



California ISO

California Independent
System Operator

Market Analysis Report

Events of February 2004

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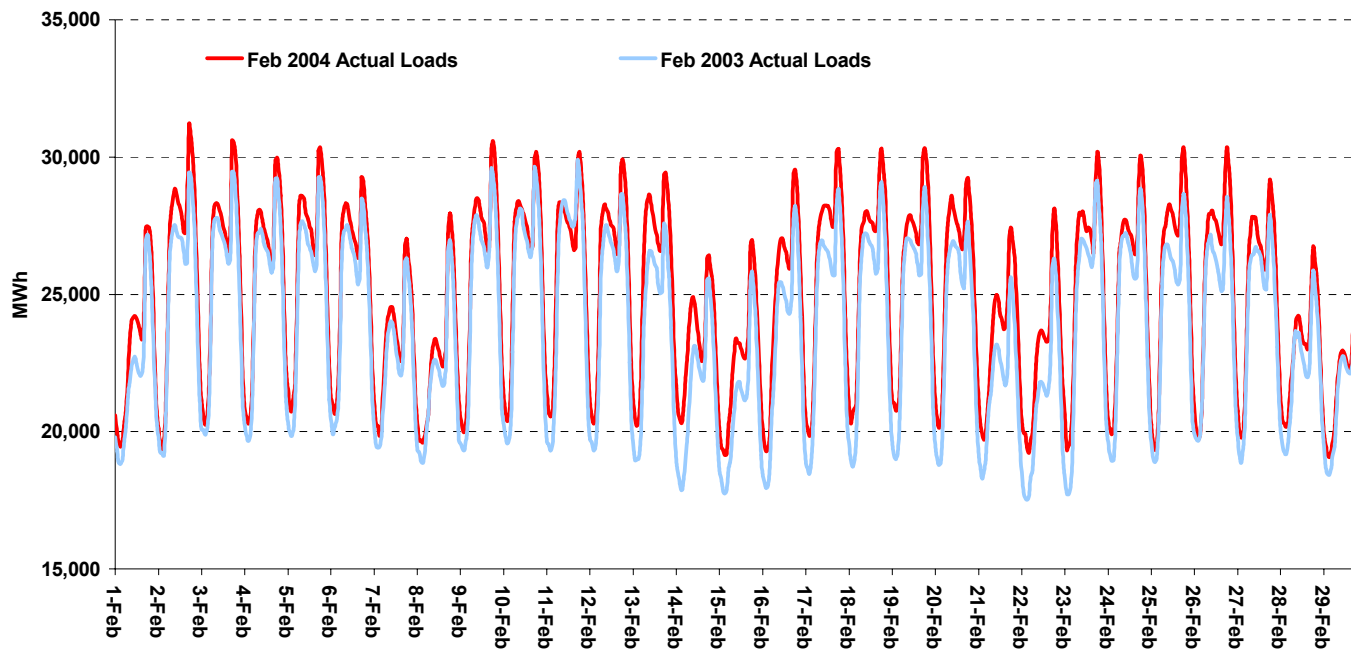
February Highlights

- Feb-04 Loads 4.5% higher than last year
 - Mild weather in Feb-03
 - Improving economy
- Real-time market stable, few price spikes
 - price-to-cost markup below 10%
- Intrazonal congestion costs up substantially
 - Costs \$8 million in February
 - Mostly due to Miguel/SWPL congestion
 - SONGS out for refueling Feb 9 through March 25
- Strong imports from Southwest caused interzonal congestion on Palo Verde intertie



Loads 4.5% higher in Feb-04 than in Feb-03, likely due to colder weather and economic growth

Comparison of Loads: Feb-04 to Feb-03



	2003	2004	Pct. Chg.
Peak Load (MW)	29,852	31,191	4.5%
Avg. Energy (MW)	23,820	24,880	4.5%



Robust increases in load since Jul-03 indicate some load growth due to factors other than weather, such as the economy

Load Growth Rates Compared with Same Month Prior Year

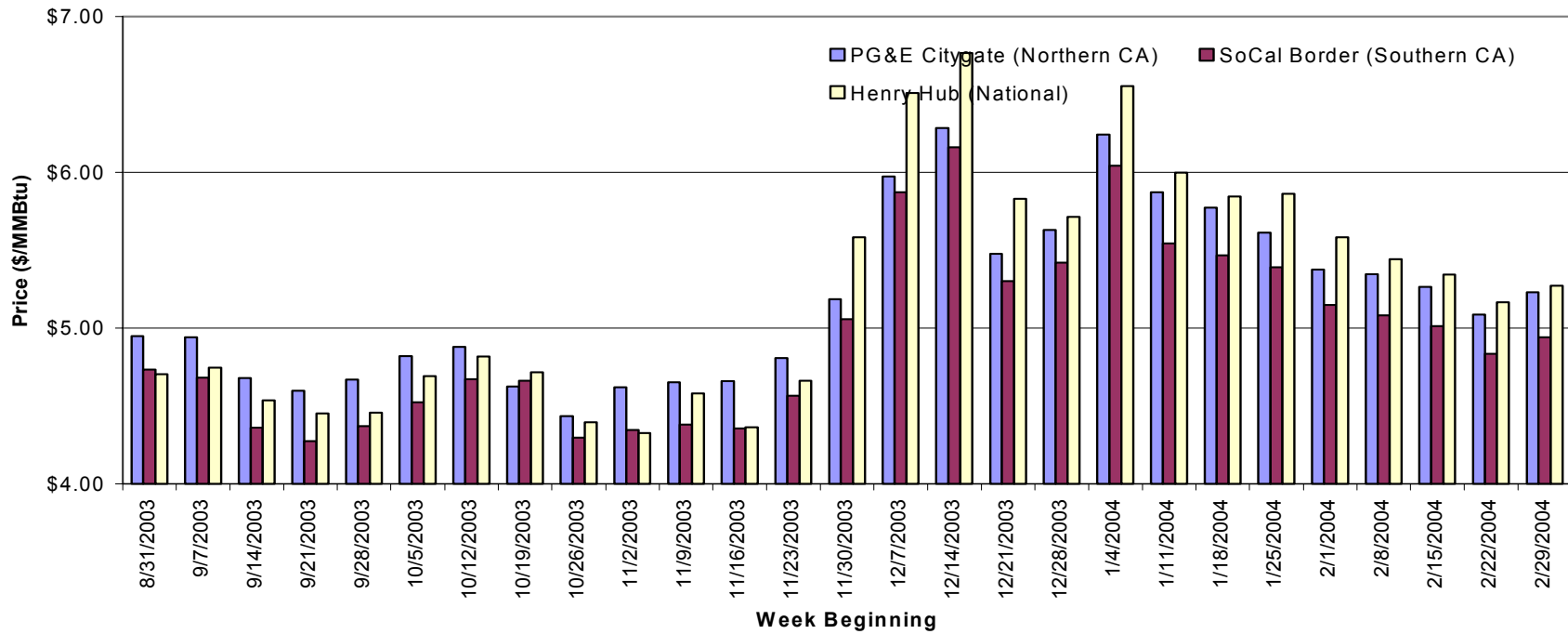
	Avg. Hrly. Load	Avg. Daily Peak	Monthly Peak
March-03	0.7%	1.6%	4.7%
April-03	-2.7%	-2.2%	0.2%
May-03	-0.8%	0.7%	10.5%
June-03	-1.6%	-1.1%	3.6%
July-03	4.3%	6.9%	0.5%
August-03	5.4%	8.5%	4.3%
September-03	2.2%	3.3%	0.3%
October-03	5.4%	7.0%	3.7%
November-03	-0.2%	1.0%	0.2%
December-03	2.8%	3.1%	2.7%
January-04	4.3%	3.1%	3.2%
February-04	4.5%	3.9%	4.5%

Note: Load figures are based on unadjusted ISO control area loads.



Gas prices dropping from Dec-Jan peak levels, around \$5/MMBtu

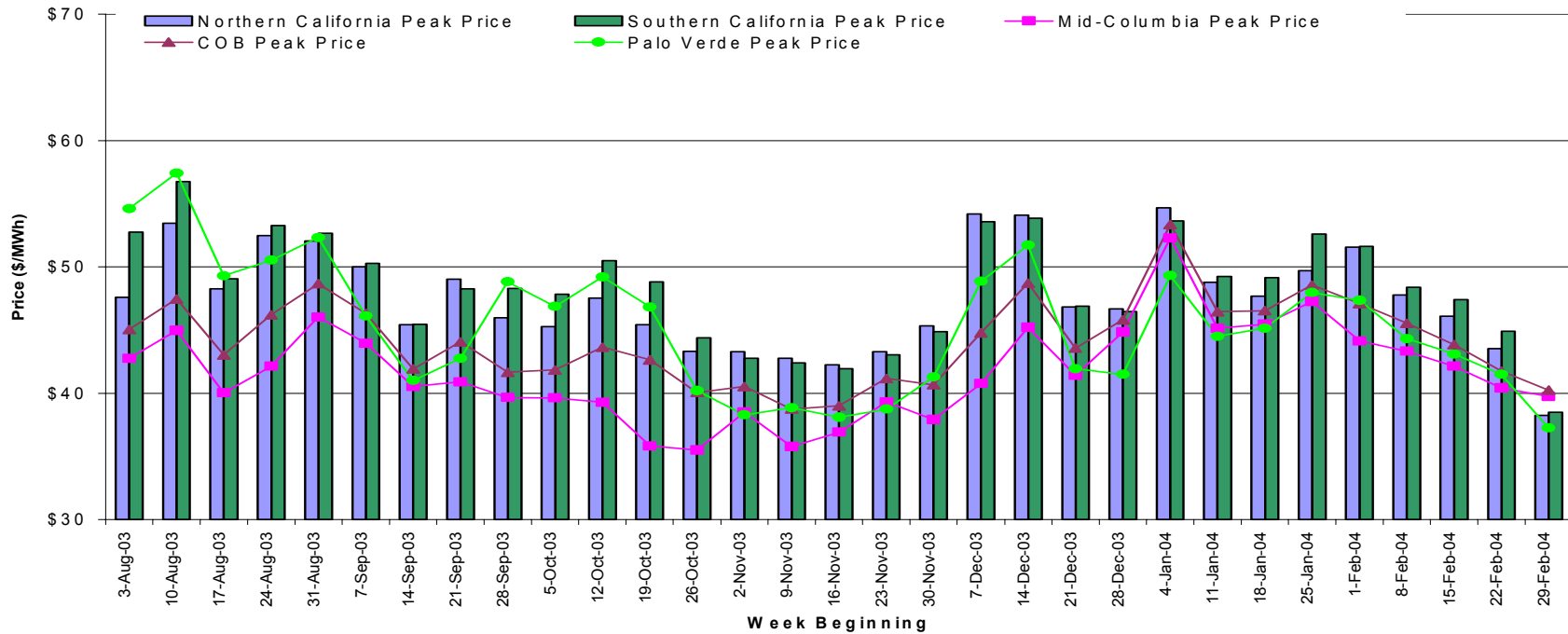
Weekly Average Gas Prices through Feb-04





Electric prices follow natural gas prices

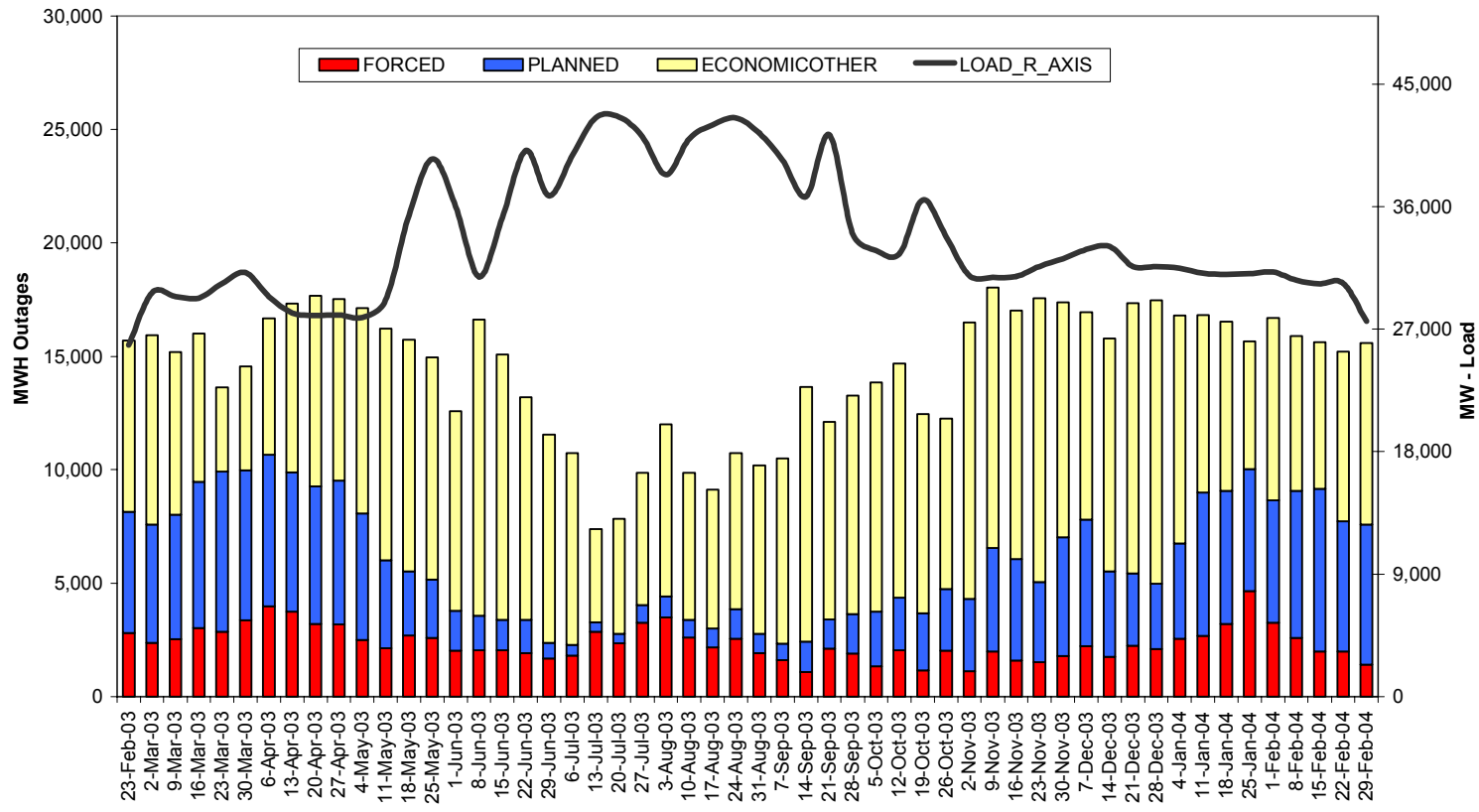
Regional Day-Ahead Forward Electric Prices - Weekly Averages





**Two baseload nuclear units out in Feb-04; both return in March.
Several others out for seasonal maintenance**

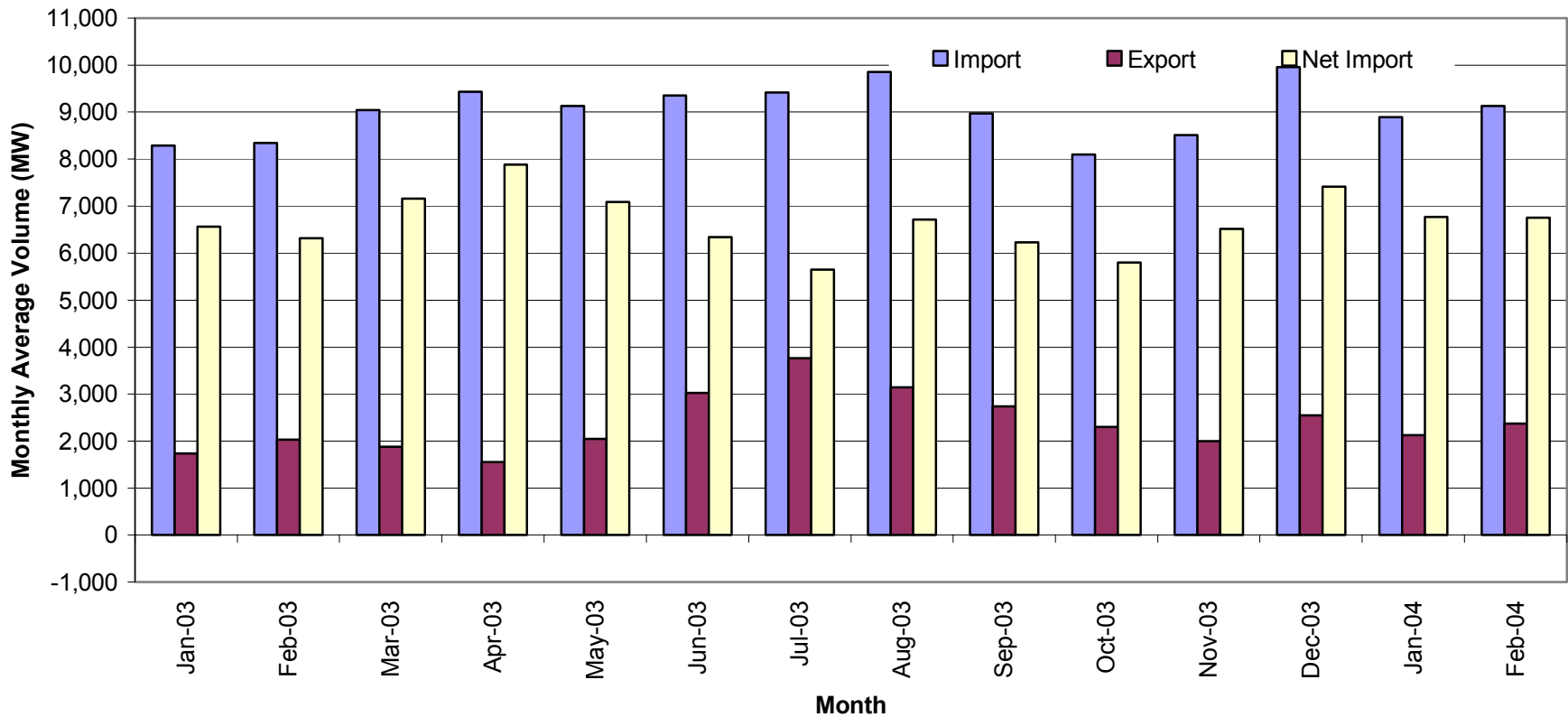
Weekly average outages through Feb-04





Import growth mostly on Palo Verde, due to low winter loads in Southwest and new generation in that region

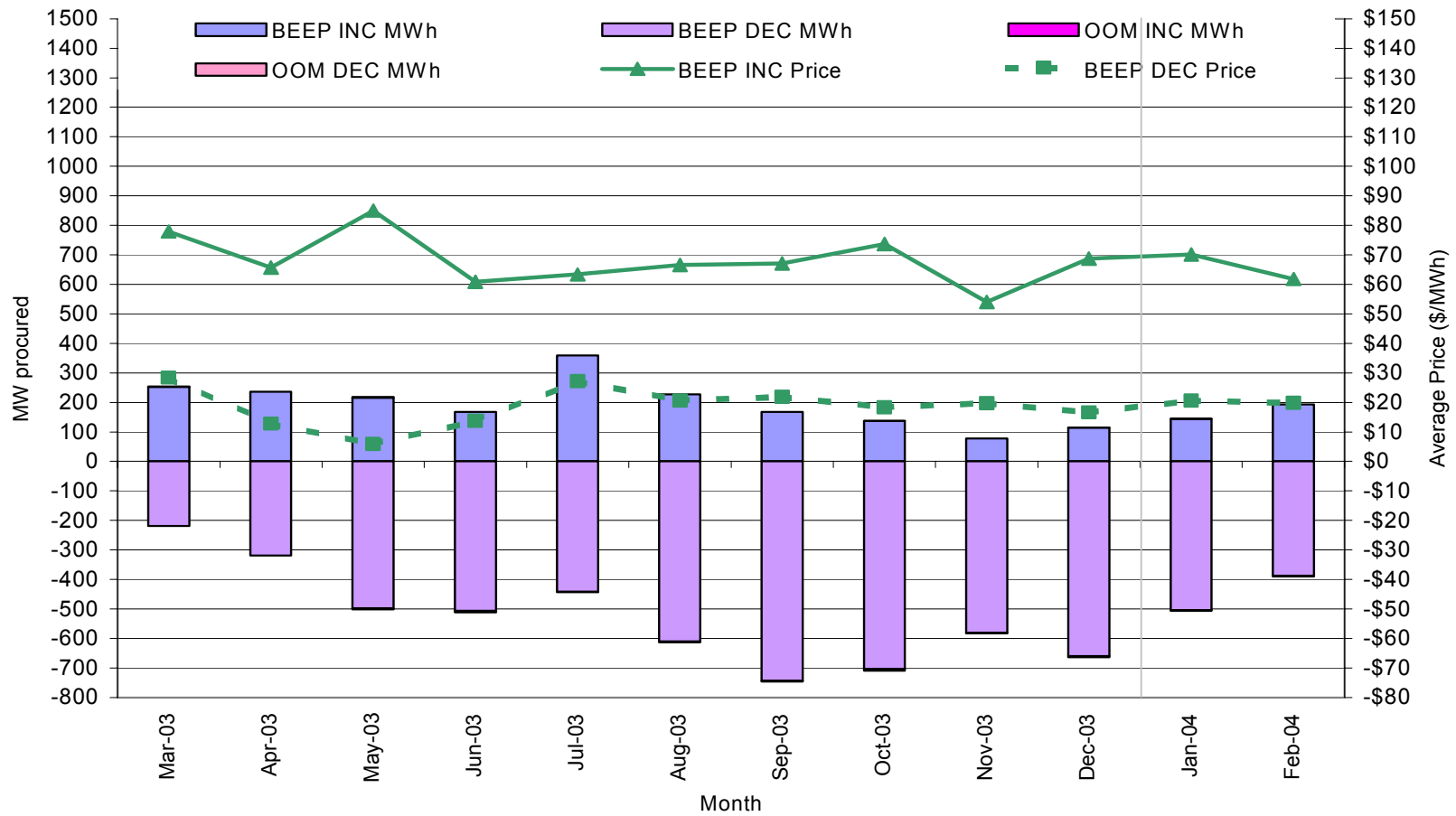
Scheduled Imports and Exports during Peak Hours - Monthly Averages





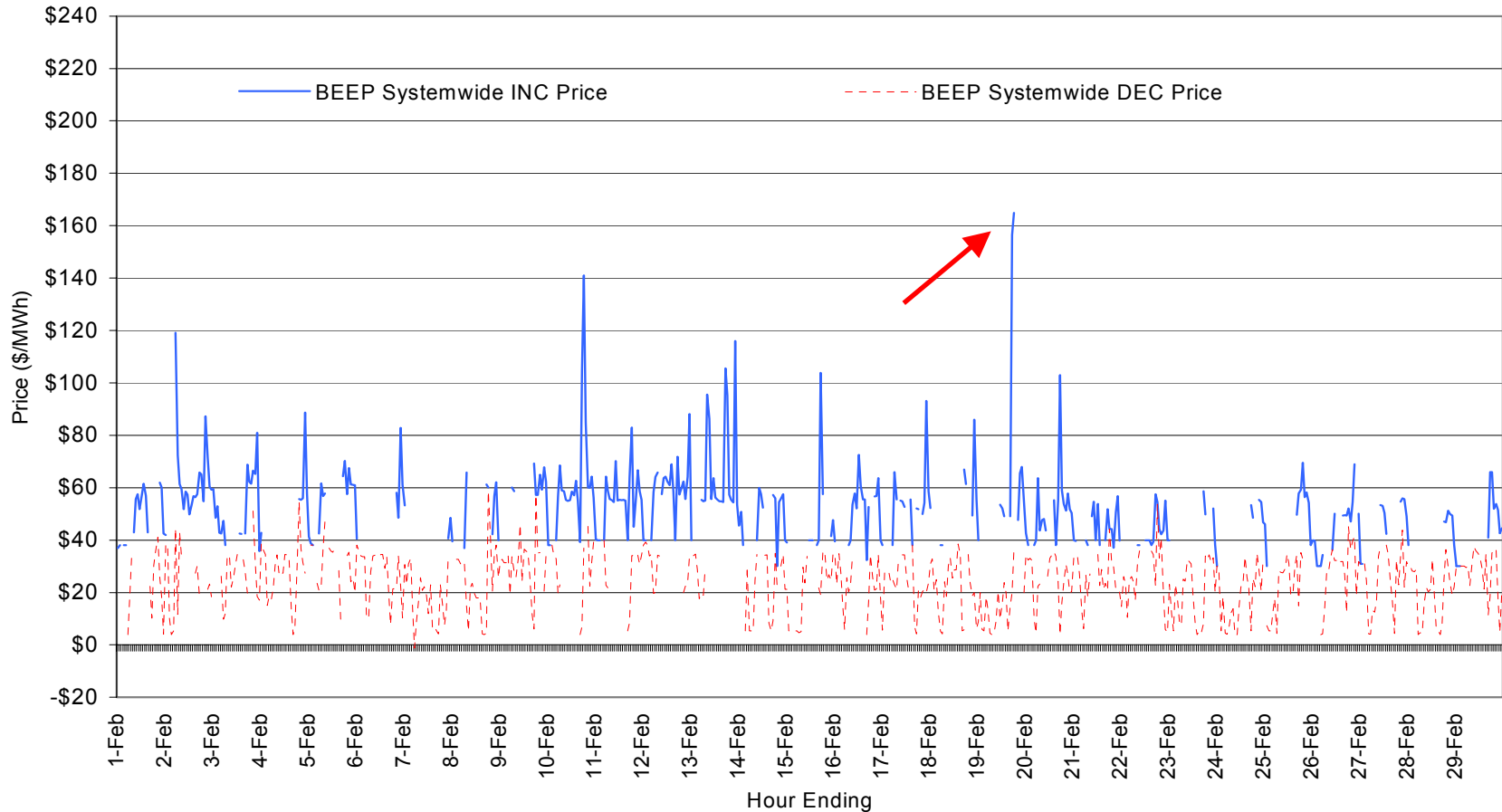
INC prices lower, volumes higher in Feb-04

Monthly Average BEEP and OOM Volume: 01-Mar-03 through 29-Feb-04





Most price spikes during morning and evening load ramps **BEEP Hourly Average Prices: 01-Feb-04 through 29-Feb-04**

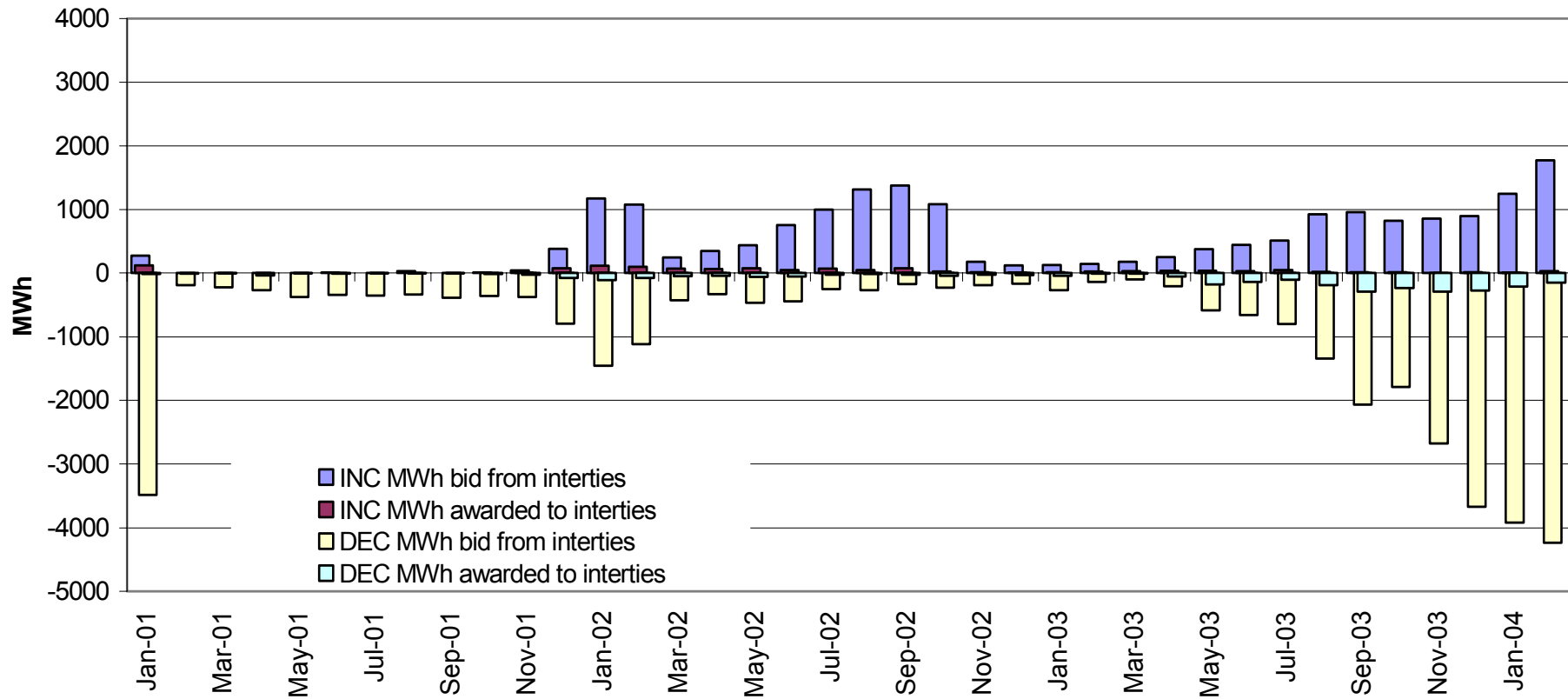


Feb 19 spike: low estimated markup, since marginal unit had very high operating cost



RT INC bid volume increasing

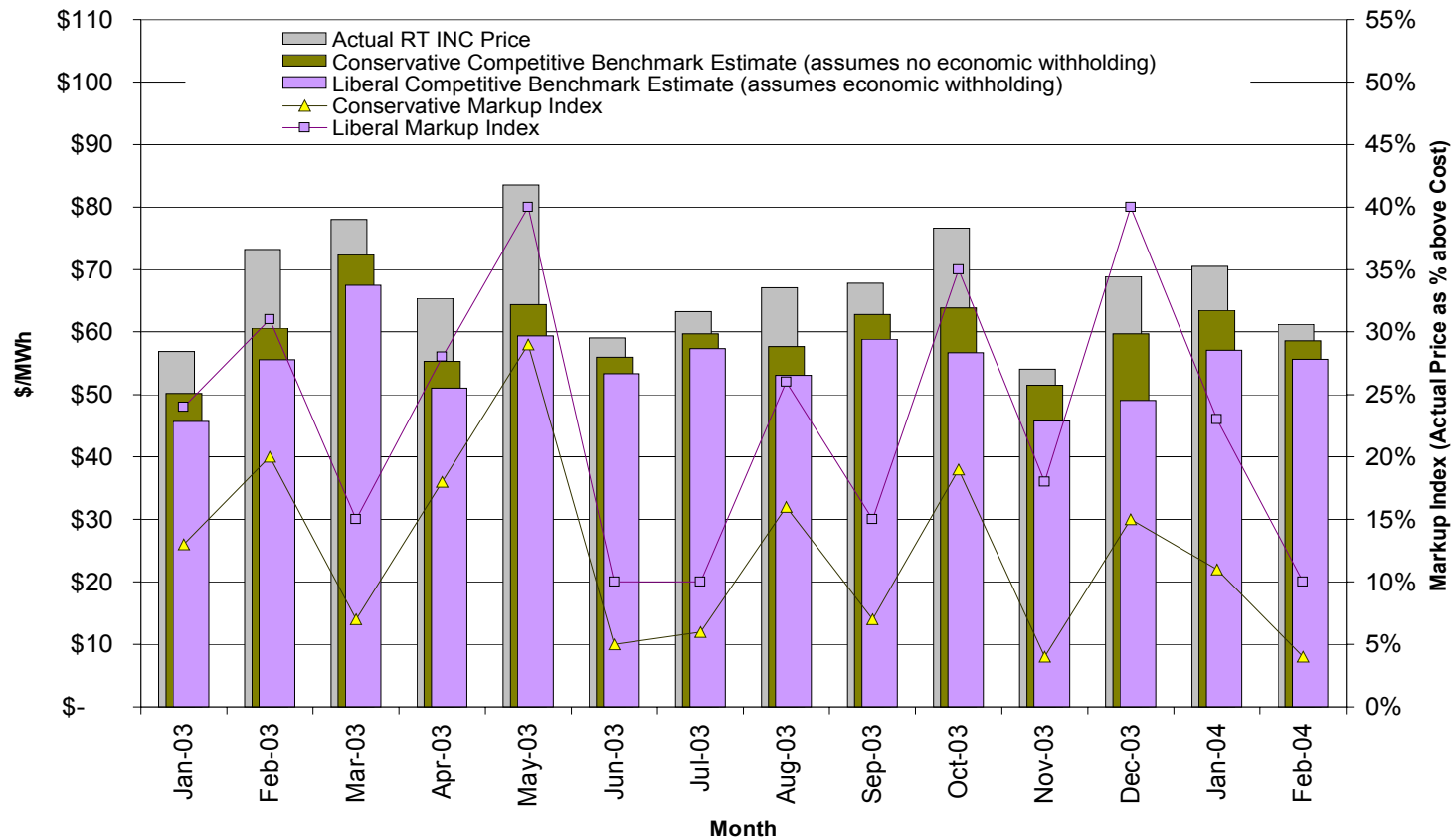
Monthly Average Intertie Bid Volume





Real-time markup between 5 and 10 percent in February, lowest range since Summer 2003, markup distributed thinly across many hours

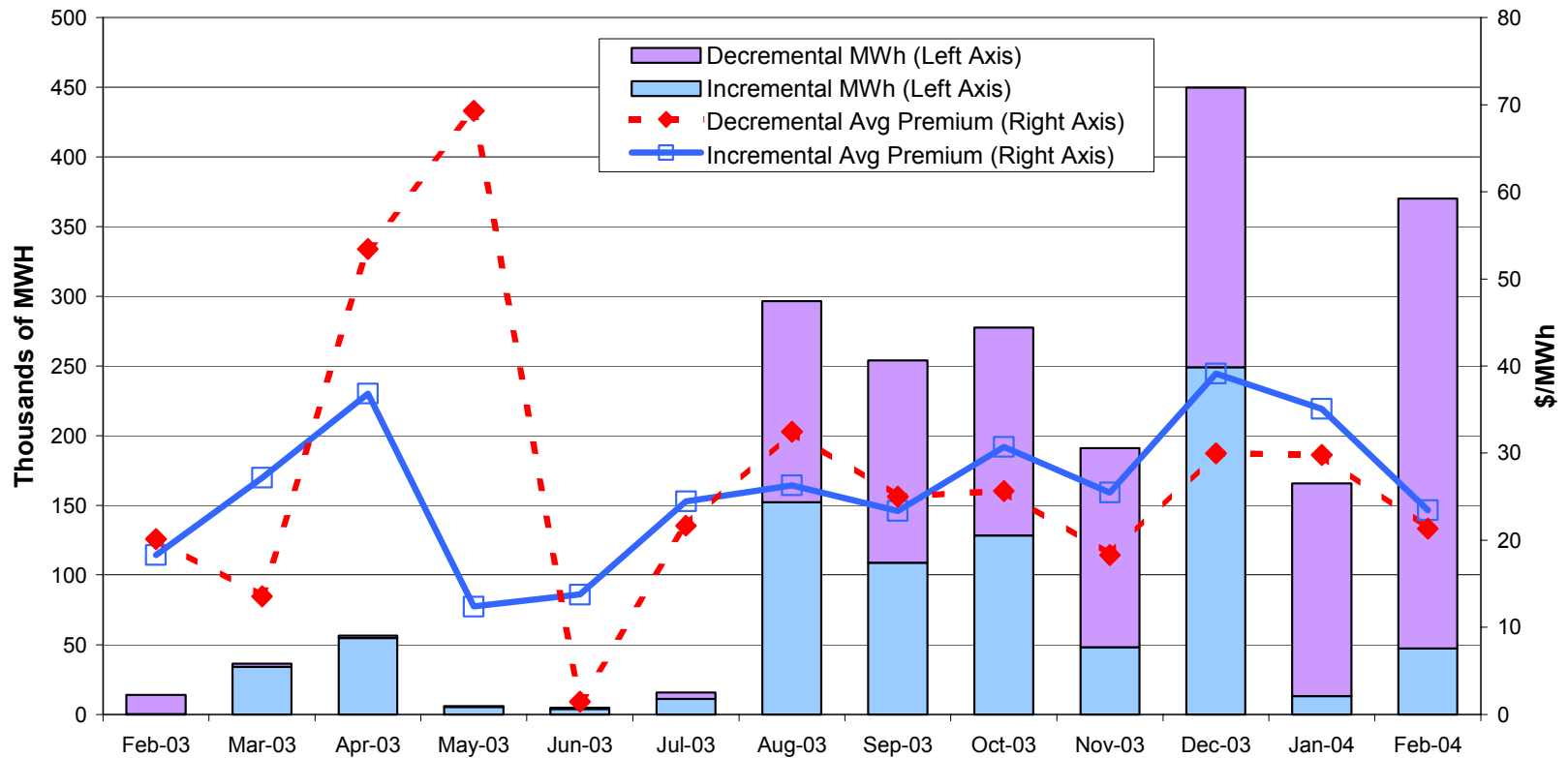
Comparison of Prices with Competitive Baseline Estimates, and resultant range of Price-to-Cost Markup





Decremental intrazonal congestion costs increased due to congestion on SWPL and at Miguel Substation

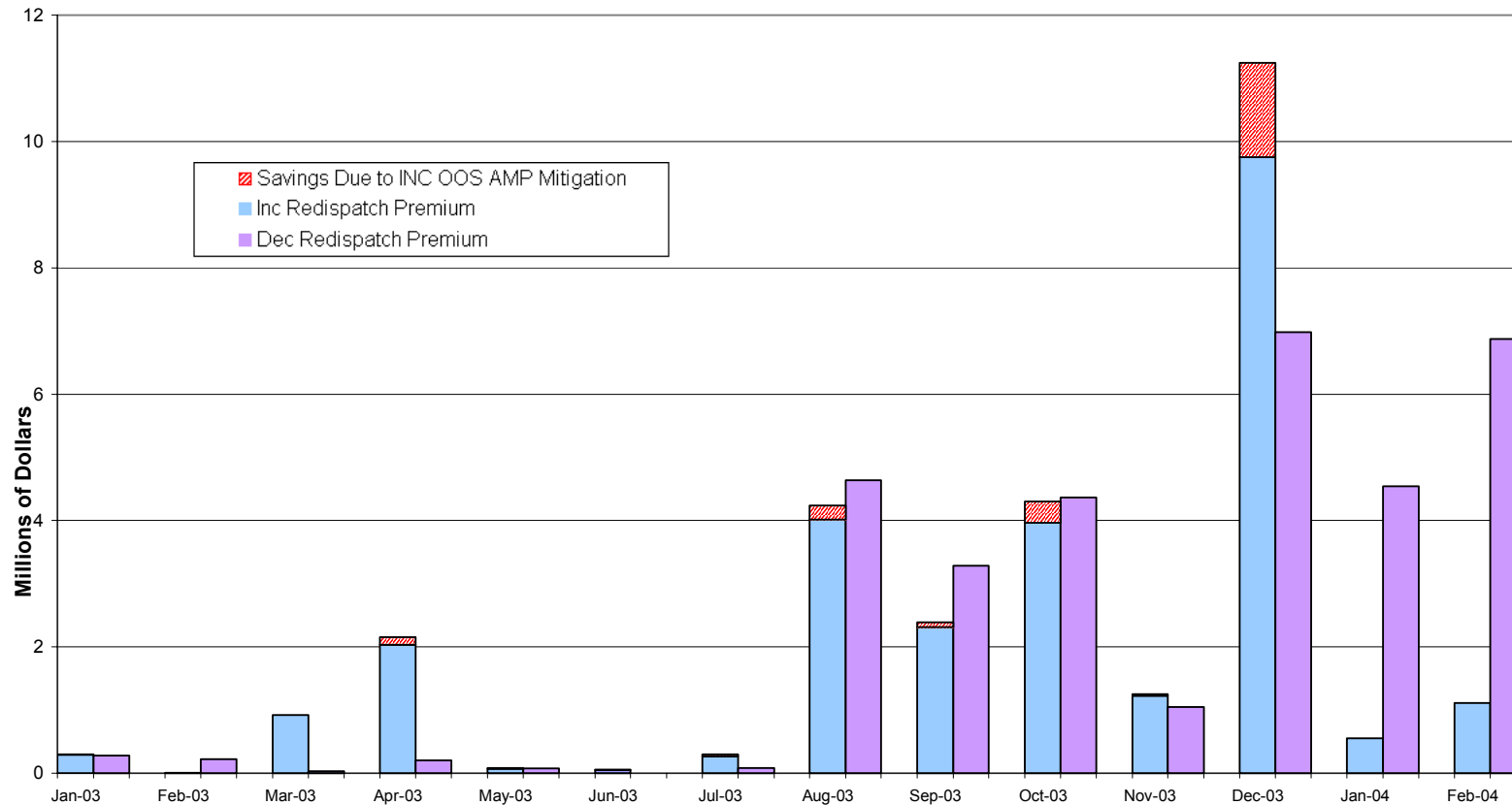
Intrazonal Congestion Redispatch Premiums and Volume through Feb-04





Intrazonal Redispatch Costs Total \$8 Million in February (\$5 Million in January)

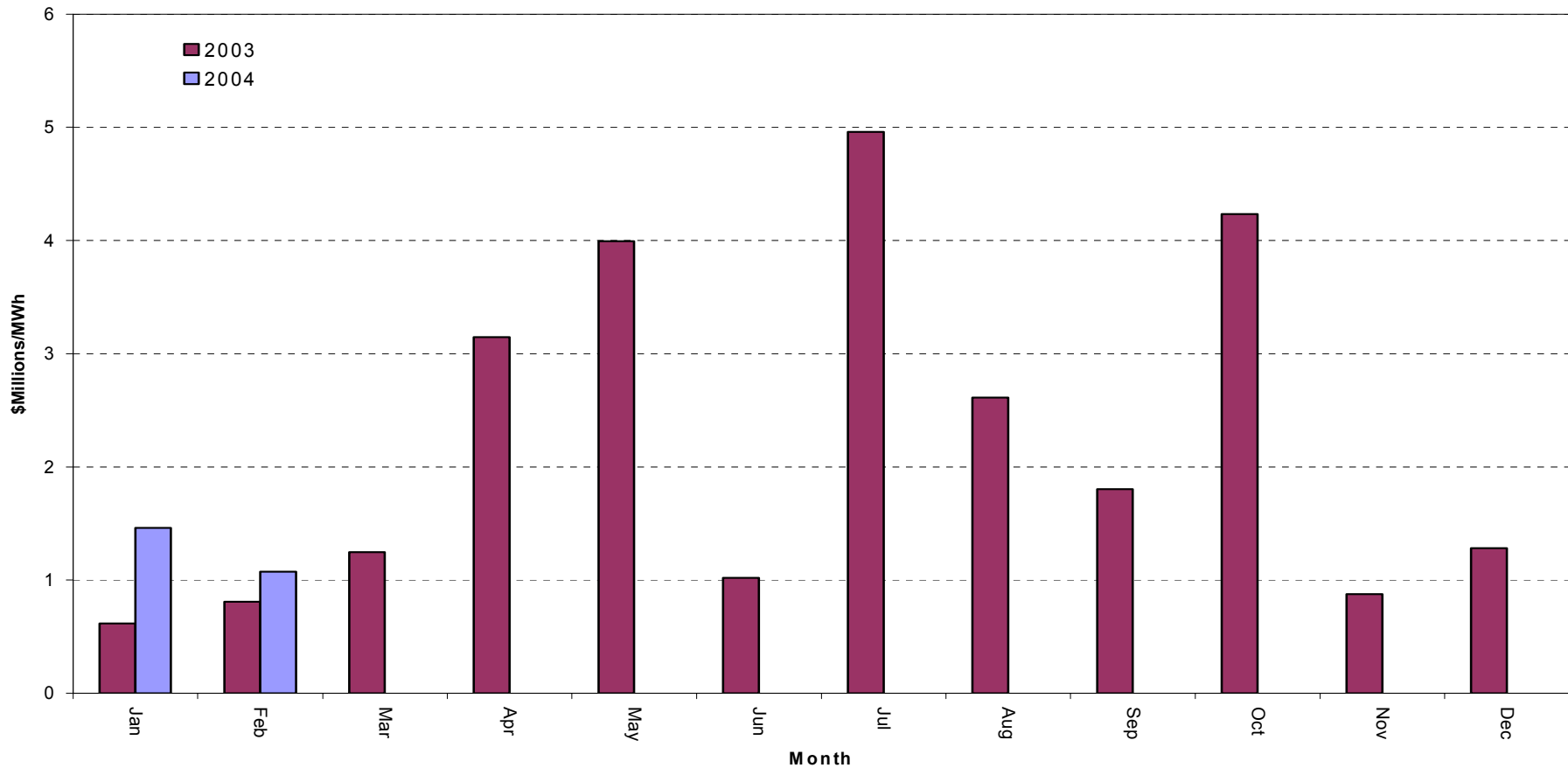
Redispatch Cost Premiums and Savings from Local Market Power Mitigation: Jan-03 through Feb-04





Interzonal congestion costs continue to be moderate

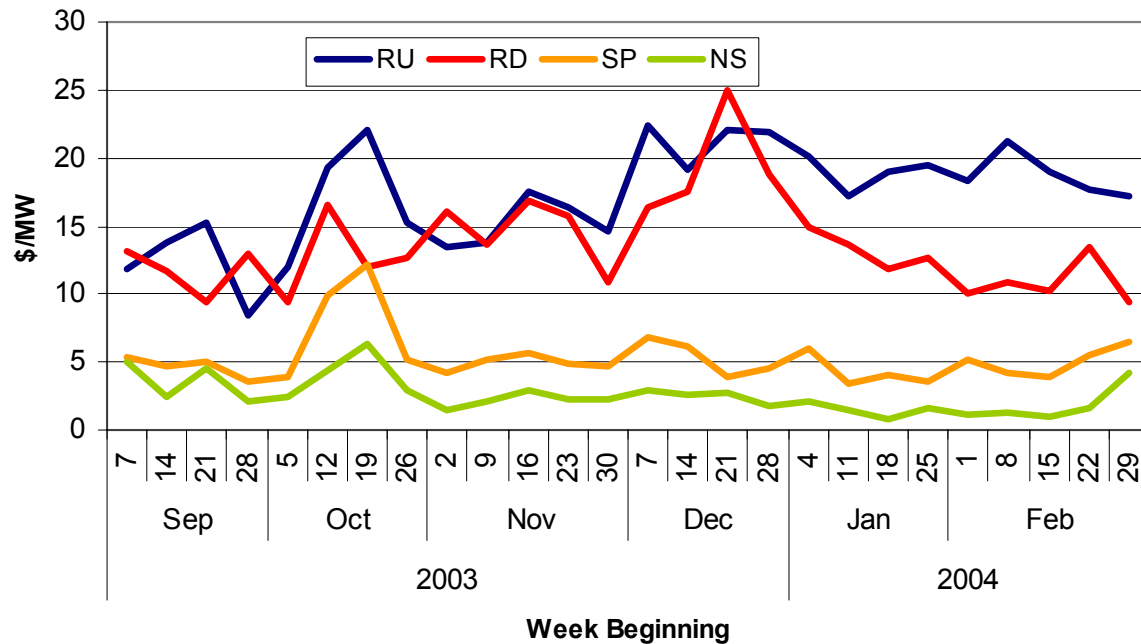
Monthly Interzonal Congestion Costs: 2004 vs 2003





Ancillary Services

- Prices decreased overall by 3.5%
- Demand increased overall by 4.4%
- Bid insufficiency decreased 59%
- Significant improvement in bid sufficiency for RD contributed to lower prices
- RMR energy taken from DA RU resources increased RU price and demand



	Average Required (MW)				Weighted Average Price (\$/MW)			
	RU	RD	SP	NS	RU	RD	SP	NS
Jan 04	363	402	708	676	\$ 18.94	\$ 13.57	\$ 4.29	\$ 1.54
Feb 04	391	406	731	710	\$ 19.09	\$ 11.13	\$ 4.82	\$ 1.39



Issues under Review

- Investigation of low- and negative-priced DEC bids at Palo Verde
 - Some cost-based reasons identified
 - Problem has abated in last few months as competition has increased
 - ISO will soon publish decremental OOS prices to encourage more bidding when prices drop
- Mitigated MCP for 2000-2001 Refund period now posted on ISO web site
 - ISO encourages parties to review *before* settlement re-run in May
- FTR auction: private information compromised
 - no evidence that auction was compromised and action resumed