per MWh)	\$0.54	\$0.41	\$0.58	\$0.38	\$0.74	\$0.59	\$1.16						\$0.63
RA Unit Commitment Costs (\$M)	\$2.5	\$1.6	\$1.3	\$2.1	\$1.9	\$3.4	\$4.8						\$2.5
FERC Unit Commitment Costs (\$M)	\$0.7	\$0.3	\$0.7	\$0.1	\$0.0	\$1.4	\$1.4						\$0.6
Inc OOS Redispatch Costs (\$M)	\$2.7	\$1.6	\$1.1	\$1.7	\$1.5	\$1.2	\$2.1						\$1.7
Dec OOS Redispatch Costs (\$M)	\$0.2	\$0.3	\$0.4	\$0.3	\$0.7	\$0.3	\$0.4						\$0.4
Total Interzonal Congestion (\$M)	\$4.0	\$1.8	\$8.1	\$5.0	\$12.5	\$4.5	\$4.2						\$5.7

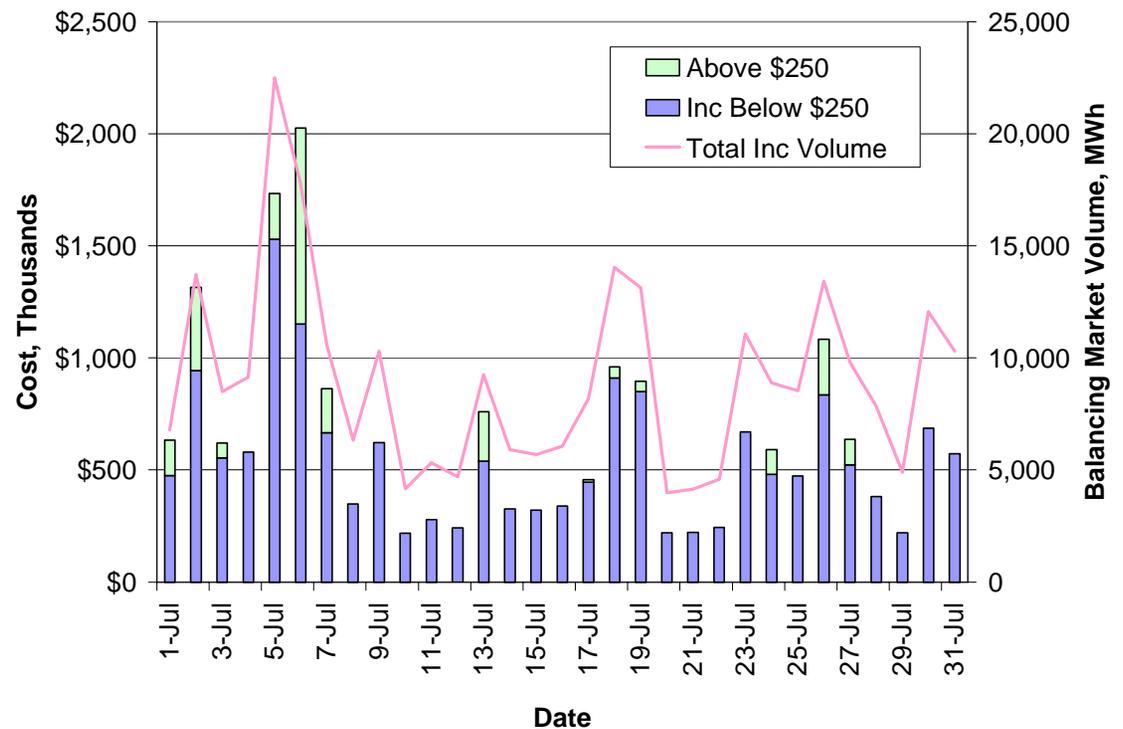
# Real Time Balancing Energy Prices

- There were only 79 occurrences of prices over \$250, which is only slightly higher than last month's 77, and far fewer than the 146 seen in July 2006
- 43% coincided with the week-long heat wave
- 32% occurred in SP15 only, and can be attributed to the Path 26 derate (Vincent outage)



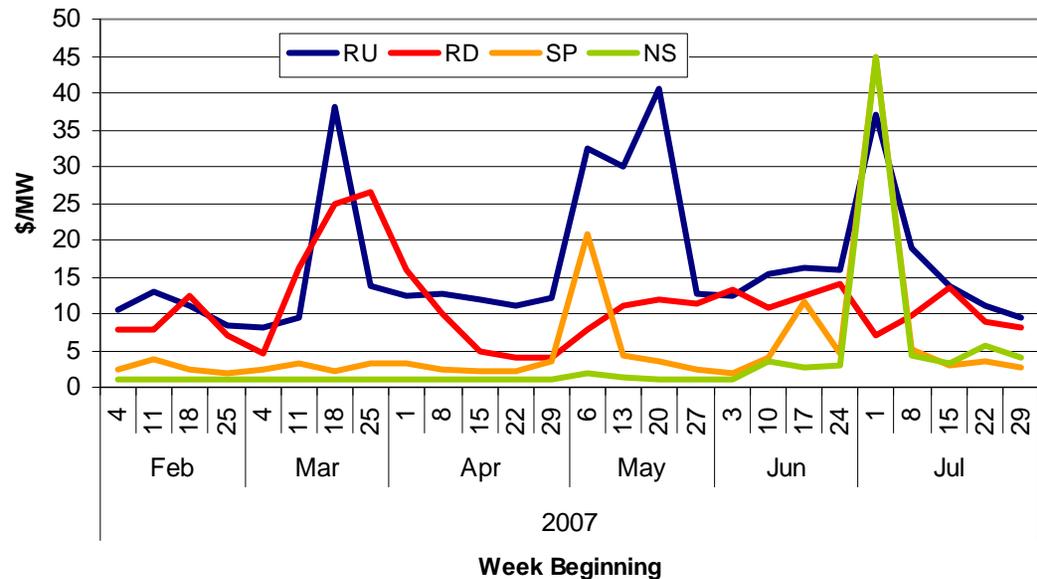
# Cost of Balancing Energy

- 86% of all incremental energy expenditures occurred below \$250/MWh while 14% were transacted at greater than \$250/MWh
- This compares favorably to June's breakdown of 82% below \$250 and 18% above
- Total expenditures on energy over \$250 per MWh declined by 19% compared to the June



# Ancillary Services Markets

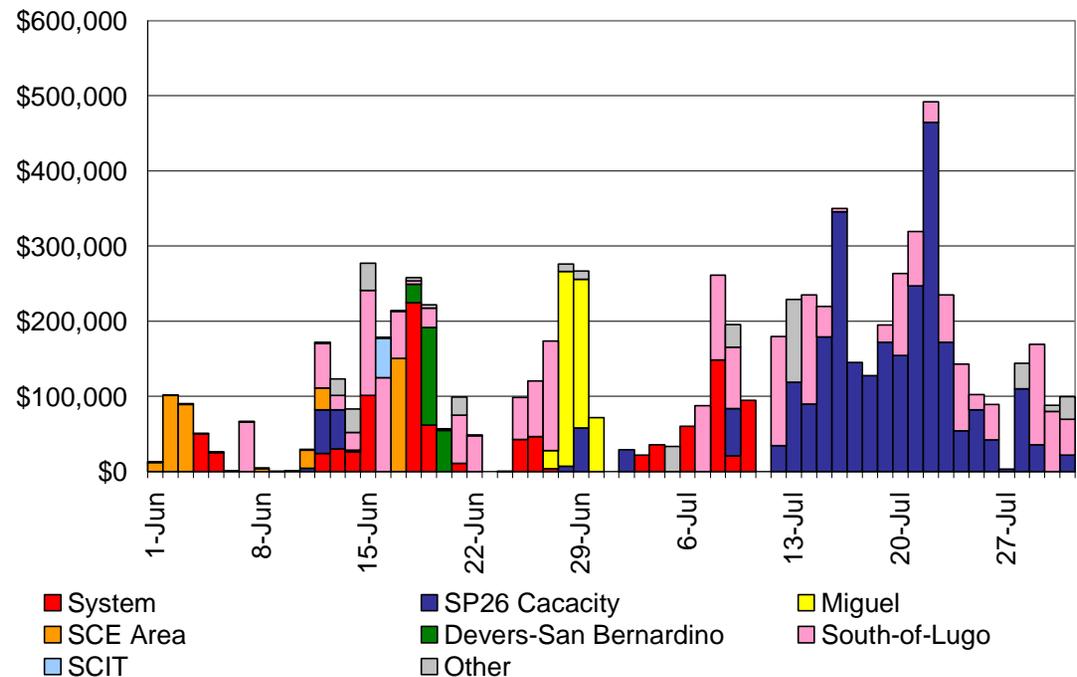
- Weighted average prices for Regulation Up, Spin and Non-Spin were up sharply due to the high forward market prices during the heat-wave
- Day Ahead AS became scarce when generators could sell power in the forward markets for well over \$300 in some instances, so AS prices had to rise in concert



	Average Required (MW)				Weighted Average Price (\$/MW)			
	RU	RD	SP	NS	RU	RD	SP	NS
Jun 07	375	357	868	812	\$ 14.98	\$ 12.57	\$ 5.53	\$ 2.49
Jul 07	397	363	1028	897	\$ 19.49	\$ 9.54	\$ 12.71	\$ 14.04
	5.8%	1.7%	18.4%	10.4%	30.1%	-24.1%	129.7%	463.1%

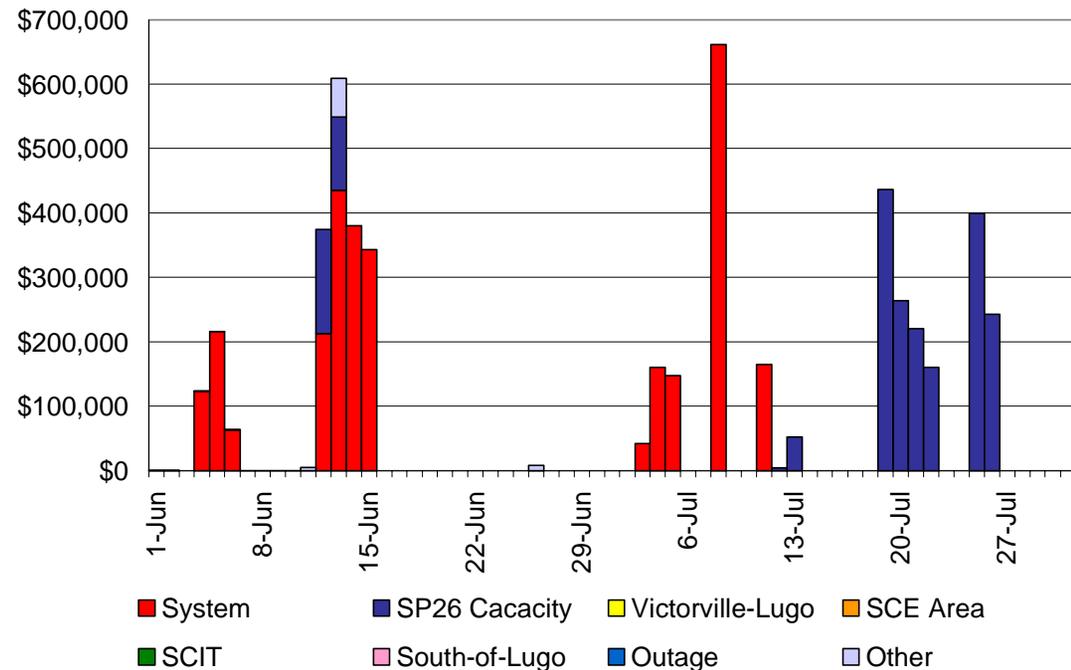
# RA Unit Commitment Costs

- Total unit commitment costs climbed to \$7.6 million in July from \$5.3 million in June
- RA unit commitments accounted for 60% of the total and were driven primarily by the Vincent bank outage and subsequent derate of Path 26 that began on July 11



# FERC MOO Commitment Costs

- FERC must-offer commitments totaled \$3 million in July
- About 60% of these costs were incurred to support the Path 26 derate, and the remainder are attributable to various system needs



# Inter-zonal Congestion Costs

- Inter-zonal congestion costs totaled \$4.3 million in July, which is down slightly from June's \$4.5 million
- A large portion of the congestion (46 %) was driven by over-scheduling on the northern inter-ties and was evenly distributed throughout the month
- Congestion on Palo Verde (21%) was also due primarily to over-scheduling, but most of Palo Verde's congestion occurred on a single day, July 29<sup>th</sup>, when the Eldorado branch group was derated
- 21 percent occurred on Path 26 during the de-rate that followed the forced outage at Vincent Banks on July 11<sup>th</sup>