

Market Performance Report for April 2007



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California ISO
Your Link to Power

Board of Governors
General Session
July 18th - 19th, 2007

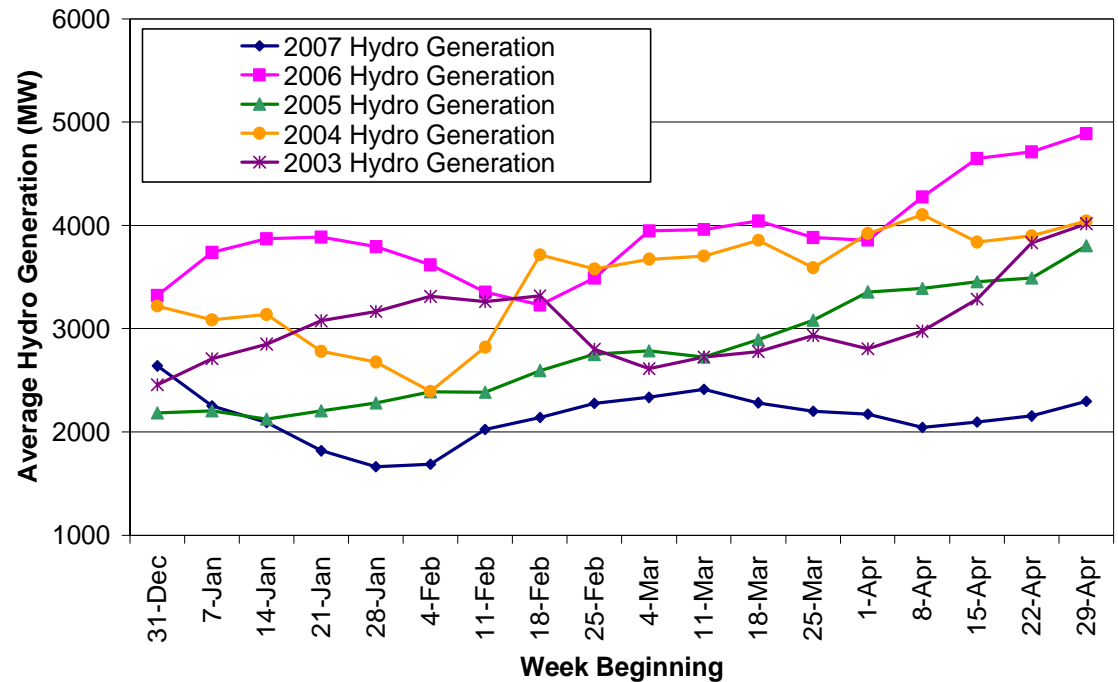
Market Highlights

The full May Market Performance Report is available at <http://www.caiso.com/1be8/1be8723649d20.pdf>

- 🌐 Hydroelectric remains less than half the level of production seen last year in April 2006
- 🌐 Real-time balancing energy prices exceeded \$250 during 203 5-minute dispatch intervals in April, up from 131 in March
- 🌐 Humboldt intra-zonal mitigation continues to dominate OOS costs
- 🌐 The Average total cost of Ancillary Services decreased from \$0.58/MWh to \$0.38/MWh
- 🌐 Total unit commitment costs increased in April to \$2.1 million from \$1.3 million in March.

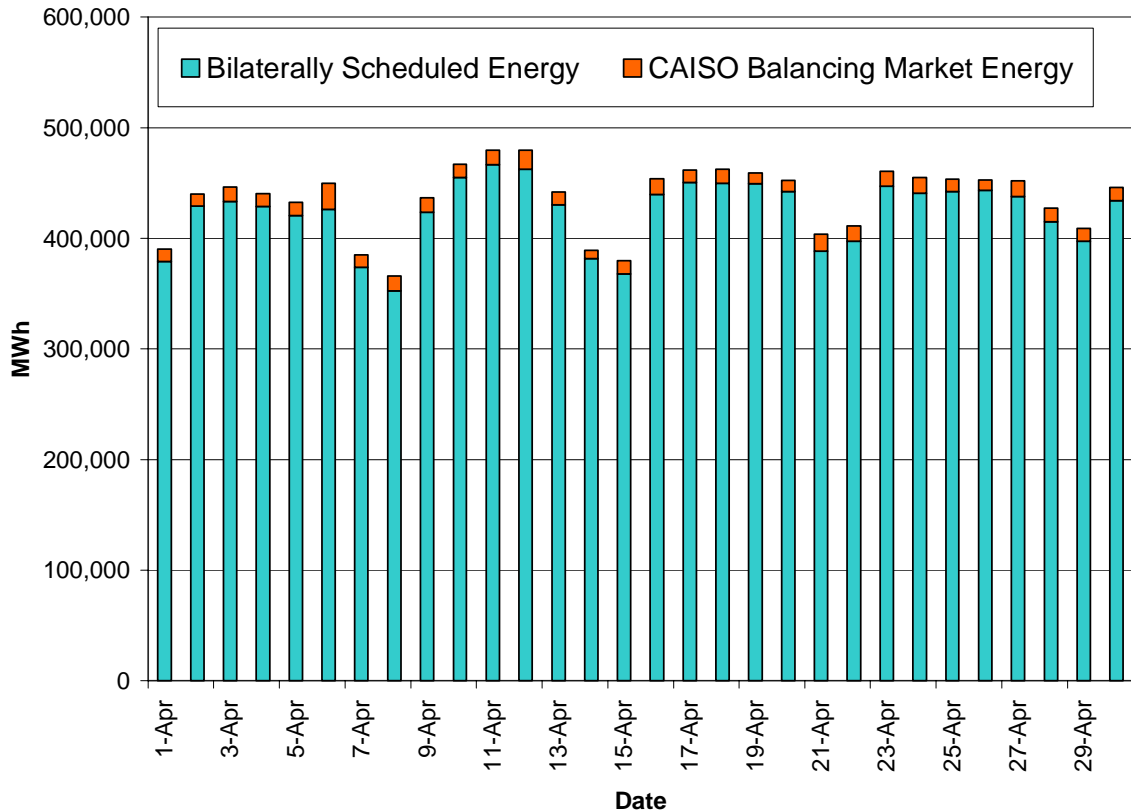
Hydroelectric Generation Capacity

- There was a small increase in average daily hydro generation in the CAISO control area during the month of April – much less than the 1000 MW jump seen last April in 2006



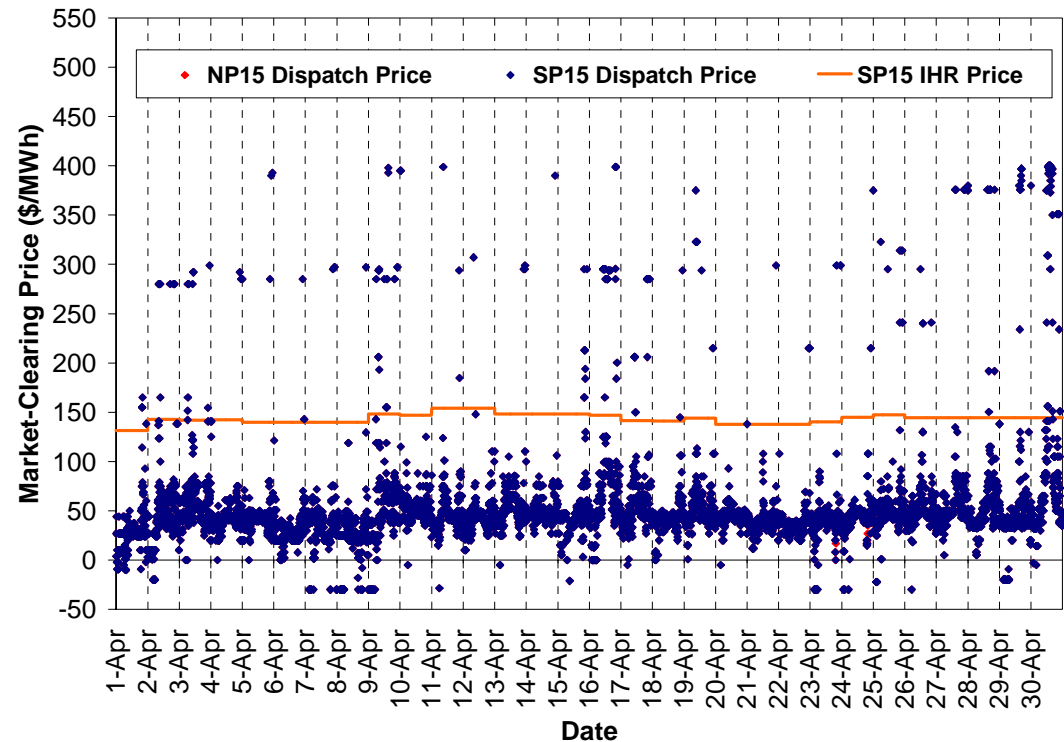
Balancing Energy Perspective

- Red bars are balancing energy vs. total market volume.
- Balancing energy made up 3.0% of total energy consumed in April.



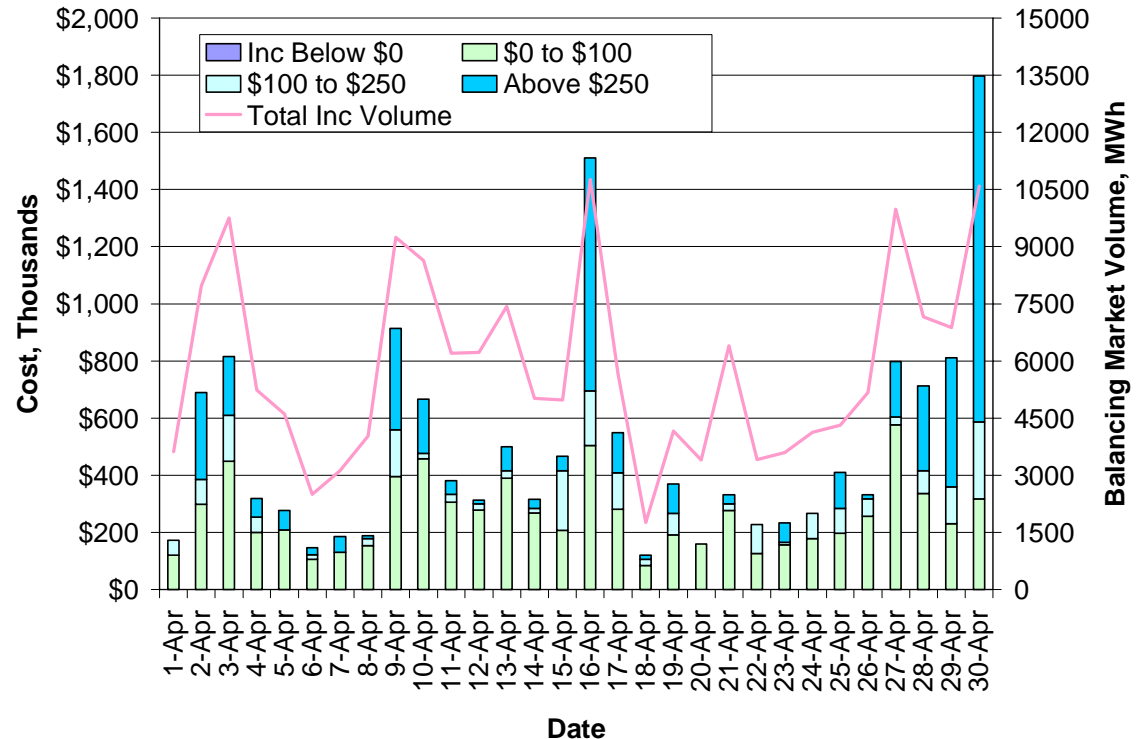
Real Time Balancing Energy Prices

- Real-time balancing energy prices exceeded \$250 during 203 5-minute dispatch intervals in April, up from 131 in March.
- 35 occurred on April 16th and another 49 on April 30th, accounting for 41 per cent of the total.



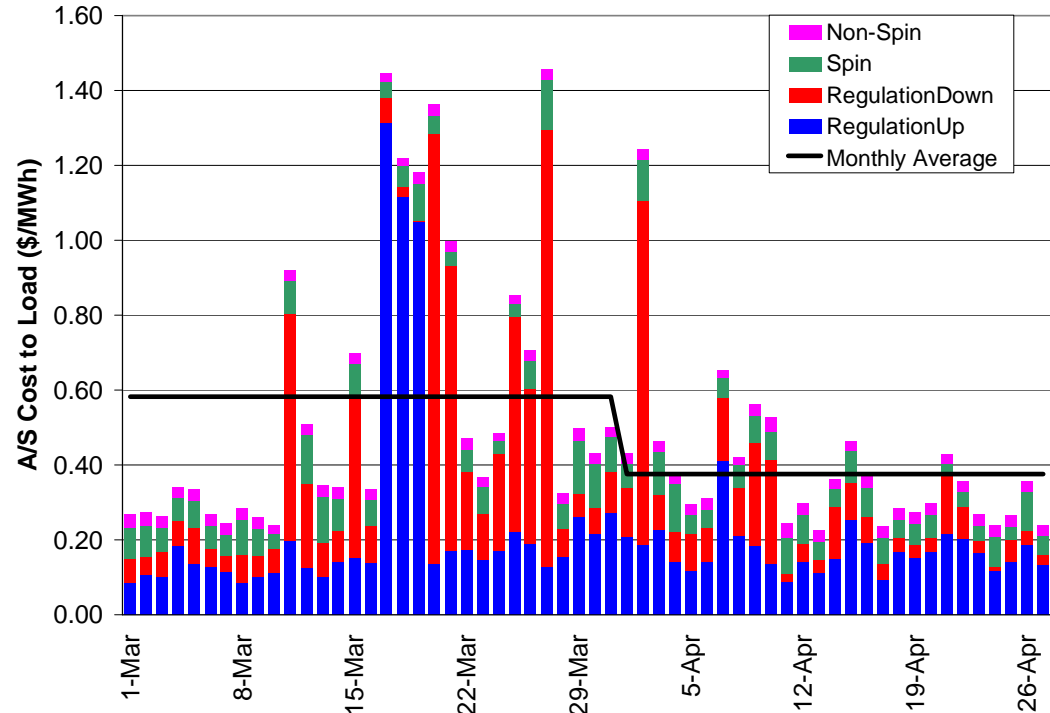
Cost of Balancing Energy

- Figure shows cost of energy vs. market clearing price.
- 52.4% of costs were incurred at prices less than \$100 while 33.2% were incurred at prices greater than \$250.



Ancillary Services Markets

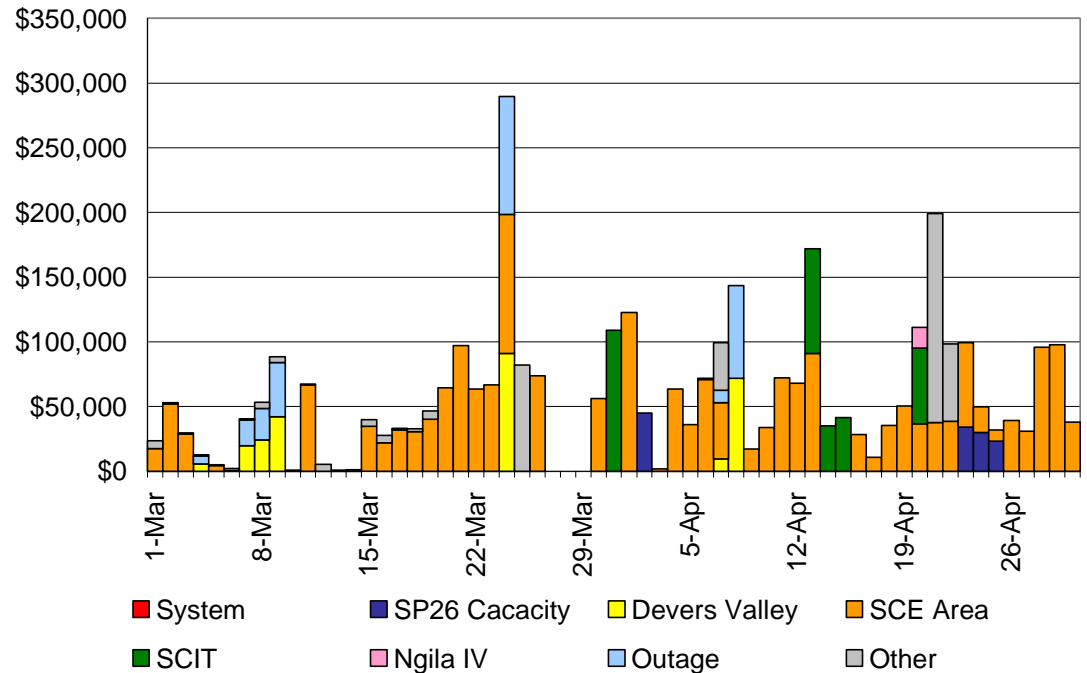
The monthly average cost of Ancillary Services decreased to \$0.38/MWh in April from March's \$0.58/MWh, primarily due to lower Regulation Up and Regulation Down prices




	Average Required (MW)				Weighted Average Price (\$/MW)			
	RU	RD	SP	NS	RU	RD	SP	NS
Mar 07	374	356	722	719	\$ 16.84	\$ 16.79	\$ 2.76	\$ 1.03
Apr 07	377	355	721	701	\$ 11.48	\$ 8.26	\$ 2.48	\$ 1.10
	0.9%	-0.2%	-0.1%	-2.6%	-31.8%	-50.8%	-10.4%	6.9%

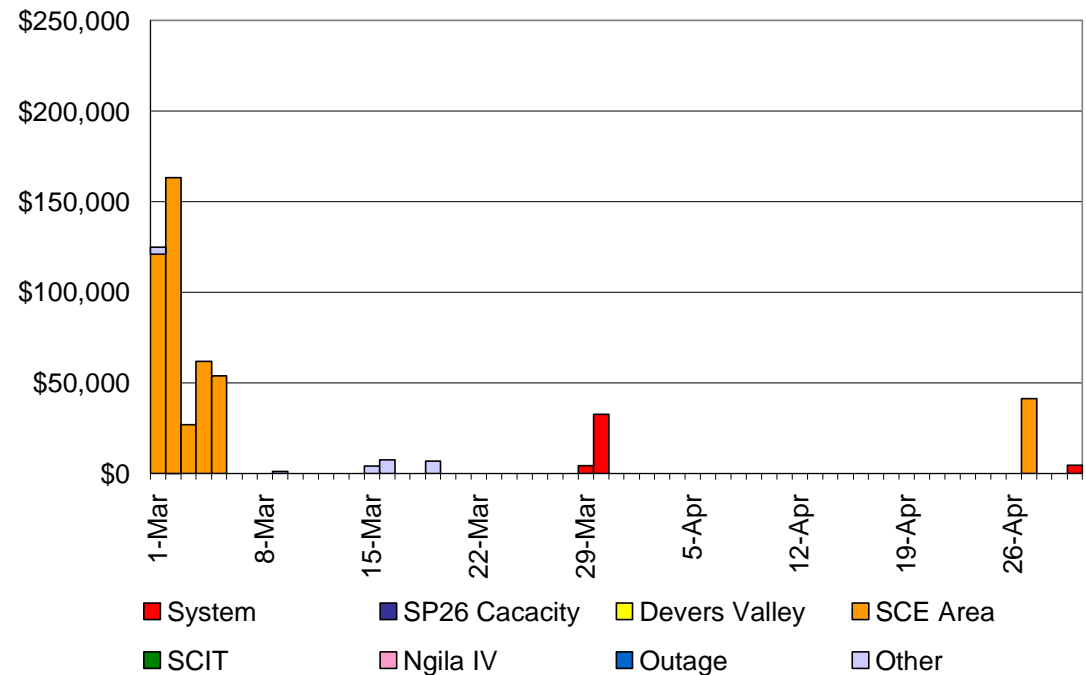
RA Unit Commitment Costs

- Total unit commitment costs (RA and MOO) increased in April to \$2.1 million from \$1.3 million in March.
- RA commitments were driven by local generation requirements, which were responsible for about two thirds of April's costs, while transmission line maintenance accounted for most of the remainder



FERC MOO Commitment Costs

 FERC MOO unit commitments declined sharply in April as specific units used to meet the SCE Area requirement were retained under RA contracts beginning April 1st



Inter-zonal Congestion Costs

- Total inter-zonal congestion costs decreased to \$5.2 million in April from \$8.1 million in March.
- A majority of congestion this month occurred on the Pacific AC Intertie (PACI) and the Nevada - Oregon Border (NOB) branch groups.
- Congestion on these branch groups was driven by a combination of SCs trying to access cheap North West power, and maintenance derates on PACI and NOB which decreased the available transmission capacity