

NYISO Market Operations Report

Management Committee Meeting

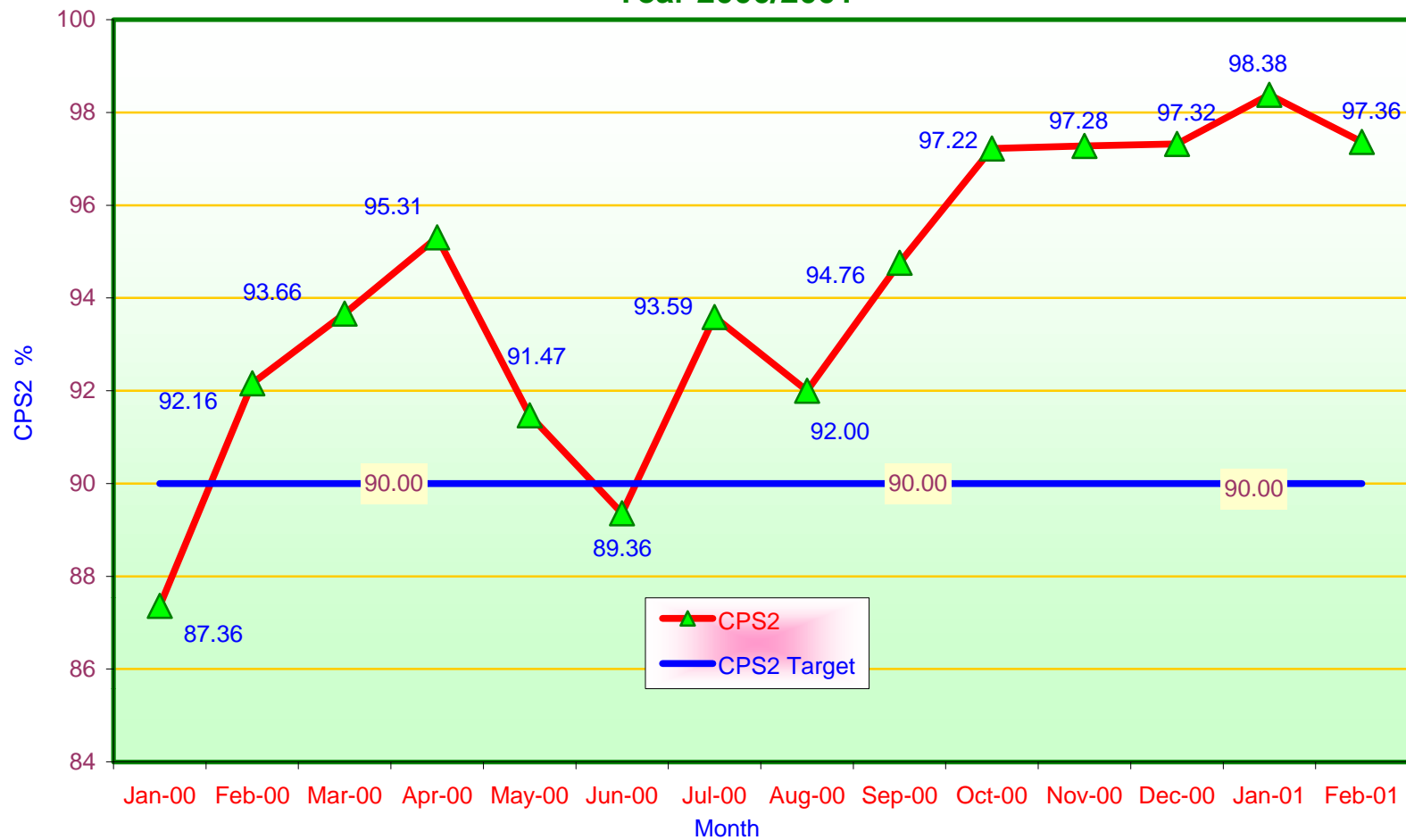
March 1, 2001

Chuck King, NYISO VP Market Services

Market Operations Report

- 1) Reliability Indicators
 - *NERC Criteria (CPS-2 Curve)*
- 2) Zonal Prices
- 3) Market Performance Highlights
- 4) Summer 2001 ICAP Status
- 5) PSC Transmission Request
- 6) Rate Schedule 1 Increase

NERC Control Performance Standard NYISO Compliance Year 2000/2001



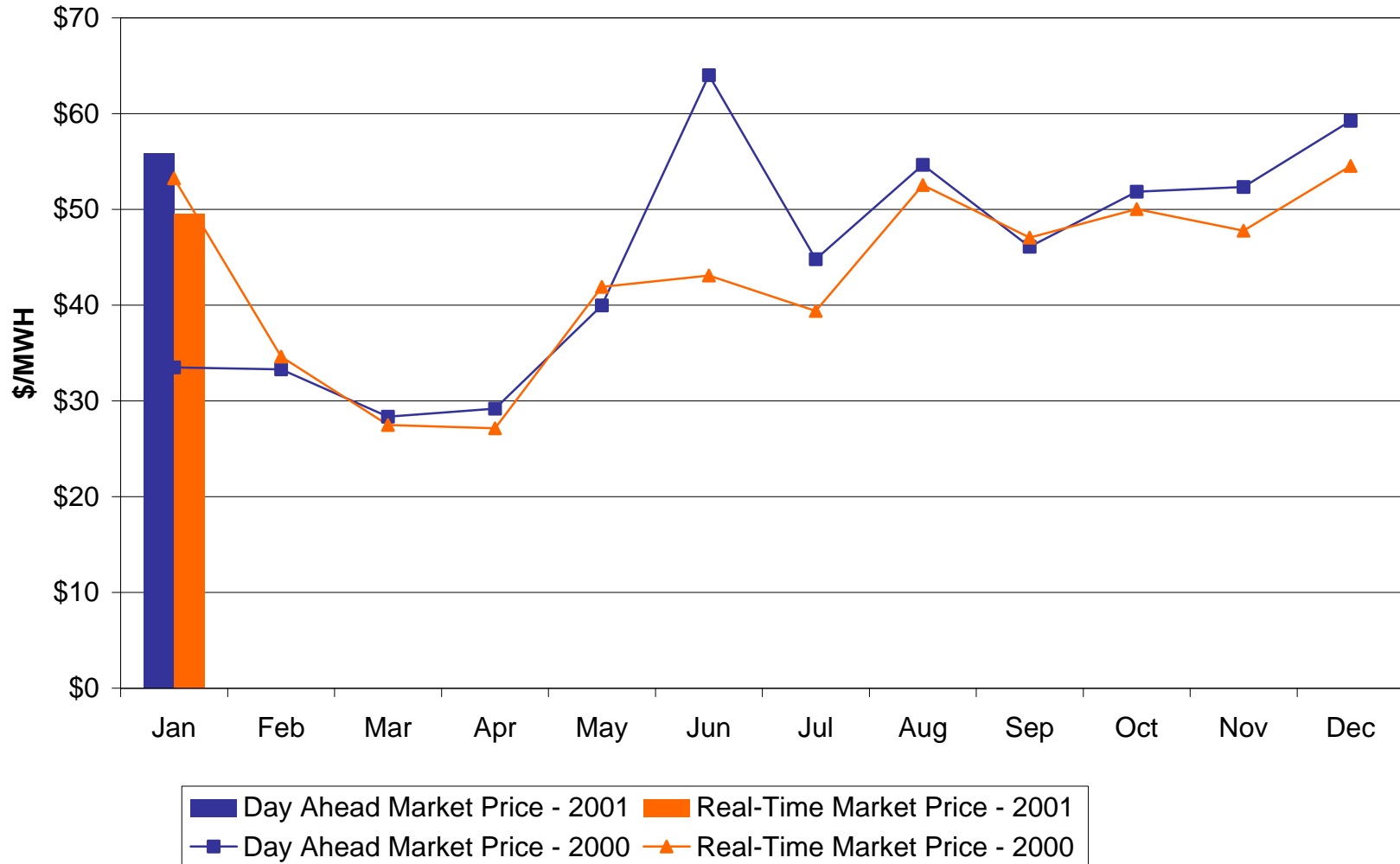
CPS2 for Feb-01 =97.36% Compliance Threshold=90%
CPS2 measures excessive unscheduled power flow resulting from large Area Control Error(ACE)

January, 2001 Zonal Statistics for NYISO

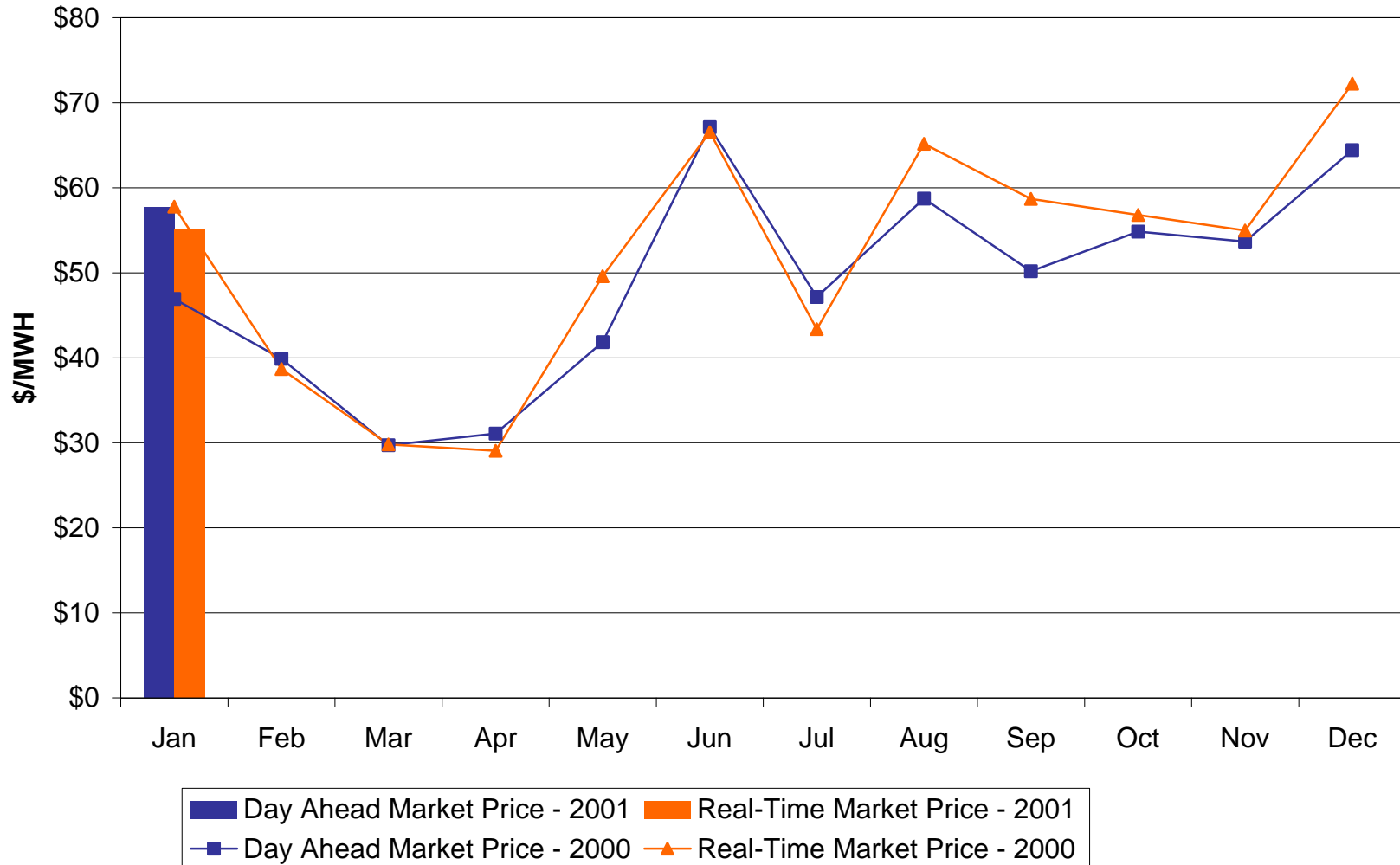
	WEST	CENTRAL	MOHAWK VALLEY	CAPITAL	HUDSON VALLEY	GENESEE	LONG ISLAND	NORTH	NEW YORK CITY	MILLWOOD	DUNWOODIE
<u>DAY AHEAD LBMP</u>											
Unweighted Price	\$44.97	\$48.22	\$49.64	\$55.93	\$55.91	\$46.51	\$79.40	\$48.37	\$57.72	\$55.90	\$56.49
Standard Deviation	\$11.89	\$12.96	\$13.25	\$18.33	\$17.43	\$12.52	\$46.24	\$12.51	\$17.69	\$17.43	\$17.59
<u>REAL TIME LBMP</u>											
Unweighted Price	\$37.98	\$39.44	\$40.52	\$52.79	\$49.52	\$39.74	\$67.71	\$39.42	\$55.11	\$52.52	\$53.23
Standard Deviation	\$15.71	\$16.69	\$17.87	\$23.08	\$20.37	\$16.65	\$32.62	\$17.70	\$25.71	\$24.16	\$24.39
<u>BALANCING MARKET LBMP</u>											
Unweighted Price	\$40.22	\$43.67	\$45.43	\$52.57	\$52.25	\$41.80	\$73.91	\$43.88	\$61.69	\$52.13	\$52.75
Standard Deviation	\$12.77	\$14.07	\$14.95	\$15.59	\$15.31	\$13.52	\$40.46	\$14.41	\$22.90	\$15.29	\$15.46

	HYDRO QUEBEC	NEW ENGLAND	ONTARIO HYDRO	PJM
<u>DAY AHEAD LBMP</u>				
Unweighted Price	\$48.18	\$56.08	\$44.56	\$45.03
Standard Deviation	\$12.53	\$18.10	\$11.56	\$14.17
<u>REAL TIME LBMP</u>				
Unweighted Price	\$39.19	\$58.61	\$38.28	\$38.09
Standard Deviation	\$18.01	\$56.49	\$15.84	\$16.84
<u>BALANCING MARKET LBMP</u>				
Unweighted Price	(\$143.58)	\$78.76	\$41.12	\$39.64
Standard Deviation	\$1,931.73	\$82.59	\$20.89	\$23.71

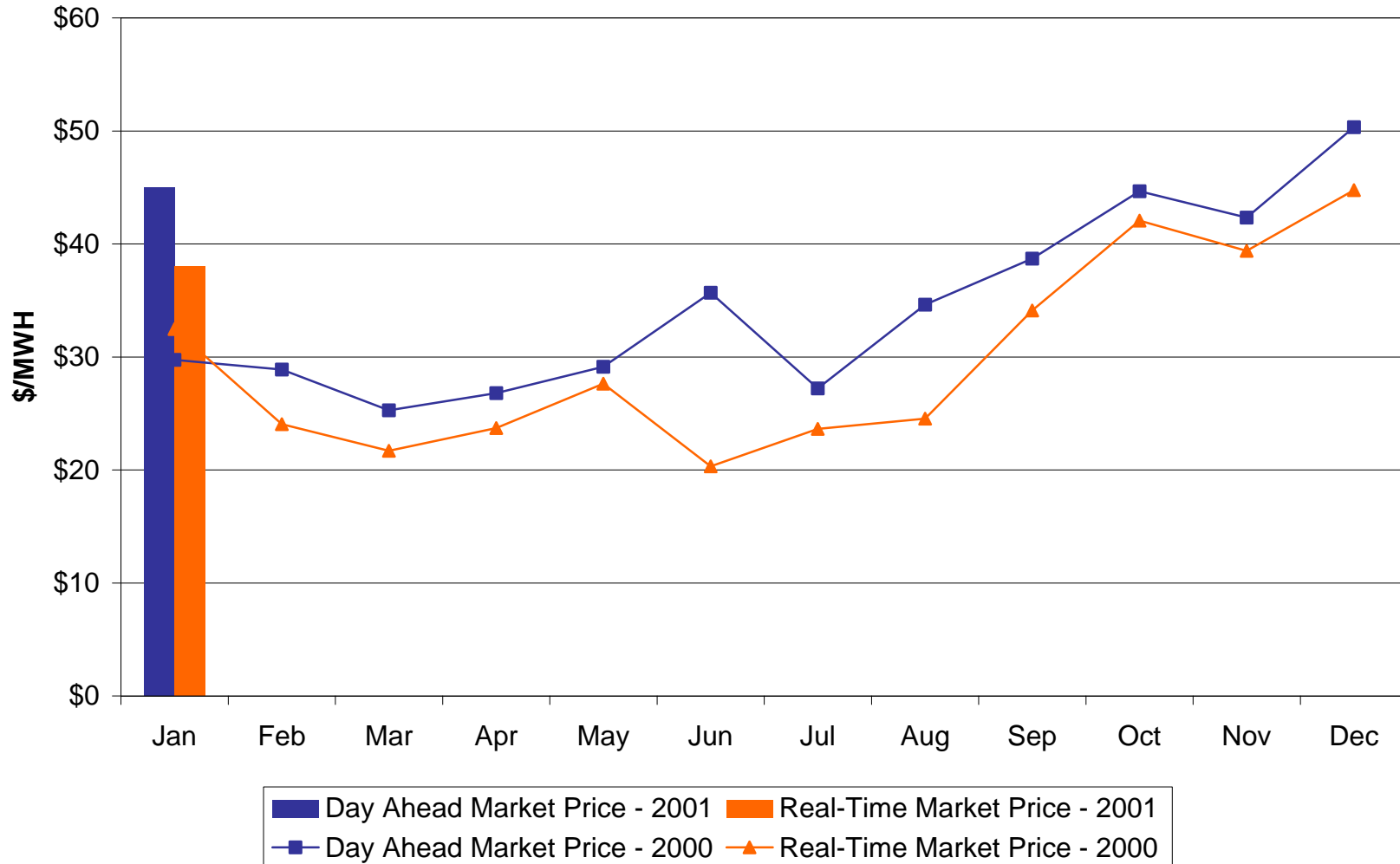
Hudson Valley Monthly Average LBMP Prices 2000 - 2001



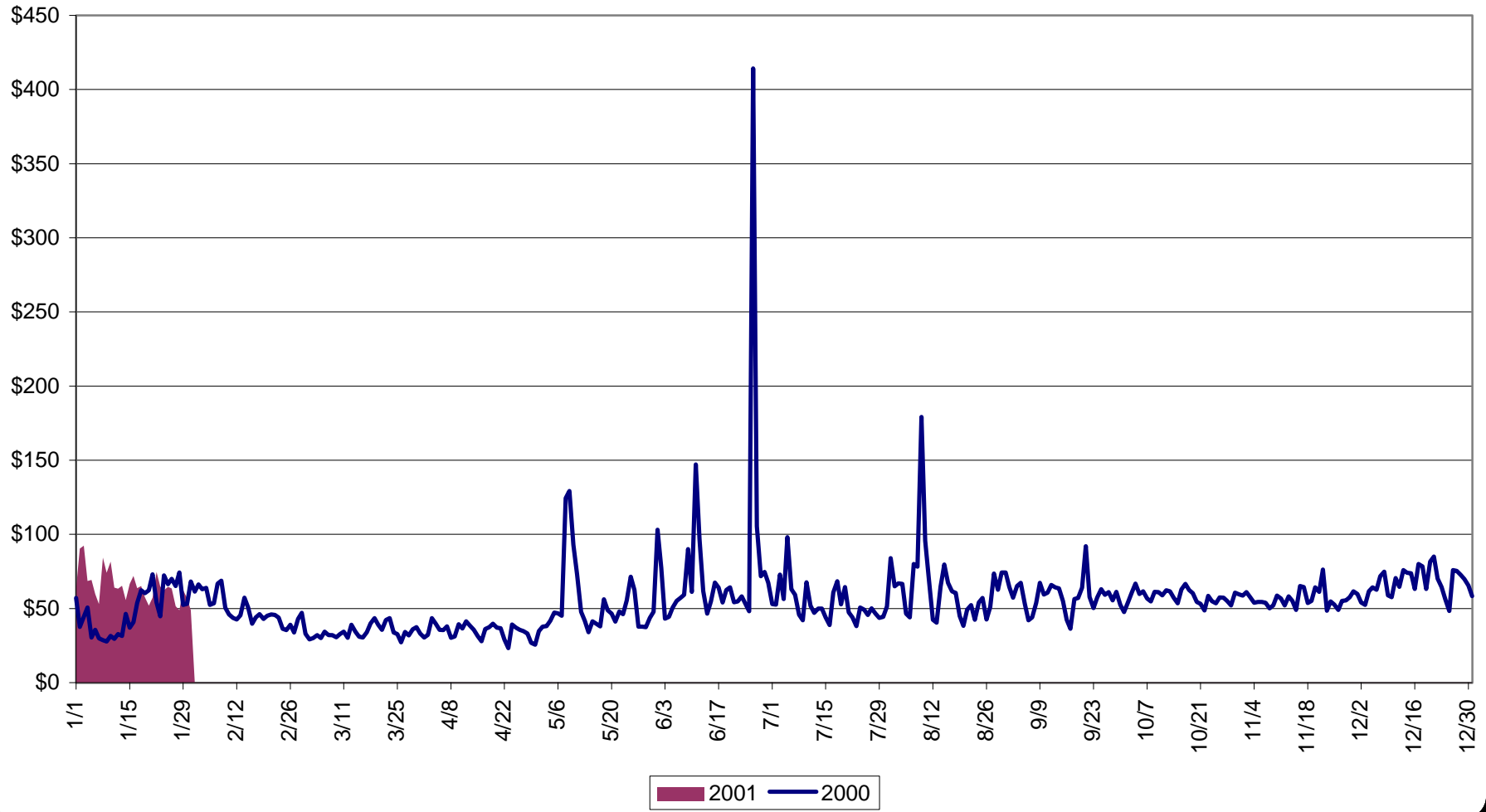
NYC Monthly Average LBMP Prices 2000 - 2001



West Monthly Average LBMP Prices 2000 - 2001



Average Daily LBMP Customer Price
2000 Annual Average \$57.81/MWH
Jan 2000 \$50.88/MWH
Jan 2001 \$65.62/MWH



NYISO Markets 2001 Energy Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<u>DAY AHEAD LBMP</u>												
Unweighted Price	\$56.41											
Standard Deviation	\$17.87											
Load Wtg.Price	\$58.34											
<u>REAL TIME LBMP</u>												
Unweighted Price	\$50.15											
Standard Deviation	\$19.32											
Load Wtg.Price	\$51.66											
<u>BALANCING MARKET LBMP</u>												
Unweighted Price	\$54.40											
Standard Deviation	\$16.85											
Load Wtg.Price	\$55.95											

NYISO Markets 2000 Energy Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<u>DAY AHEAD LBMP</u>												
Unweighted Price	\$38.64	\$37.09	\$29.24	\$29.55	\$37.73	\$57.96	\$40.66	\$50.18	\$46.47	\$51.91	\$50.07	\$58.34
Standard Deviation	\$16.64	\$12.75	\$8.22	\$9.57	\$16.65	\$67.35	\$18.96	\$37.40	\$15.52	\$12.64	\$9.67	\$18.03
Load Wtg.Price	\$40.09	\$38.31	\$30.05	\$30.60	\$39.80	\$64.23	\$43.32	\$54.34	\$48.50	\$53.46	\$51.13	\$60.81
<u>REAL TIME LBMP</u>												
Unweighted Price	\$49.46	\$34.52	\$27.40	\$27.04	\$41.17	\$46.26	\$36.81	\$48.86	\$50.12	\$51.74	\$48.89	\$58.28
Standard Deviation	\$99.49	\$20.65	\$20.80	\$13.14	\$74.60	\$91.83	\$21.87	\$59.58	\$53.73	\$19.28	\$19.89	\$48.47
Load Wtg.Price	\$54.16	\$36.06	\$28.57	\$28.11	\$48.07	\$53.28	\$39.42	\$54.84	\$54.11	\$53.62	\$50.41	\$60.38
<u>BALANCING MARKET LBMP</u>												
Unweighted Price	\$52.24	\$52.40	\$27.44	\$30.95	\$135.39	\$230.91	\$40.26	\$121.45	\$59.17	\$55.44	\$49.31	\$61.57
Standard Deviation	\$391.99	\$244.80	\$21.97	\$14.13	\$5,206.45	\$2,355.22	\$34.84	\$1,207.51	\$92.35	\$21.42	\$14.92	\$31.11
Load Wtg.Price	\$55.95	\$55.25	\$28.21	\$31.93	\$210.52	\$290.60	\$42.26	\$137.53	\$61.96	\$57.29	\$50.59	\$65.35

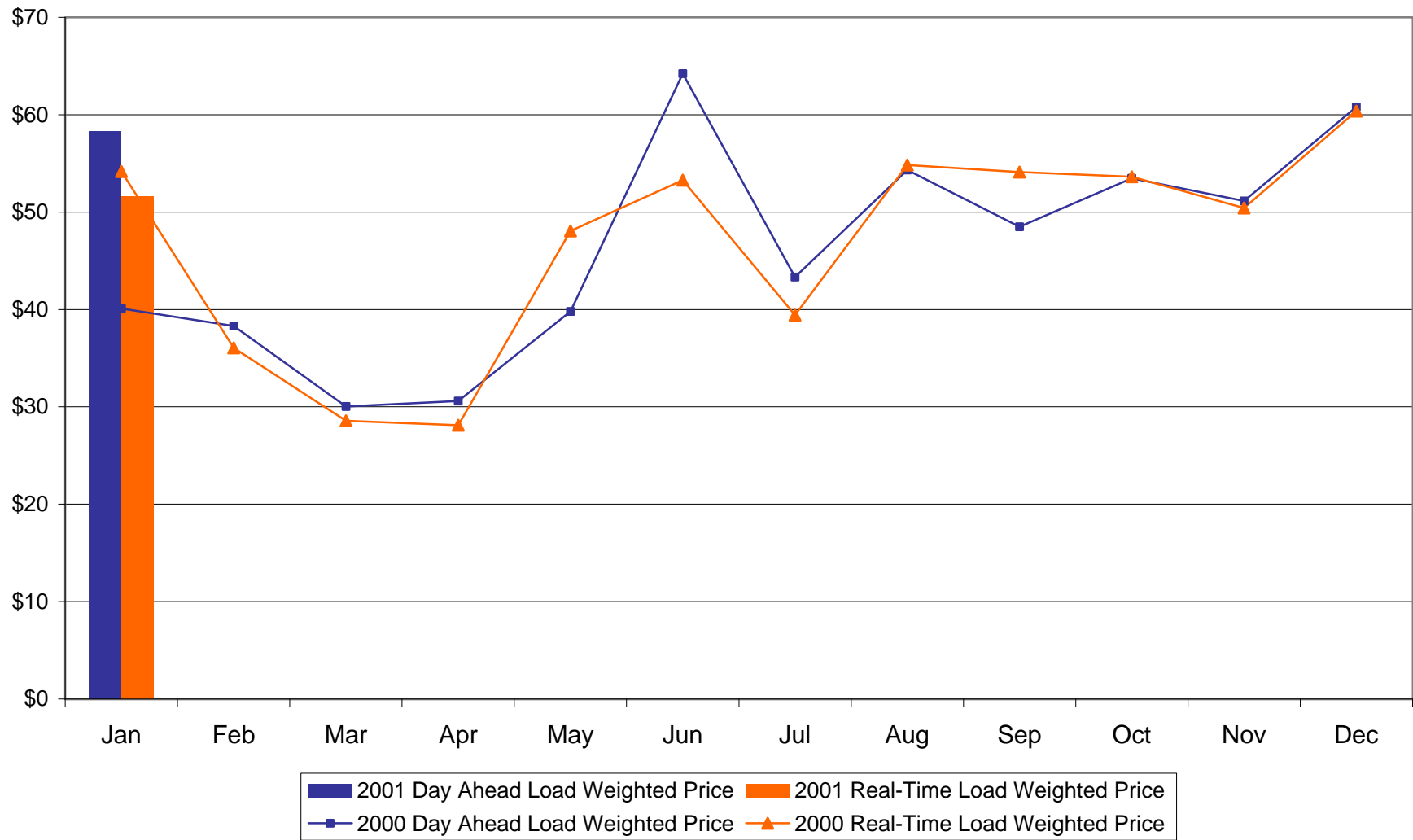
NYISO Markets 2001 Liquidity Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<u>LIQUIDITY - By Market</u>												
DAM LSE Internal LBMP Energy Sales	41%											
DAM External TC LBMP Energy Sales	3%											
DAM Bilateral - Internal Bilaterals	50%											
DAM Bilateral - Import/Non-LBMP Market Bilaterals	1%											
DAM Bilateral - Export/Non-LBMP Market Bilaterals	1%											
DAM Bilateral - Wheel Through Bilaterals	4%											
Day Ahead Market	100%											
Balancing LSE Internal LBMP Energy Sales	63%											
Balancing External TC LBMP Energy Sales	56%											
Balancing Bilateral - Internal Bilaterals	-8%											
Balancing Bilateral - Import/Non-LBMP Market Bilaterals	2%											
Balancing Bilateral - Export/Non-LBMP Market Bilaterals	0%											
Balancing Bilateral - Wheel Through Bilaterals	-13%											
Balancing Market	100%											
<u>LIQUIDITY - All Markets</u>												
LBMP	45%											
Internal Bilaterals	49%											
Import Bilaterals	1%											
Export Bilaterals	1%											
Wheels Through	4%											
Market Share of Total Load												
Day Ahead Market	97.71%											
Balancing Market	2.29%											
Total MWH	14,684,835											

NYISO Markets 2000 Liquidity Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<u>LIQUIDITY - All Markets</u>												
LBMP	30%	31%	35%	37%	42%	44%	45%	45%	50%	48%	43%	47%
Internal Bilaterals	64%	63%	60%	58%	52%	51%	50%	51%	45%	48%	51%	48%
Import Bilaterals	2%	2%	2%	2%	1%	1%	1%	1%	2%	1%	1%	1%
Export Bilaterals	1%	1%	1%	1%	1%	1%	2%	1%	1%	2%	2%	0%
Wheels Through	2%	3%	1%	1%	4%	3%	3%	2%	2%	1%	3%	3%
Market Share of Total Load												
Day Ahead Market	97.97%	97.85%	97.25%	96.18%	98.52%	98.70%	101.33%	102.12%	96.98%	98.29%	96.11%	96.22%
Balancing Market	2.03%	2.15%	2.75%	3.82%	1.48%	1.30%	-1.33%	-2.12%	3.02%	1.71%	3.89%	3.78%
Total MWH	13,979,215	12,933,930	12,616,286	11,800,570	12,940,566	13,964,207	14,199,309	15,011,759	13,321,117	12,516,751	12,635,197	14,740,664

NYISO Monthly Average LBMP Prices 2000 - 2001



NYISO Markets 2001 Ancillary Service Statistics

January February March April May June July August September October November December

ANCILLARY SERVICES Day Ahead Market

10 Min Spin

Unweighted Price	\$2.71
Standard Deviation	\$1.67

10 Min Nonspin

Unweighted Price	\$1.69
Standard Deviation	\$0.78

30 Min

Unweighted Price	\$0.60
Standard Deviation	\$0.40

Regulation

Unweighted Price	\$7.80
Standard Deviation	\$5.50

ANCILLARY SERVICES Balancing Market

10 Min Spin

Unweighted Price	\$3.19
Standard Deviation	\$3.95

10 Min Nonspin

Unweighted Price	\$1.70
Standard Deviation	\$0.92

30 Min

Unweighted Price	\$0.88
Standard Deviation	\$0.84

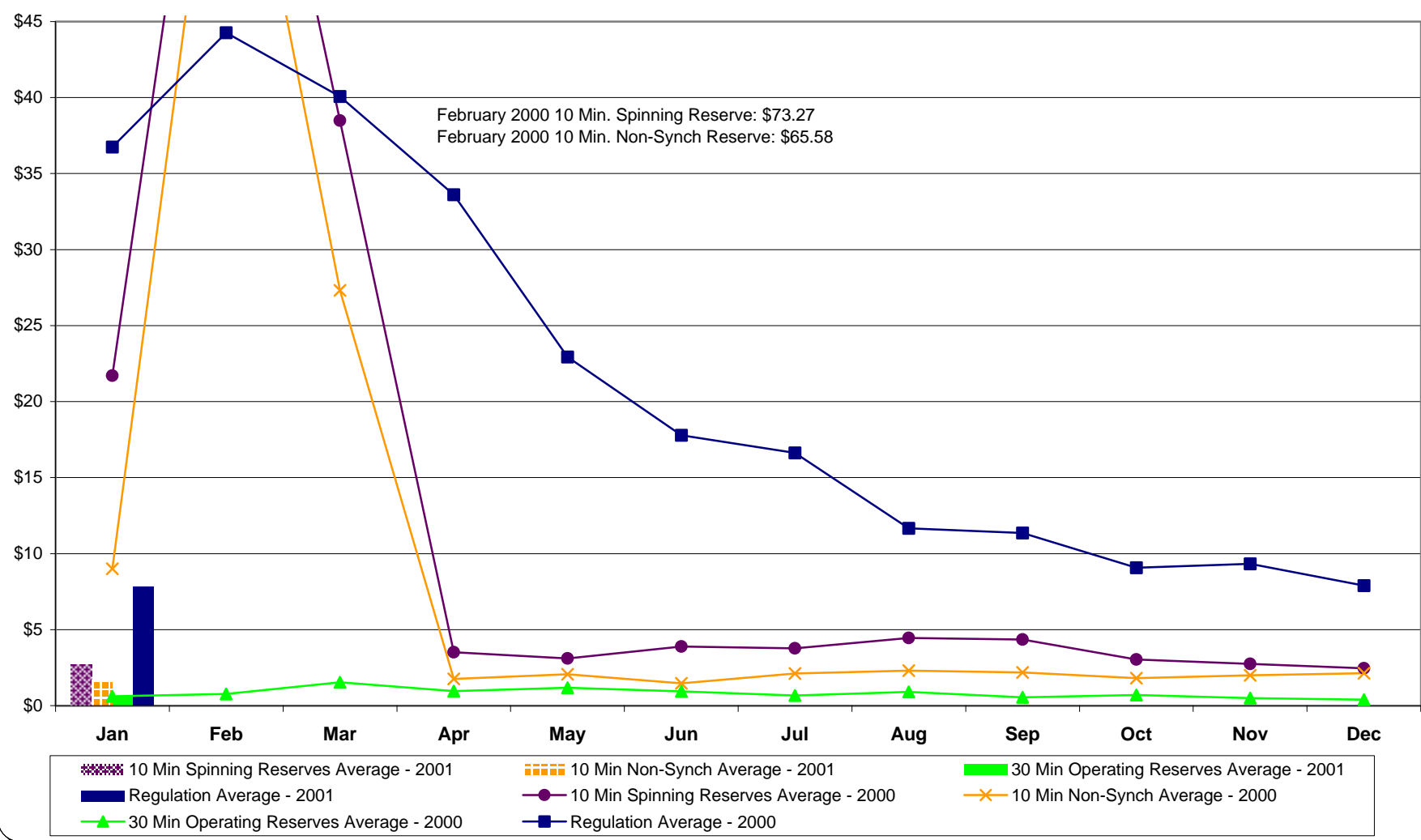
Regulation

Unweighted Price	\$5.70
Standard Deviation	\$5.97

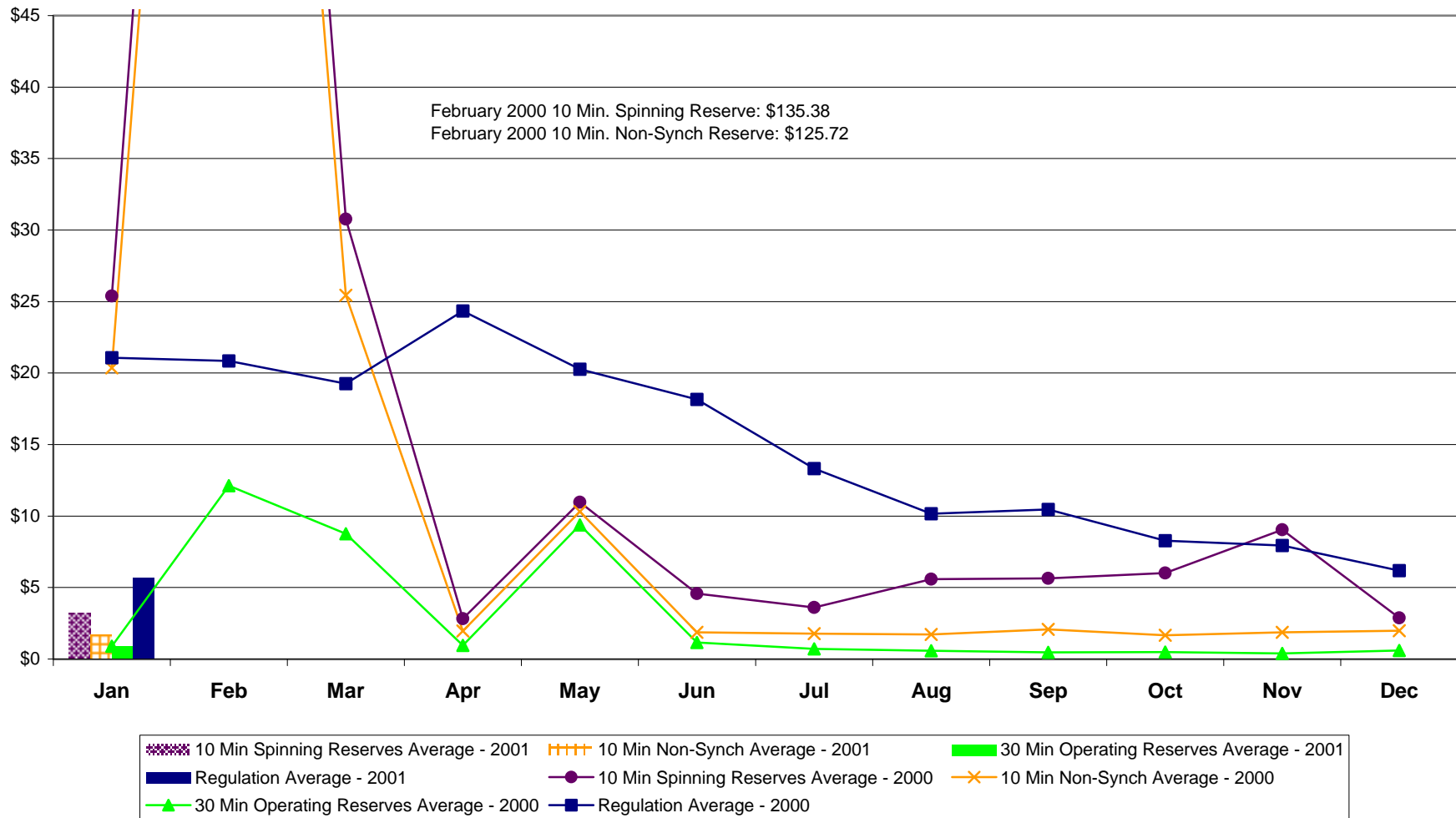
NYISO Markets 2000 Ancillary Services Statistics

	January	February	March	April	May	June	July	August	September	October	November	December
<u>ANCILLARY SERVICES Day Ahead Market</u>												
10 Min Spin												
Price	\$21.70	\$73.27	\$38.48	\$3.51	\$3.10	\$3.89	\$3.76	\$4.45	\$4.34	\$3.03	\$2.74	\$2.45
Standard Deviation	\$26.67	\$32.24	\$34.05	\$5.74	\$5.31	\$4.88	\$2.61	\$5.63	\$6.50	\$4.95	\$3.81	\$0.76
10 Min Nonspin												
Price	\$9.01	\$65.58	\$27.31	\$1.75	\$2.07	\$1.47	\$2.12	\$2.30	\$2.18	\$1.80	\$1.99	\$2.14
Standard Deviation	\$0.39	\$0.22	\$6.39	\$0.45	\$5.07	\$2.52	\$1.35	\$2.02	\$0.21	\$0.62	\$0.58	\$0.57
30 Min												
Price	\$0.62	\$0.77	\$1.53	\$0.95	\$1.17	\$0.93	\$0.66	\$0.91	\$0.55	\$0.70	\$0.50	\$0.39
Standard Deviation	\$19.20	\$24.13	\$16.17	\$0.16	\$5.12	\$2.51	\$1.39	\$2.14	\$0.30	\$0.27	\$0.39	\$0.39
Regulation												
Price	\$36.75	\$44.27	\$40.07	\$33.61	\$22.93	\$17.79	\$16.63	\$11.66	\$11.35	\$9.08	\$9.32	\$7.89
Standard Deviation	\$42.26	\$21.99	\$23.72	\$35.08	\$11.18	\$9.52	\$9.17	\$5.13	\$10.38	\$6.96	\$7.93	\$5.73
<u>ANCILLARY SERVICES Balancing Market</u>												
10 Min Spin												
Price	\$25.38	\$135.38	\$30.76	\$2.83	\$10.96	\$4.58	\$3.60	\$5.58	\$5.64	\$6.02	\$9.05	\$2.87
Standard Deviation	\$37.34	\$798.48	\$31.12	\$6.32	\$27.38	\$6.74	\$5.68	\$8.40	\$8.54	\$9.66	\$12.05	\$3.37
10 Min Nonspin												
Price	\$20.37	\$125.72	\$25.45	\$1.97	\$10.31	\$1.87	\$1.77	\$1.71	\$2.07	\$1.66	\$1.86	\$1.98
Standard Deviation	\$33.81	\$799.03	\$23.67	\$4.51	\$27.41	\$3.77	\$3.77	\$1.74	\$0.51	\$0.90	\$0.78	\$1.07
30 Min												
Price	\$0.90	\$12.13	\$8.77	\$0.96	\$9.37	\$1.16	\$0.71	\$0.58	\$0.46	\$0.49	\$0.39	\$0.60
Standard Deviation	\$2.35	\$26.61	\$23.48	\$4.55	\$27.70	\$3.84	\$3.79	\$1.67	\$0.59	\$0.60	\$0.63	\$1.01
Regulation												
Price	\$21.07	\$20.84	\$19.25	\$24.34	\$20.26	\$18.15	\$13.31	\$10.16	\$10.46	\$8.28	\$7.94	\$6.19
Standard Deviation	\$26.50	\$19.49	\$19.55	\$33.72	\$11.44	\$39.80	\$9.66	\$8.06	\$11.39	\$8.82	\$8.50	\$5.90

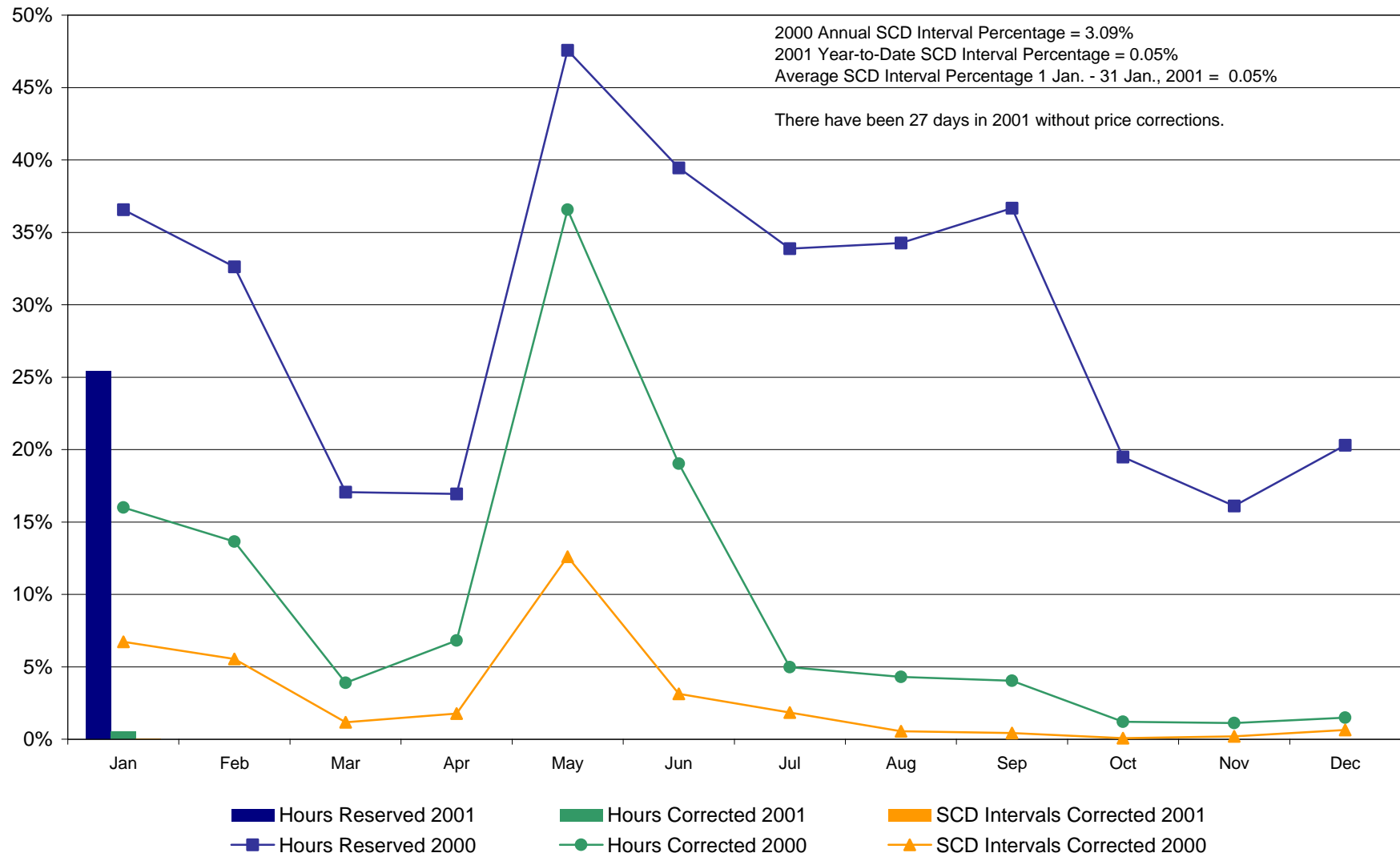
NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2000 - 2001



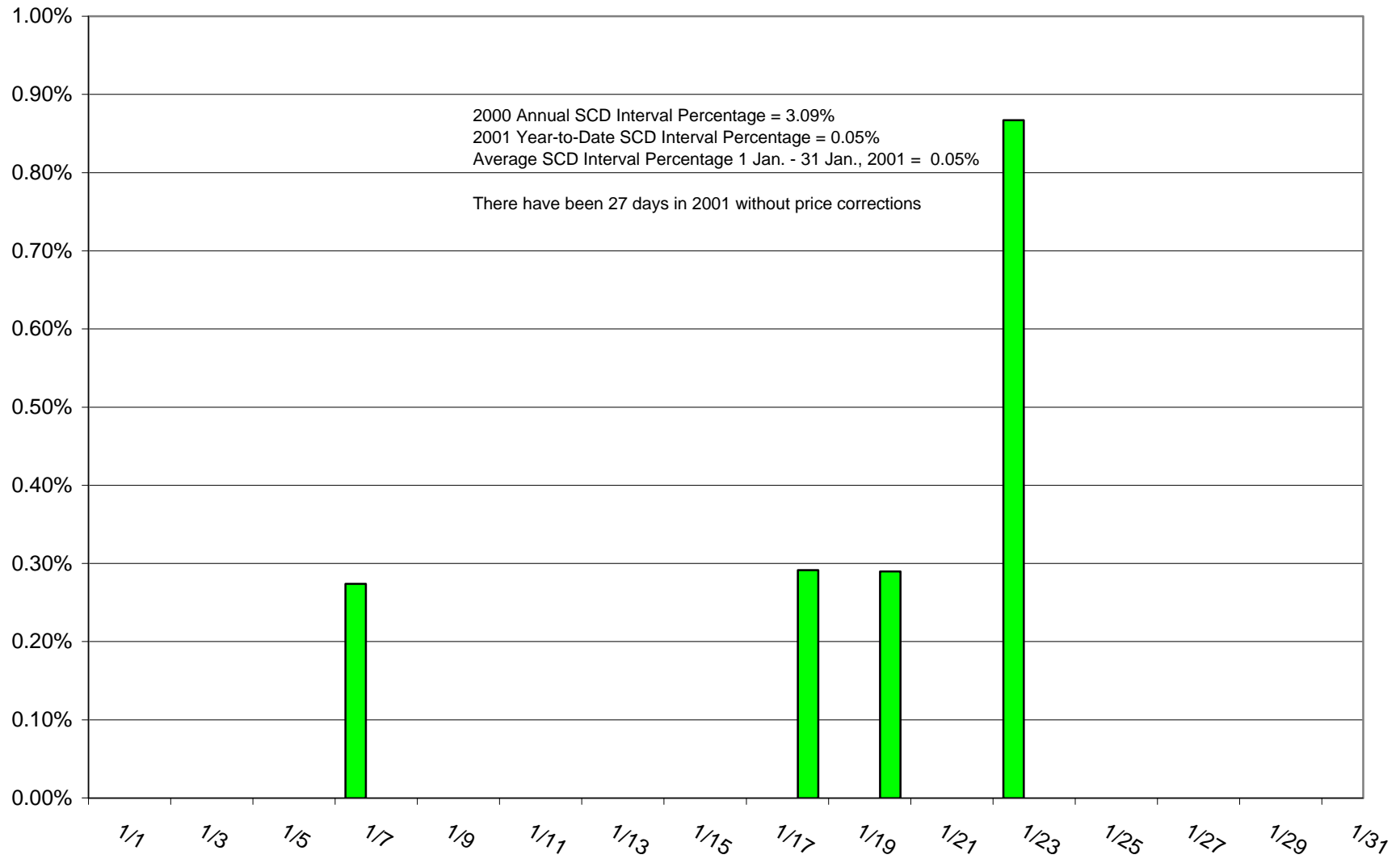
NYISO Monthly Average Ancillary Service Prices Balancing Market 2000 - 2001



Percentage of Real-Time Corrections



Percentage of SCD Intervals Needing Correction (01/1/01 - 01/31/01)



NYS & Locality Load and Capacity Outlook For Summer 2001

Statewide

Forecast Demand	30,620 MW
Reserve Requirement	<u>5,512 MW</u>
Total Requirement	36,132 MW

New York City

Forecast Demand	10,535 MW
In-City Requirements (80%)	8,428 MW
Available Supply (as of 2/1/01)	<u>8,031 MW</u>
In-City Deficiency	397 MW

Long Island

Forecast Demand	4,733 MW
On-Island Requirements (98%)	4,639 MW
Available Supply (as of 2/1/01)	<u>4,507 MW</u>
On-Island Deficiency	132 MW

2001 Load and Capacity Outlook: Sensitivity Analysis
Extreme Weather Scenario based on Summer 1999 weather*

Statewide

Forecast Demand	32,340 MW
Reserve Requirement	<u>5,821 MW</u>
Total Requirement	38,161 MW

New York City

Forecast Demand	11,125 MW
In-City Requirements (80%)	8,900 MW
Available Supply (as of 2/1/01)	<u>8,031 MW</u>
In-City Deficiency	869 MW

Long Island

Forecast Demand	5,000 MW
On-Island Requirements (98%)	4,900 MW
Available Supply (as of 2/1/01)	<u>4,507 MW</u>
On-Island Deficiency	393 MW

*Under this scenario the risk of loss of load is almost ten times greater than it would be for the expected forecast demand.

PSC Transmission Request (H. Tarler letter of 2/14/01)

Summary of PSC Request

- PSC has requested that the NYISO consider additional transmission studies to enhance transfers between New York and neighboring ISOs, specifically.
 - *What transmission reinforcement studies exist which could increase levels of economic interchange with adjacent control areas?*
 - *Can new studies be undertaken to explore the feasibility of increasing transfer capability from PJM and ISO-NE by 50%?
By 100%?*