## Market Performance Report for April 2008



Alan Isemonger Manager, Market Information



ISO Board of Governors General Session July 9, 2008

### **Market Highlights**

- April was a quiet month
- Lighter loads and fewer units on-line limited ramping capability and contributed to more frequent price spikes

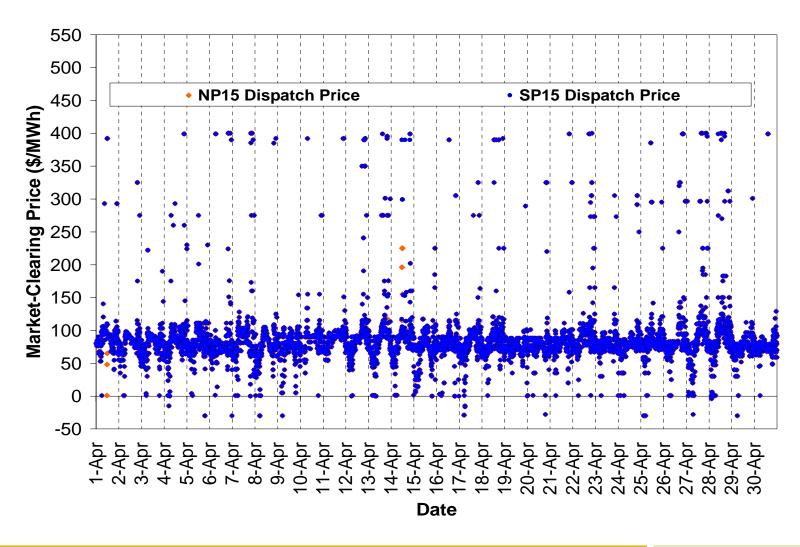


## **Monthly Market Performance Metrics**

Monthly Metrics	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Avg
Average Gas Price	\$7.19	\$7.27	\$6.89	\$6.14	\$5.93	\$5.73	\$6.80	\$7.05	\$7.00	\$7.78	\$8.31	\$9.09	\$9.96 <b>'</b>	\$7.33
Average On-Peak Contract Price	\$64.78	\$75.04	\$68.47	\$71.76	\$71.40	\$59.64	\$71.89	\$64.21	\$70.41	\$76.90	\$77.52	\$84.41	\$97.74	\$74.12
Average Real-Time Price	\$50.24	\$59.14	\$54.85	\$55.84	\$62.44	\$47.22	\$56.59	\$56.95	\$62.84	\$70.64	\$66.07	\$75.88	\$89.10	\$63.13
No. of Price Spikes Over \$250	203	101	77	79	167	10	93	72	122	192	192	171	225	125
Costs Incurred over \$250 (percent)	33%	22%	18%	14%	24%	3%	27%	16%	29%	28%	26%	21%	<b>25</b> %	21%
AS Cost (\$ per MWh)	\$0.38	\$0.74	\$0.59	\$1.16	\$0.78	\$0.58	\$0.47	\$0.56	0.5	0.45	0.63	0.73	0.77	\$0.66
RA Unit Commitment Costs (\$M)	\$2.1	\$1.9	\$3.4	\$4.8	\$3.2	\$2.9	\$4.3	\$5.0	\$5.0	\$7.0	\$4.0	\$4.0	\$5.0 <sup>'</sup>	\$4.2
FERC Unit Commitment Costs (\$M)	\$0.1	\$0.0	\$1.4	\$1.4	\$1.4	\$0.8	\$3.8	\$0.6	\$0.1	\$0.0	\$0.0	\$0.0	\$0.0 <sup>'</sup>	\$0.8
Inc OOS Redispatch Costs (\$M)	\$1.7	\$1.5	\$1.2	\$2.1	\$1.2	\$1.2	\$4.5	\$2.0	\$3.1	\$3.4	\$3.0	\$2.9	\$1.8 <sup>'</sup>	\$2.3
Dec OOS Redispatch Costs (\$M)	\$0.3	\$0.7	\$0.3	\$0.4	\$0.5	\$0.3	\$2.5	\$2.5	\$1.2	\$2.3	\$2.5	\$1.1	\$0.6 <sup>'</sup>	\$1.2
Total Interzonal Congestion (\$M)	\$5.0	\$12.5	\$4.5	\$4.2	\$3.1	\$4.3	\$12.9	\$10.3	\$12.3	\$6.1	\$1.9	\$9.0	\$4.5	\$7.1

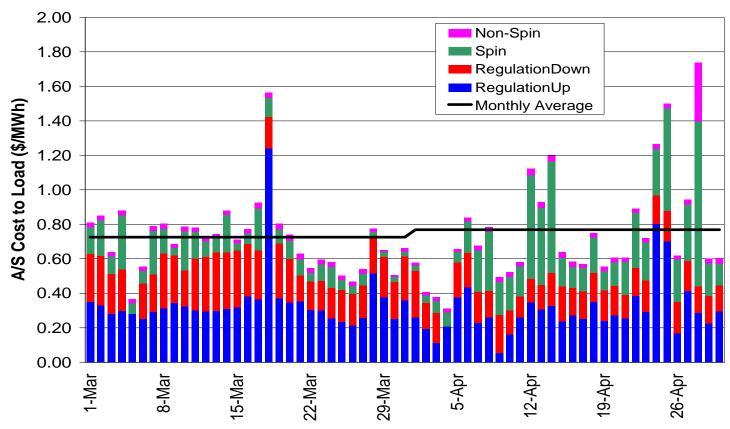


### Number of Price Spikes Up to 225 from 171





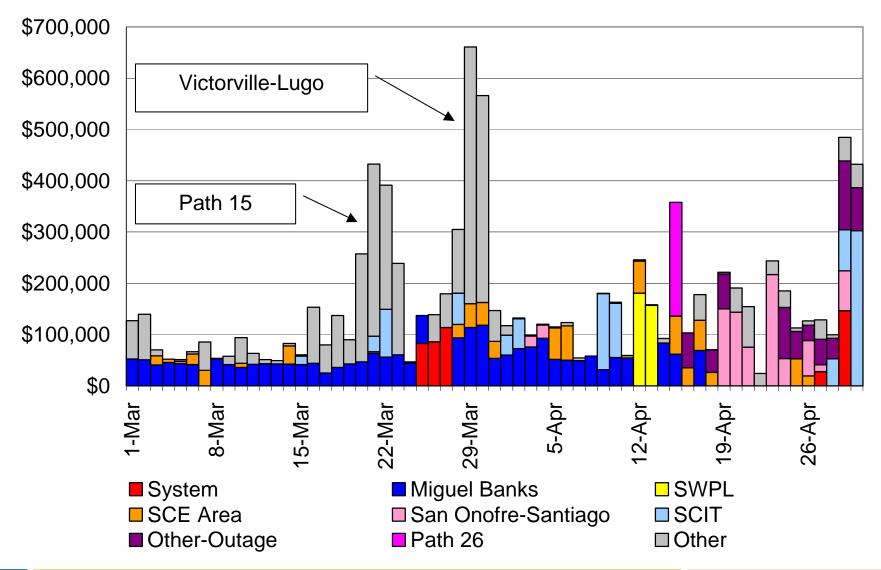
## **AS Cost to Load Increased Slightly**



		Average Requ	ired (MW)	Weighted Average Price (\$/MW)						
	RU	RD	SP	NS	RU	RD	SP	NS		
Mar 08	364	356	798	797	\$ 23.58	\$ 16.97	\$ 3.43	\$ 0.80		
Apr 08	382	356	824	846	\$ 20.40	\$ 12.56	\$ 8.16	\$ 1.18		
	4.8%	0.0%	3.3%	6.2%	-13.5%	-26.0%	137.8%	47.3%		

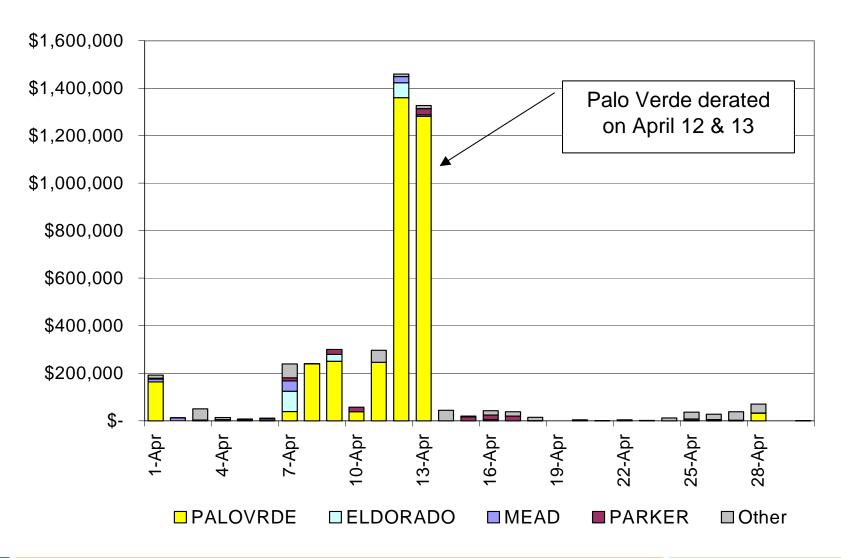


### Unit Commitment Costs Up \$1M from \$4M in March





### Inter-zonal Congestion Costs Down by half to \$4.5M





# Market Performance Report for May 2008



Alan Isemonger Manager, Market Information



ISO Board of Governors General Session July 9, 2008

### **Market Highlights**

- The month of May saw the first heat wave of the year starting on May 15 and ending on May 19.
- The heat wave during mid month combined with transmission line outages drove the majority of unit commitment costs
- Availability of cheap hydro power from Pacific Northwest resulted in significant Inter-zonal Congestions costs

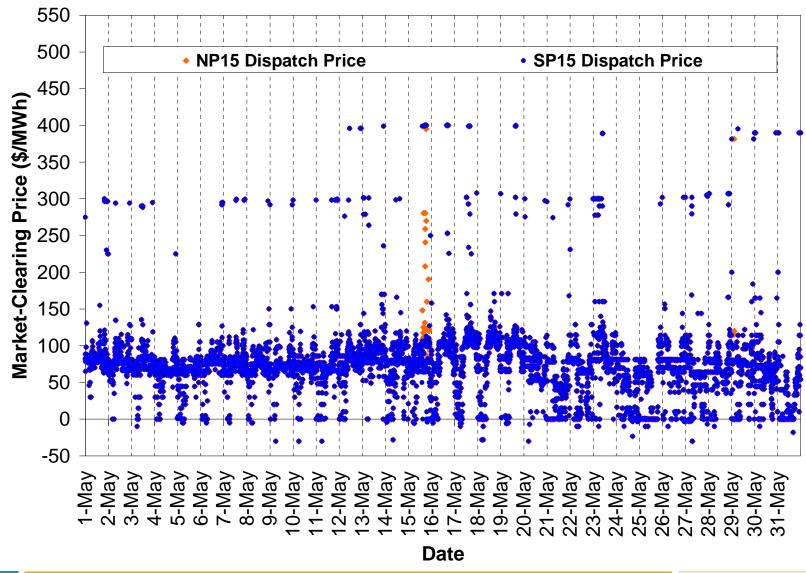


## **Monthly Market Performance Metrics**

Monthly Metrics	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Avg
Average Gas Price	\$7.27	\$6.89	\$6.14	\$5.93	\$5.73	\$6.80	\$7.05	\$7.00	\$7.78	\$8.31	\$9.09	\$9.96	\$9.98	\$7.53
Average On-Peak Contract Price	\$75.04	\$68.47	\$71.76	\$71.40	\$59.64	\$71.89	\$64.21	\$70.41	\$76.90	\$77.52	\$84.41	\$97.74	\$89.18	\$75.27
Average Real-Time Price	\$59.14	\$54.85	\$55.84	\$62.44	\$47.22	\$56.59	\$56.95	\$62.84	\$70.64	\$66.07	\$75.88	\$89.10	\$64.21	\$63.21
No. of Price Spikes Over \$250	101	77	79	167	10	93	72	122	192	192	171	225	195	130
Costs Incurred over \$250 (percent)	22%	18%	14%	24%	3%	27%	16%	29%	28%	26%	21%	25%	25%	21%
AS Cost (\$ per MWh)	\$0.74	\$0.59	\$1.16	\$0.78	\$0.58	\$0.47	\$0.56	0.5	0.45	0.63	0.73	0.77	1.18	\$0.70
RA Unit Commitment Costs (\$M)	\$1.9	\$3.4	\$4.8	\$3.2	\$2.9	\$4.3	\$5.0	\$5.0	\$7.0	\$4.0	\$4.0	\$5.0	\$16.0	\$5.1
FERC Unit Commitment Costs (\$M)	\$0.0	\$1.4	\$1.4	\$1.4	\$0.8	\$3.8	\$0.6	\$0.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.7
Inc OOS Redispatch Costs (\$M)	\$1.5	\$1.2	\$2.1	\$1.2	\$1.2	\$4.5	\$2.0	\$3.1	\$3.4	\$3.0	\$2.9	\$1.8	\$3.5	\$2.4
Dec OOS Redispatch Costs (\$M)	\$0.7	\$0.3	\$0.4	\$0.5	\$0.3	\$2.5	\$2.5	\$1.2	\$2.3	\$2.5	\$1.1	\$0.6	\$1.7	\$1.3
Total Interzonal Congestion (\$M)	\$12.5	\$4.5	\$4.2	\$3.1	\$4.3	\$12.9	\$10.3	\$12.3	\$6.1	\$1.9	\$9.0	\$4.5	\$18.2	\$8.0

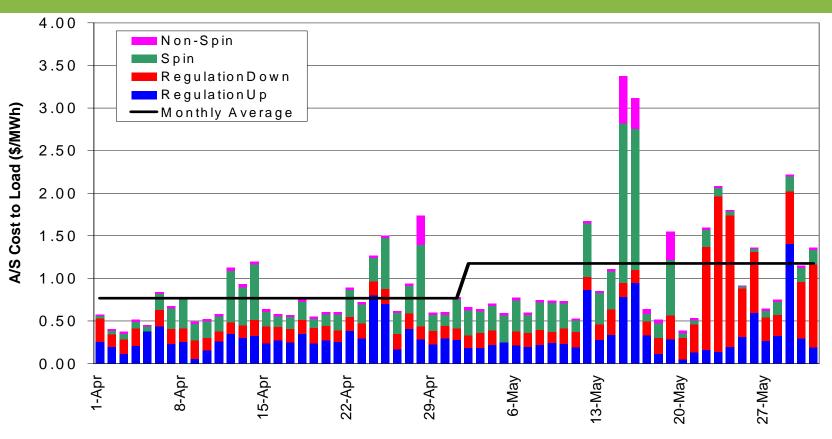


### **Number of Price Spikes Down to 195 from 225**





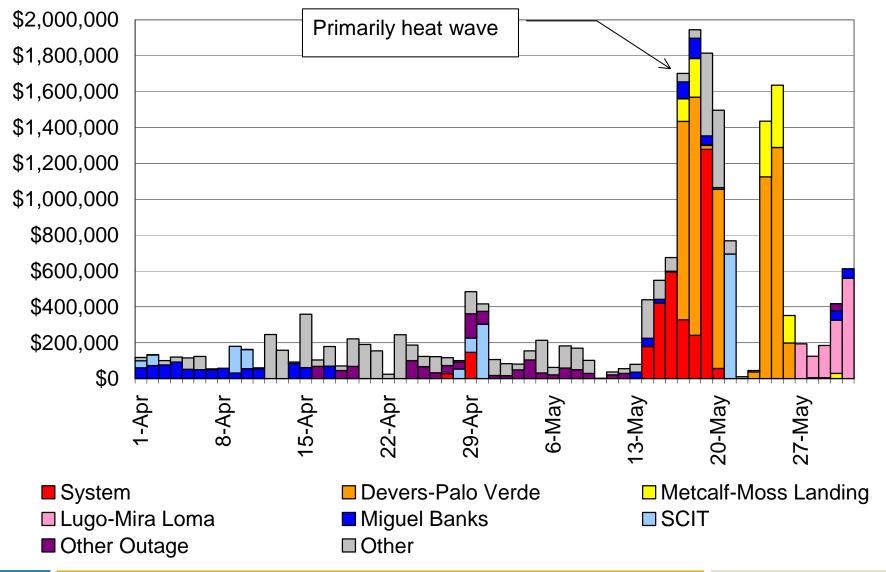
### AS Cost to Load up to \$1.12 from \$0.77



		Average Requ	ired (MW)	Weighted Average Price (\$/MW)						
	RU	RD	SP	NS	RU	RD	SP	NS		
Apr 08	382	356	824	846	\$ 20.40	\$ 12.56	\$ 8.16	\$ 1.18		
May 08	383	356	814	838	\$ 23.98	\$ 29.59	\$ 11.79	\$ 2.31		
	0.4%	0.1%	-1.2%	-0.9%	17.6%	135.5%	44.5%	95.5%		



### Unit Commitment Costs Up \$16 M from \$5M in April





### Inter-zonal Congestion Costs up \$13.7 M to \$18.2M

