

---

# **NYISO Market Operations Report**

*Business Issues Committee Meeting  
December 3, 2003*

*Agenda #4*

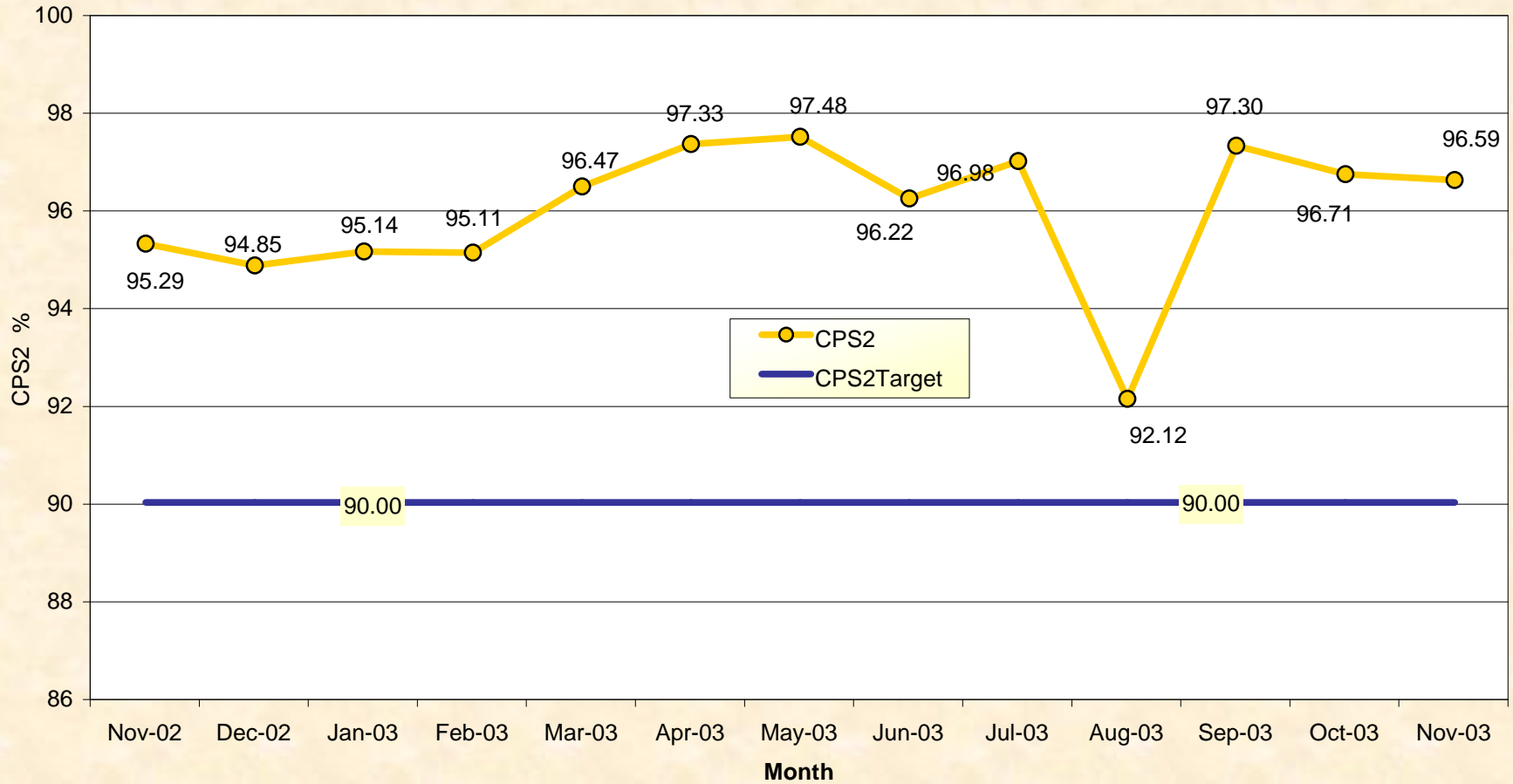
# Report Items

---

- 1) Reliability Indicators
  - *NERC Criteria (CPS-2 Curve)*
  
- 2) Market Performance Highlights

# NERC Control Performance Standard

NYISO Compliance  
Year 2002/2003



**CPS2 for November = 96.59% Compliance Threshold = 90%**  
**CPS2 measures excessive unscheduled power flow resulting from large Area Control Error (ACE)**

# Market Performance Highlights for November, 2003

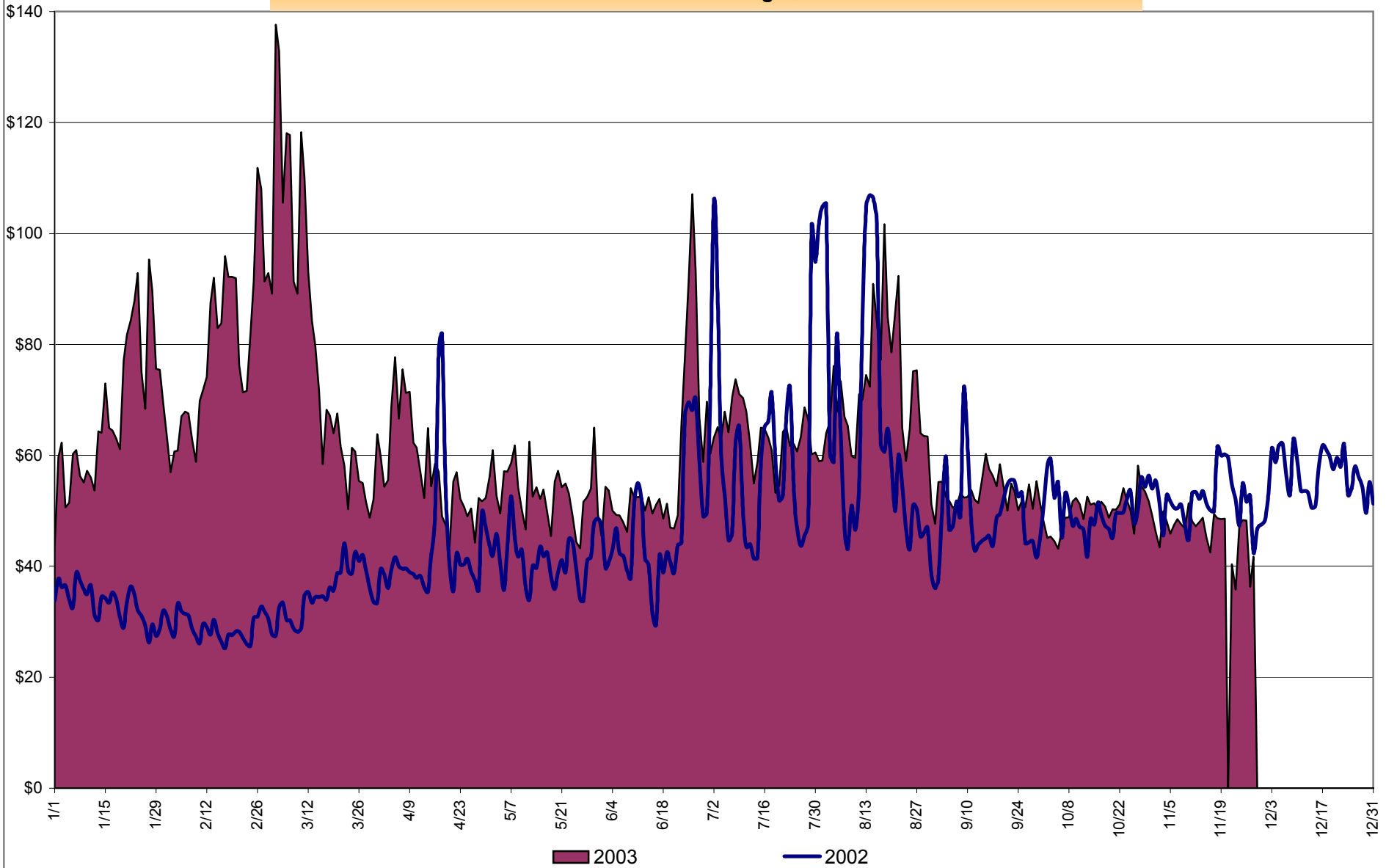
- Energy prices were moderate in November due to lower load-levels and mild weather.
- The seasonal drop in uplift costs is noted.
- Price reservations and corrections have dropped compared with October. There were no price reservations in November attributed to TLR activity.

**Average Daily NYISO - Administered Total Price (Energy & Ancillary Services)**

**2002 Annual Average \$49.77/MWH**

**November 2002 YTD Average \$49.09/MWH**

**November 2003 YTD Average \$63.25/MWH**

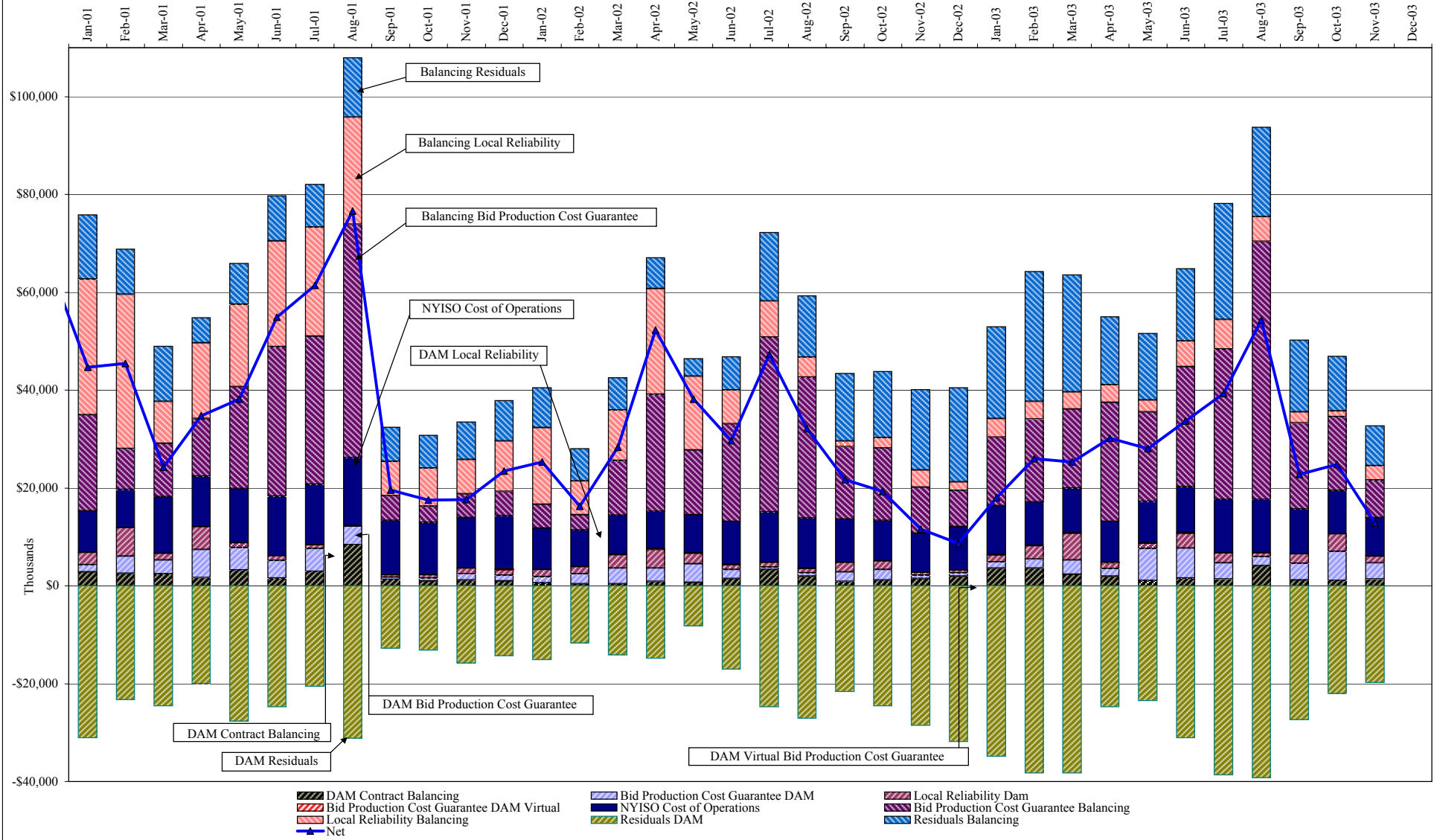


**NYISO Administered Total Price (Energy and Ancillary Services)**

**from the LBMP Customer point of view**

| <b>2003</b> |                                 | January      | February     | March        | April        | May          | June         | July         | August       | September    | October      | November     | December     |
|-------------|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|             | LBMP                            | 66.40        | 76.65        | 78.37        | 54.27        | 49.76        | 57.37        | 60.11        | 68.14        | 50.82        | 47.02        | 43.82        |              |
|             | NTAC                            | 0.41         | 0.35         | 0.66         | 0.45         | 0.44         | 0.39         | 0.53         | 0.36         | 0.24         | 0.29         | 0.51         |              |
|             | Reserve                         | 0.46         | 0.35         | 0.45         | 0.39         | 0.47         | 0.24         | 0.15         | 0.22         | 0.13         | 0.10         | 0.19         |              |
|             | Regulation                      | 0.26         | 0.27         | 0.38         | 0.31         | 0.65         | 0.31         | 0.19         | 0.17         | 0.31         | 0.49         | 0.43         |              |
|             | NYISO Cost of Operations        | 0.68         | 0.68         | 0.68         | 0.68         | 0.68         | 0.68         | 0.69         | 0.69         | 0.68         | 0.69         | 0.68         |              |
|             | Uplift                          | 0.32         | 1.08         | 1.01         | 1.68         | 1.48         | 1.67         | 1.76         | 2.44         | 0.93         | 1.16         | 0.32         |              |
|             | Voltage Support and Black Start | 0.33         | 0.33         | 0.33         | 0.33         | 0.34         | 0.33         | 0.34         | 0.34         | 0.33         | 0.34         | 0.34         |              |
|             | <b>Avg Monthly Price</b>        | <b>68.87</b> | <b>79.71</b> | <b>81.88</b> | <b>58.13</b> | <b>53.82</b> | <b>61.00</b> | <b>63.77</b> | <b>72.36</b> | <b>53.45</b> | <b>50.08</b> | <b>46.29</b> |              |
|             | Avg YTD Price                   | 68.87        | 74.05        | 76.62        | 72.22        | 68.82        | 67.42        | 66.76        | 67.65        | 66.13        | 64.64        | 63.25        |              |
| <b>2002</b> |                                 | January      | February     | March        | April        | May          | June         | July         | August       | September    | October      | November     | December     |
|             | LBMP                            | 30.32        | 26.58        | 32.02        | 39.03        | 37.48        | 45.59        | 60.80        | 65.60        | 46.88        | 48.13        | 50.10        | 54.76        |
|             | NTAC                            | 0.53         | 0.48         | 0.45         | 0.43         | 0.47         | 0.61         | 1.04         | 0.52         | 0.49         | 0.63         | 0.39         | 0.35         |
|             | Reserve                         | 0.19         | 0.19         | 0.24         | 0.29         | 0.21         | 0.19         | 0.30         | 0.33         | 0.22         | 0.22         | 0.31         | 0.41         |
|             | Regulation                      | 0.19         | 0.19         | 0.17         | 0.16         | 0.26         | 0.24         | 0.18         | 0.20         | 0.27         | 0.26         | 0.25         | 0.25         |
|             | NYISO Cost of Operations        | 0.63         | 0.63         | 0.63         | 0.63         | 0.63         | 0.63         | 0.63         | 0.63         | 0.63         | 0.63         | 0.62         | 0.63         |
|             | Uplift                          | 1.19         | 0.67         | 1.36         | 3.70         | 2.34         | 1.35         | 2.28         | 1.32         | 0.86         | 0.79         | 0.22         | (0.14)       |
|             | Voltage Support and Black Start | 0.34         | 0.33         | 0.33         | 0.34         | 0.34         | 0.33         | 0.33         | 0.33         | 0.33         | 0.33         | 0.33         | 0.33         |
|             | <b>Avg Monthly Price</b>        | <b>33.39</b> | <b>29.08</b> | <b>35.21</b> | <b>44.58</b> | <b>41.72</b> | <b>48.94</b> | <b>65.56</b> | <b>68.94</b> | <b>49.68</b> | <b>50.99</b> | <b>52.24</b> | <b>56.60</b> |
|             | Avg YTD Price                   | 33.39        | 31.37        | 32.69        | 35.71        | 36.83        | 39.06        | 44.35        | 48.39        | 48.54        | 48.78        | 49.10        | 49.77        |
| <b>2001</b> |                                 | January      | February     | March        | April        | May          | June         | July         | August       | September    | October      | November     | December     |
|             | LBMP                            | 61.52        | 44.29        | 49.98        | 48.60        | 52.84        | 50.31        | 46.58        | 71.97        | 35.33        | 31.05        | 31.53        | 29.23        |
|             | NTAC                            | 0.39         | 0.21         | 0.59         | 0.35         | 0.51         | 0.41         | 0.30         | 0.35         | 0.38         | 0.39         | 0.40         | 0.61         |
|             | Reserve                         | 0.47         | 0.29         | 0.42         | 0.43         | 0.59         | 0.44         | 0.55         | 1.40         | 0.43         | 0.25         | 0.27         | 0.25         |
|             | Regulation                      | 0.07         | 0.07         | 0.10         | 0.10         | 0.13         | 0.08         | 0.08         | 0.06         | 0.14         | 0.18         | 0.15         | 0.18         |
|             | NYISO Cost of Operations        | 0.65         | 0.59         | 0.89         | 0.89         | 0.88         | 0.88         | 0.88         | 0.88         | 0.88         | 0.83         | 0.88         | 0.88         |
|             | Uplift                          | 2.62         | 2.85         | 0.88         | 2.04         | 2.98         | 3.12         | 3.71         | 4.27         | 0.67         | 0.54         | 0.52         | 0.94         |
|             | Voltage Support and Black Start | 0.34         | 0.34         | 0.34         | 0.34         | 0.33         | 0.33         | 0.33         | 0.33         | 0.33         | 0.33         | 0.33         | 0.33         |
|             | <b>Avg Monthly Price</b>        | <b>66.05</b> | <b>48.64</b> | <b>53.20</b> | <b>52.75</b> | <b>58.27</b> | <b>55.58</b> | <b>52.44</b> | <b>79.28</b> | <b>38.17</b> | <b>33.57</b> | <b>34.10</b> | <b>32.44</b> |
|             | Avg YTD Price                   | 66.05        | 58.08        | 56.55        | 55.72        | 56.21        | 56.09        | 55.41        | 59.68        | 57.12        | 54.63        | 52.99        | 51.42        |
| <b>2000</b> |                                 | January      | February     | March        | April        | May          | June         | July         | August       | September    | October      | November     | December     |
|             | LBMP                            | 46.01        | 41.33        | 32.62        | 32.05        | 50.39        | 79.35        | 51.46        | 63.48        | 54.29        | 53.84        | 52.16        | 62.85        |
|             | NTAC                            | 0.47         | 0.20         | 0.25         | 0.65         | 0.60         | 0.46         | 0.39         | 0.42         | 0.22         | 0.32         | 0.30         | 0.20         |
|             | Reserve                         | 1.44         | 5.64         | 2.68         | 0.27         | 0.68         | 0.66         | 0.31         | 0.49         | 0.64         | 0.44         | 0.33         | 0.37         |
|             | Regulation                      | 0.19         | 0.35         | 0.42         | 0.33         | 0.14         | 0.01         | 0.10         | 0.04         | 0.07         | 0.09         | 0.08         | 0.07         |
|             | NYISO Cost of Operations        | 1.14         | (0.46)       | (0.61)       | 0.47         | 0.76         | 0.89         | 0.88         | 1.81         | 1.89         | 0.43         | 0.48         | 0.49         |
|             | Uplift                          | 0.16         | 0.05         | (0.29)       | 0.27         | 3.37         | 3.31         | 1.13         | 3.80         | 2.85         | 0.96         | 0.38         | 3.70         |
|             | Voltage Support and Black Start | 0.38         | 0.37         | 0.37         | 0.37         | 0.38         | 0.38         | 0.38         | 0.37         | 0.39         | 0.40         | 0.40         | 0.40         |
|             | <b>Avg Monthly Price</b>        | <b>49.78</b> | <b>47.49</b> | <b>35.45</b> | <b>34.40</b> | <b>56.33</b> | <b>85.06</b> | <b>54.64</b> | <b>70.43</b> | <b>60.36</b> | <b>56.48</b> | <b>54.13</b> | <b>68.07</b> |
|             | Avg YTD Price                   | 49.78        | 48.70        | 44.05        | 41.62        | 45.14        | 53.74        | 53.91        | 56.57        | 57.09        | 57.02        | 56.75        | 57.90        |

## NYISO Dollar Flows - Uplift - OATT Schedule 1 components



DAM Contract Balancing amounts are for payments made to generating units to make them whole for being dispatched below their Day-Ahead schedule, as a result of out-of-merit dispatches.

DAM Bid Production Cost Guarantees for Virtual Transactions are included in the chart and are shown from the inception of Virtual Transactions. These values are small and cannot be identified on the chart. The value for April 2003 is \$135,233.

DAM residuals are revenue charged or returned to customers due to the under or over collection of funds. On this chart, negative values represent funds returned to Transmission Customers (through Transmission Owners' Transmission Service Charges).

## NYISO Markets Transactions

| Transactions by Market 2003                                    | January    | February   | March      | April      | May        | June       | July       | August     | September  | October    | November   | December |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----------|
| <b>Day Ahead Market MWH</b>                                    | 14,187,752 | 12,695,868 | 13,126,563 | 11,997,655 | 12,029,453 | 13,341,831 | 15,444,857 | 15,759,082 | 13,003,309 | 12,507,780 | 11,937,118 |          |
| DAM LSE Internal LBMP Energy Sales                             | 46%        | 48%        | 46%        | 49%        | 46%        | 48%        | 55%        | 57%        | 49%        | 48%        | 47%        |          |
| DAM External TC LBMP Energy Sales                              | 1%         | 1%         | 1%         | 1%         | 2%         | 2%         | 1%         | 0%         | 1%         | 2%         | 2%         |          |
| DAM Bilateral - Internal Bilaterals                            | 50%        | 49%        | 50%        | 46%        | 49%        | 46%        | 43%        | 40%        | 48%        | 47%        | 48%        |          |
| DAM Bilateral - Import/Non-LBMP Market Bilaterals              | 1%         | 1%         | 1%         | 1%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         |          |
| DAM Bilateral - Export/Non-LBMP Market Bilaterals              | 1%         | 1%         | 2%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         |          |
| DAM Bilateral - Wheel Through Bilaterals                       | 1%         | 1%         | 1%         | 2%         | 2%         | 2%         | 1%         | 1%         | 1%         | 1%         | 1%         |          |
| <b>Balancing Energy Market MWH</b>                             | 347,539    | 285,381    | 376,222    | 235,800    | 278,939    | 291,519    | 208,142    | -55,913    | 394,363    | 338,562    | 407,295    |          |
| Balancing Energy LSE Internal LBMP Energy Sales                | 58%        | 35%        | 52%        | 72%        | 48%        | 39%        | 53%        | -146%      | 65%        | 53%        | 45%        |          |
| Balancing Energy External TC LBMP Energy Sales                 | 58%        | 80%        | 95%        | 73%        | 69%        | 78%        | 79%        | 242%       | 44%        | 61%        | 57%        |          |
| Balancing Energy Bilateral - Internal Bilaterals               | -6%        | -10%       | -2%        | 0%         | -5%        | 5%         | -2%        | -75%       | 1%         | 3%         | 0%         |          |
| Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals | 4%         | 1%         | 1%         | 1%         | 1%         | 0%         | 0%         | 2%         | 0%         | 0%         | 0%         |          |
| Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals | 0%         | 0%         | -38%       | 0%         | 0%         | 0%         | 0%         | -14%       | 0%         | 0%         | 0%         |          |
| Balancing Energy Bilateral - Wheel Through Bilaterals          | -14%       | -7%        | -8%        | -46%       | -14%       | -23%       | -31%       | -109%      | -10%       | -16%       | -2%        |          |
| <b>Transactions Summary 2003</b>                               |            |            |            |            |            |            |            |            |            |            |            |          |
| LBMP   | 49%        | 50%        | 49%        | 52%        | 49%        | 52%        | 56%        | 58%        | 51%        | 52%        | 51%        |          |
| Internal Bilaterals  | 48%        | 47%        | 48%        | 45%        | 48%        | 46%        | 42%        | 40%        | 46%        | 46%        | 47%        |          |
| Import Bilaterals  | 1%         | 1%         | 1%         | 1%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         |          |
| Export Bilaterals  | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         |          |
| Wheels Through   | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 0%         | 1%         | 1%         |          |
| <b>Market Share of Total Load 2003</b>                         |            |            |            |            |            |            |            |            |            |            |            |          |
| Day Ahead Market   | 97.6%      | 97.8%      | 97.2%      | 98.1%      | 97.7%      | 97.9%      | 98.7%      | 100.4%     | 97.1%      | 97.4%      | 96.7%      |          |
| Balancing Energy +   | 2.4%       | 2.2%       | 2.8%       | 1.9%       | 2.3%       | 2.1%       | 1.3%       | -0.4%*     | 2.9%       | 2.6%       | 3.3%       |          |
| Total MWH  | 14,535,291 | 12,981,249 | 13,502,785 | 12,233,455 | 12,308,392 | 13,633,350 | 15,652,999 | 15,703,169 | 13,397,672 | 12,846,342 | 12,344,413 |          |
| Average Daily Energy Sendout/Month GWh                         | 458        | 450        | 418        | 393        | 382        | 432        | 497        | 498        | 433        | 397        | 402        |          |

## Transactions by Market 2002

|  |            |            |            |            |            |            |            |            |            |            |            |            |
|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| <b>Day Ahead Market MWH</b>                                    | 13,580,547 | 12,016,720 | 12,760,385 | 11,863,525 | 12,561,505 | 14,043,673 | 16,297,012 | 16,165,944 | 13,922,494 | 12,859,329 | 12,470,189 | 13,580,220 |
| DAM LSE Internal LBMP Energy Sales                             | 44%        | 42%        | 43%        | 45%        | 40%        | 43%        | 50%        | 51%        | 46%        | 46%        | 49%        | 47%        |
| DAM External TC LBMP Energy Sales                              | 0%         | 1%         | 1%         | 1%         | 1%         | 2%         | 3%         | 1%         | 2%         | 1%         | 1%         | 2%         |
| DAM Bilateral - Internal Bilaterals                            | 51%        | 52%        | 51%        | 49%        | 55%        | 51%        | 45%        | 45%        | 49%        | 50%        | 46%        | 49%        |
| DAM Bilateral - Import/Non-LBMP Market Bilaterals              | 1%         | 1%         | 1%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 1%         |
| DAM Bilateral - Export/Non-LBMP Market Bilaterals              | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         |
| DAM Bilateral - Wheel Through Bilaterals                       | 3%         | 3%         | 3%         | 3%         | 2%         | 2%         | 1%         | 2%         | 2%         | 1%         | 1%         | 1%         |
| <b>Balancing Energy Market MWH</b>                             | -214,495   | -30,504    | 32,311     | 224,671    | -98,746    | -69,632    | 88,020     | 79,918     | 112,928    | 350,988    | 339,372    | 514,175    |
| Balancing Energy LSE Internal LBMP Energy Sales                | -17%       | 410%       | 821%       | 182%       | -10%       | 148%       | 311%       | 18%        | -77%       | 61%        | 52%        | 59%        |
| Balancing Energy External TC LBMP Energy Sales                 | 5%         | 39%        | -36%       | -15%       | 44%        | -95%       | -165%      | 89%        | 189%       | 37%        | 44%        | 30%        |
| Balancing Energy Bilateral - Internal Bilaterals               | 1%         | -51%       | 8%         | 12%        | 10%        | 14%        | -19%       | 27%        | 17%        | -2%        | 3%         | 3%         |
| Balancing Energy Bilateral - Import/Non-LBMP Market Bilaterals | 13%        | 27%        | 24%        | 3%         | 8%         | 15%        | 24%        | 19%        | 14%        | 8%         | 9%         | 9%         |
| Balancing Energy Bilateral - Export/Non-LBMP Market Bilaterals | 0%         | 0%         | 0%         | 0%         | 1%         | 2%         | 0%         | 1%         | 0%         | 0%         | 0%         | 0%         |
| Balancing Energy Bilateral - Wheel Through Bilaterals          | -103%      | -524%      | -717%      | -84%       | -154%      | -183%      | -52%       | -55%       | -42%       | -4%        | -8%        | -2%        |
| <b>Transactions Summary 2002</b>                               |            |            |            |            |            |            |            |            |            |            |            |            |
| LBMP   | 45%        | 44%        | 46%        | 48%        | 42%        | 46%        | 53%        | 52%        | 49%        | 49%        | 52%        | 50%        |
| Internal Bilaterals  | 52%        | 52%        | 51%        | 49%        | 55%        | 51%        | 45%        | 45%        | 48%        | 48%        | 45%        | 47%        |
| Import Bilaterals  | 1%         | 1%         | 1%         | 0%         | 0%         | 0%         | 0%         | 0%         | 0%         | 1%         | 1%         | 1%         |
| Export Bilaterals  | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         |
| Wheels Through   | 1%         | 2%         | 1%         | 1%         | 1%         | 2%         | 1%         | 1%         | 1%         | 1%         | 1%         | 1%         |
| <b>Market Share of Total Load 2002</b>                         |            |            |            |            |            |            |            |            |            |            |            |            |
| Day Ahead Market   | 101.6%     | 100.3%     | 99.7%      | 98.1%      | 100.8%     | 100.5%     | 99.5%      | 99.5%      | 99.2%      | 97.3%      | 97.4%      | 96.4%      |
| Balancing Energy +   | -1.6%*     | -0.3%*     | 0.3%       | 1.9%       | -0.8%*     | -0.5%*     | 0.5%       | 0.5%       | 0.8%       | 2.7%       | 2.6%       | 3.6%       |
| Total MWH  | 13,366,052 | 11,986,216 | 12,792,696 | 12,088,196 | 12,462,759 | 13,974,041 | 16,385,032 | 16,245,862 | 14,035,422 | 13,210,317 | 12,809,561 | 14,094,395 |
| Average Daily Energy Sendout/Month GWh                         | 427        | 418        | 403        | 397        | 388        | 449        | 513        | 511        | 444        | 412        | 413        | 440        |

+ Balancing Energy: Load(MW) purchased at Real Time LBMP.

\* The signs for the detail section intuitively reflect the direction of power flow eliminating the use of double negatives when Balancing Energy is negative.

Notes: Percent totals may not equal 100% due to rounding.

Virtual Transactions are not reflected in this chart.



### NYISO Markets 2003 Energy Statistics

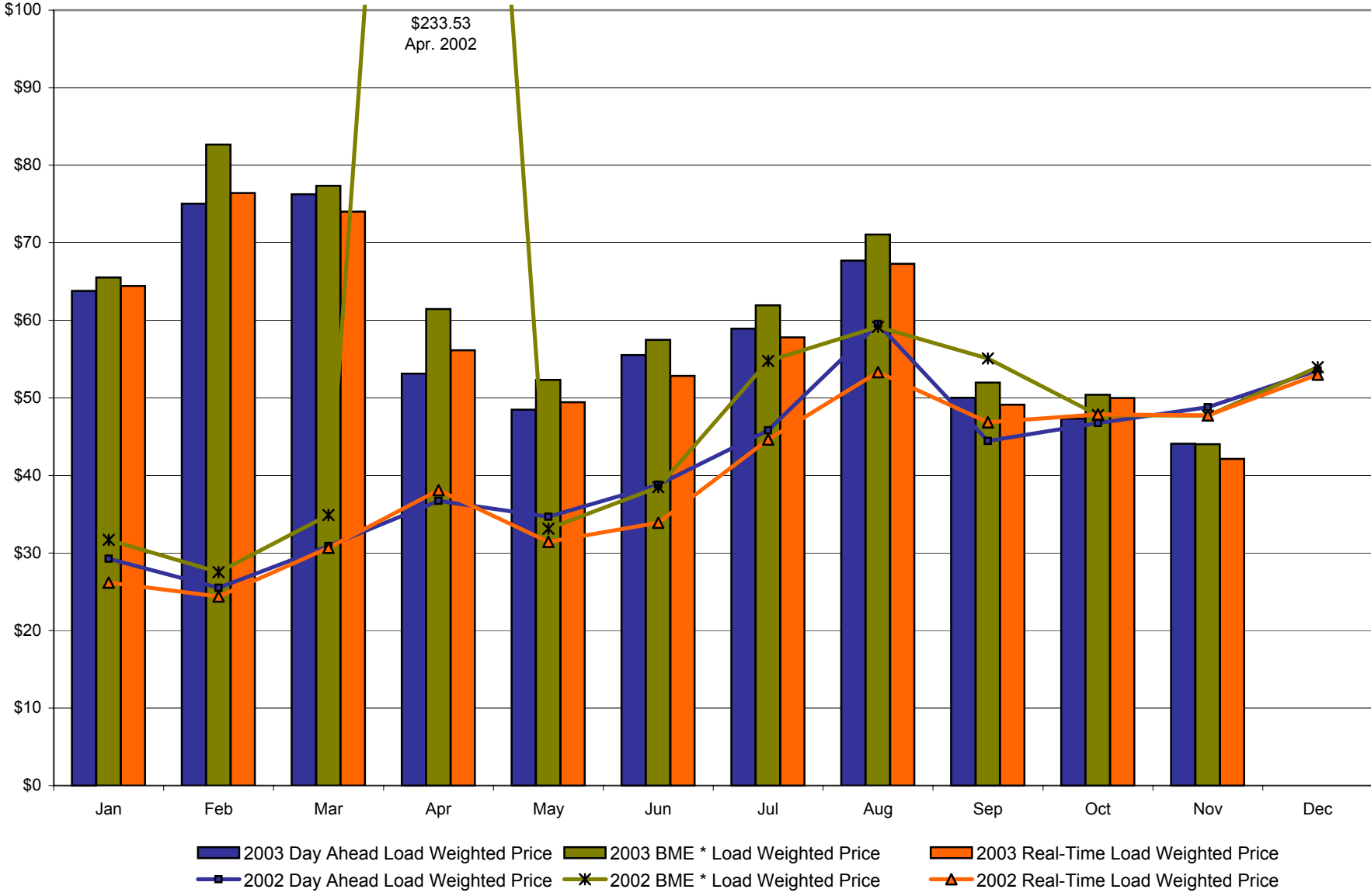
|  | January | February | March   | April   | May     | June    | July    | August  | September | October | November | December |
|--|---------|----------|---------|---------|---------|---------|---------|---------|-----------|---------|----------|----------|
| <b><u>DAY AHEAD LBMP</u></b>           |         |          |         |         |         |         |         |         |           |         |          |          |
| Unweighted Price                       | \$61.33 | \$72.81  | \$73.18 | \$51.58 | \$46.43 | \$51.45 | \$57.10 | \$64.94 | \$48.29   | \$45.81 | \$42.42  |          |
| Standard Deviation                     | \$20.09 | \$21.12  | \$29.70 | \$12.47 | \$14.03 | \$21.27 | \$11.88 | \$18.06 | \$11.04   | \$10.91 | \$12.16  |          |
| Load Wtg.Price                         | \$63.81 | \$75.03  | \$76.25 | \$53.14 | \$48.47 | \$55.52 | \$58.93 | \$67.71 | \$50.02   | \$47.34 | \$44.08  |          |
| <b><u>BME * LBMP</u></b>               |         |          |         |         |         |         |         |         |           |         |          |          |
| Unweighted Price                       | \$63.19 | \$80.25  | \$74.27 | \$59.22 | \$50.27 | \$53.84 | \$59.99 | \$67.63 | \$50.34   | \$48.74 | \$41.94  |          |
| Standard Deviation                     | \$25.43 | \$41.53  | \$32.77 | \$25.00 | \$16.37 | \$22.27 | \$14.82 | \$72.20 | \$14.01   | \$15.35 | \$19.14  |          |
| Load Wtg.Price                         | \$65.54 | \$82.65  | \$77.33 | \$61.45 | \$52.31 | \$57.49 | \$61.94 | \$71.07 | \$51.96   | \$50.39 | \$44.03  |          |
| <b><u>REAL TIME LBMP</u></b>           |         |          |         |         |         |         |         |         |           |         |          |          |
| Unweighted Price                       | \$61.53 | \$74.03  | \$70.54 | \$53.94 | \$46.74 | \$48.96 | \$55.94 | \$64.32 | \$47.24   | \$48.57 | \$39.86  |          |
| Standard Deviation                     | \$30.16 | \$37.46  | \$37.97 | \$28.70 | \$23.03 | \$21.57 | \$13.68 | \$34.91 | \$15.52   | \$25.74 | \$23.19  |          |
| Load Wtg.Price                         | \$64.43 | \$76.41  | \$74.02 | \$56.14 | \$49.44 | \$52.82 | \$57.79 | \$67.27 | \$49.12   | \$49.98 | \$42.14  |          |
| Average Daily Energy Sendout/Month GWh | 458     | 450      | 418     | 393     | 382     | 432     | 497     | 498     | 433       | 397     | 402      |          |

### NYISO Markets 2002 Energy Statistics

|  | January | February | March   | April      | May     | June    | July     | August  | September | October | November | December |
|--|---------|----------|---------|------------|---------|---------|----------|---------|-----------|---------|----------|----------|
| <b><u>DAY AHEAD LBMP</u></b>           |         |          |         |            |         |         |          |         |           |         |          |          |
| Unweighted Price                       | \$28.39 | \$24.93  | \$30.07 | \$35.25    | \$33.36 | \$38.96 | \$51.07  | \$54.86 | \$42.58   | \$45.16 | \$47.30  | \$52.01  |
| Standard Deviation                     | \$7.26  | \$4.61   | \$7.28  | \$11.57    | \$8.76  | \$15.32 | \$23.15  | \$29.88 | \$11.72   | \$11.61 | \$11.72  | \$12.28  |
| Load Wtg.Price                         | \$29.25 | \$25.50  | \$30.88 | \$36.72    | \$34.66 | \$38.81 | \$45.81  | \$59.54 | \$44.43   | \$46.76 | \$48.79  | \$53.54  |
| <b><u>BME * LBMP</u></b>               |         |          |         |            |         |         |          |         |           |         |          |          |
| Unweighted Price                       | \$30.66 | \$26.84  | \$33.53 | \$191.03   | \$31.43 | \$38.57 | \$63.19  | \$55.27 | \$51.96   | \$45.90 | \$46.53  | \$52.44  |
| Standard Deviation                     | \$11.22 | \$7.60   | \$13.84 | \$1,020.88 | \$13.91 | \$54.74 | \$181.17 | \$29.34 | \$147.55  | \$12.10 | \$11.07  | \$14.74  |
| Load Wtg.Price                         | \$31.67 | \$27.54  | \$34.88 | \$233.53   | \$33.12 | \$38.49 | \$54.76  | \$59.15 | \$55.08   | \$47.76 | \$47.70  | \$53.95  |
| <b><u>REAL TIME LBMP</u></b>           |         |          |         |            |         |         |          |         |           |         |          |          |
| Unweighted Price                       | \$25.36 | \$23.73  | \$29.78 | \$35.44    | \$29.80 | \$33.98 | \$53.70  | \$49.74 | \$44.08   | \$46.16 | \$46.13  | \$51.04  |
| Standard Deviation                     | \$8.27  | \$8.83   | \$10.97 | \$25.85    | \$13.32 | \$16.92 | \$66.25  | \$24.86 | \$34.24   | \$17.61 | \$18.25  | \$22.41  |
| Load Wtg.Price                         | \$26.17 | \$24.39  | \$30.67 | \$38.10    | \$31.42 | \$33.91 | \$44.63  | \$53.32 | \$46.85   | \$47.88 | \$47.75  | \$53.01  |
| Average Daily Energy Sendout/Month GWh | 427     | 418      | 403     | 397        | 388     | 449     | 513      | 511     | 444       | 412     | 413      | 440      |

\* Commonly referred as Hour Ahead Market (HAM)

**NYISO Monthly Average Internal LBMPs  
2002 - 2003**



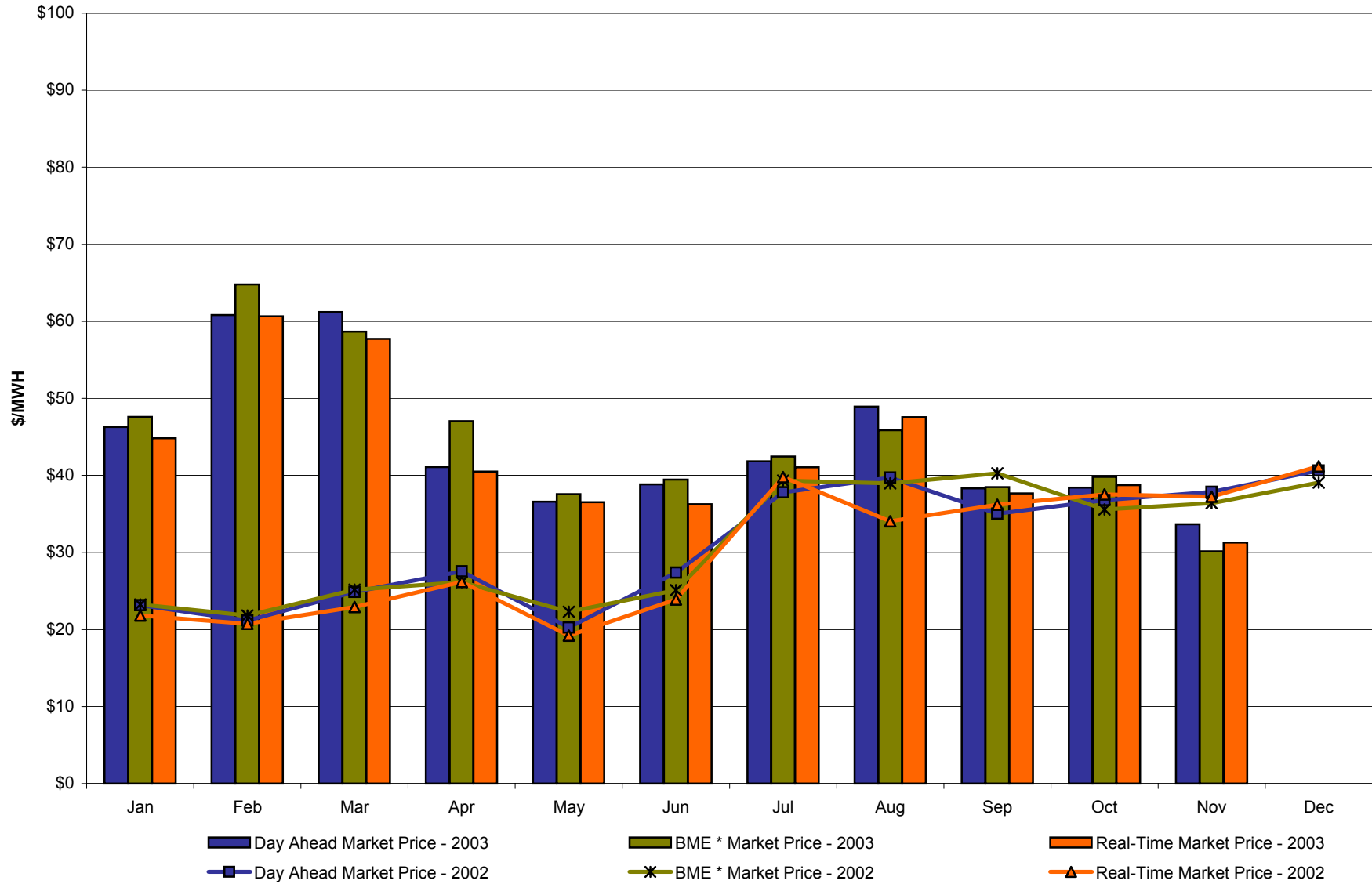
\* Commonly referred to as Hour Ahead Market (HAM)

**November 2003 Zonal Statistics for NYISO (\$/MWH)**

|                              | <b>WEST<br/>Zone A</b>              | <b>GENESEE<br/>Zone B</b>          | <b>NORTH<br/>Zone D</b> | <b>CENTRAL<br/>Zone C</b>         | <b>MOHAWK<br/>VALLEY<br/>Zone E</b> | <b>CAPITAL<br/>Zone F</b> | <b>HUDSON<br/>VALLEY<br/>Zone G</b> | <b>MILLWOOD<br/>Zone H</b> | <b>DUNWOODIE<br/>Zone I</b> | <b>NEW YORK<br/>CITY<br/>Zone J</b> | <b>LONG<br/>ISLAND<br/>Zone K</b> |
|------------------------------|-------------------------------------|------------------------------------|-------------------------|-----------------------------------|-------------------------------------|---------------------------|-------------------------------------|----------------------------|-----------------------------|-------------------------------------|-----------------------------------|
| <b><u>DAY AHEAD LBMP</u></b> |                                     |                                    |                         |                                   |                                     |                           |                                     |                            |                             |                                     |                                   |
| Unweighted Price             | 33.67                               | 35.67                              | 36.35                   | 35.66                             | 36.81                               | 39.02                     | 38.89                               | 38.78                      | 39.45                       | 48.77                               | 45.47                             |
| Standard Deviation           | 9.29                                | 9.89                               | 9.92                    | 10.03                             | 10.29                               | 11.14                     | 11.06                               | 11.22                      | 11.58                       | 16.09                               | 12.48                             |
| <b><u>BME * LBMP</u></b>     |                                     |                                    |                         |                                   |                                     |                           |                                     |                            |                             |                                     |                                   |
| Unweighted Price             | 30.16                               | 31.64                              | 34.16                   | 33.34                             | 34.44                               | 35.45                     | 36.08                               | 35.96                      | 36.46                       | 49.63                               | 51.65                             |
| Standard Deviation           | 13.84                               | 14.63                              | 15.24                   | 15.37                             | 15.75                               | 16.13                     | 16.51                               | 16.47                      | 16.71                       | 28.45                               | 26.54                             |
| <b><u>REAL TIME LBMP</u></b> |                                     |                                    |                         |                                   |                                     |                           |                                     |                            |                             |                                     |                                   |
| Unweighted Price             | 31.28                               | 33.88                              | 33.91                   | 33.16                             | 34.43                               | 35.84                     | 34.85                               | 35.18                      | 35.74                       | 44.99                               | 43.27                             |
| Standard Deviation           | 19.45                               | 20.96                              | 20.84                   | 20.54                             | 21.19                               | 22.05                     | 21.56                               | 21.79                      | 22.15                       | 28.04                               | 24.62                             |
|                              | <b>ONTARIO<br/>HYDRO<br/>Zone O</b> | <b>HYDRO<br/>QUEBEC<br/>Zone M</b> | <b>PJM<br/>Zone P</b>   | <b>NEW<br/>ENGLAND<br/>Zone N</b> |                                     |                           |                                     |                            |                             |                                     |                                   |
| <b><u>DAY AHEAD LBMP</u></b> |                                     |                                    |                         |                                   |                                     |                           |                                     |                            |                             |                                     |                                   |
| Unweighted Price             | 33.24                               | 36.32                              | 33.11                   | 39.09                             |                                     |                           |                                     |                            |                             |                                     |                                   |
| Standard Deviation           | 8.94                                | 10.21                              | 10.92                   | 11.13                             |                                     |                           |                                     |                            |                             |                                     |                                   |
| <b><u>BME * LBMP</u></b>     |                                     |                                    |                         |                                   |                                     |                           |                                     |                            |                             |                                     |                                   |
| Unweighted Price             | 29.56                               | 34.03                              | 31.21                   | 36.35                             |                                     |                           |                                     |                            |                             |                                     |                                   |
| Standard Deviation           | 12.04                               | 13.95                              | 13.85                   | 14.22                             |                                     |                           |                                     |                            |                             |                                     |                                   |
| <b><u>REAL TIME LBMP</u></b> |                                     |                                    |                         |                                   |                                     |                           |                                     |                            |                             |                                     |                                   |
| Unweighted Price             | 31.48                               | 34.22                              | 31.72                   | 36.26                             |                                     |                           |                                     |                            |                             |                                     |                                   |
| Standard Deviation           | 19.66                               | 21.13                              | 20.27                   | 21.54                             |                                     |                           |                                     |                            |                             |                                     |                                   |

\*Commonly Referred as Hour Ahead Market (HAM)

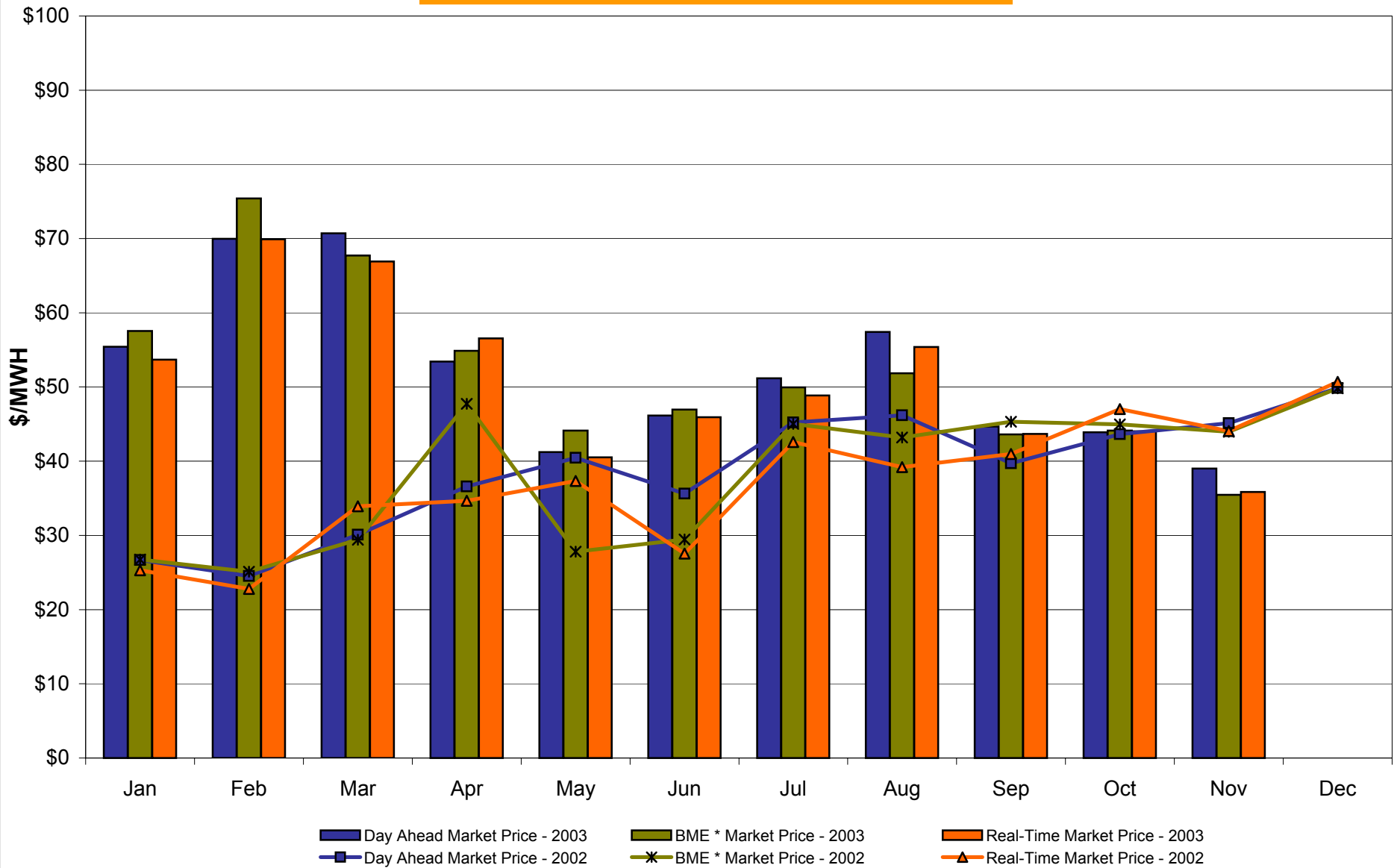
**West Zone A**  
**Monthly Average LBMP Prices 2002 - 2003**



\* Commonly referred to as Hour Ahead Market (HAM)

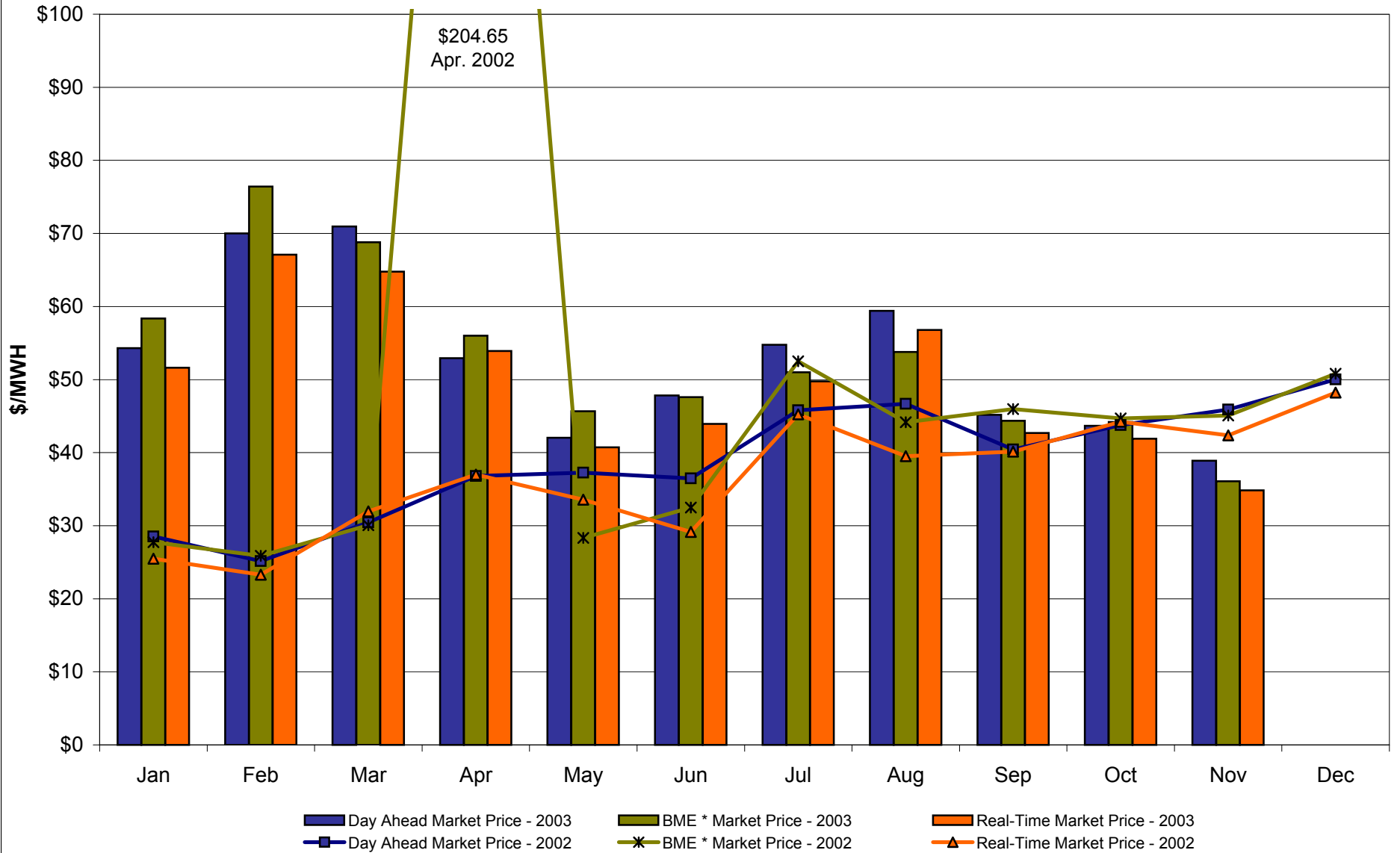
4-H

## Capital Zone F Monthly Average LBMP Prices 2002 - 2003



\* Commonly referred to as Hour Ahead Market (HAM)

## Hudson Valley Zone G Monthly Average LBMP Prices 2002 - 2003



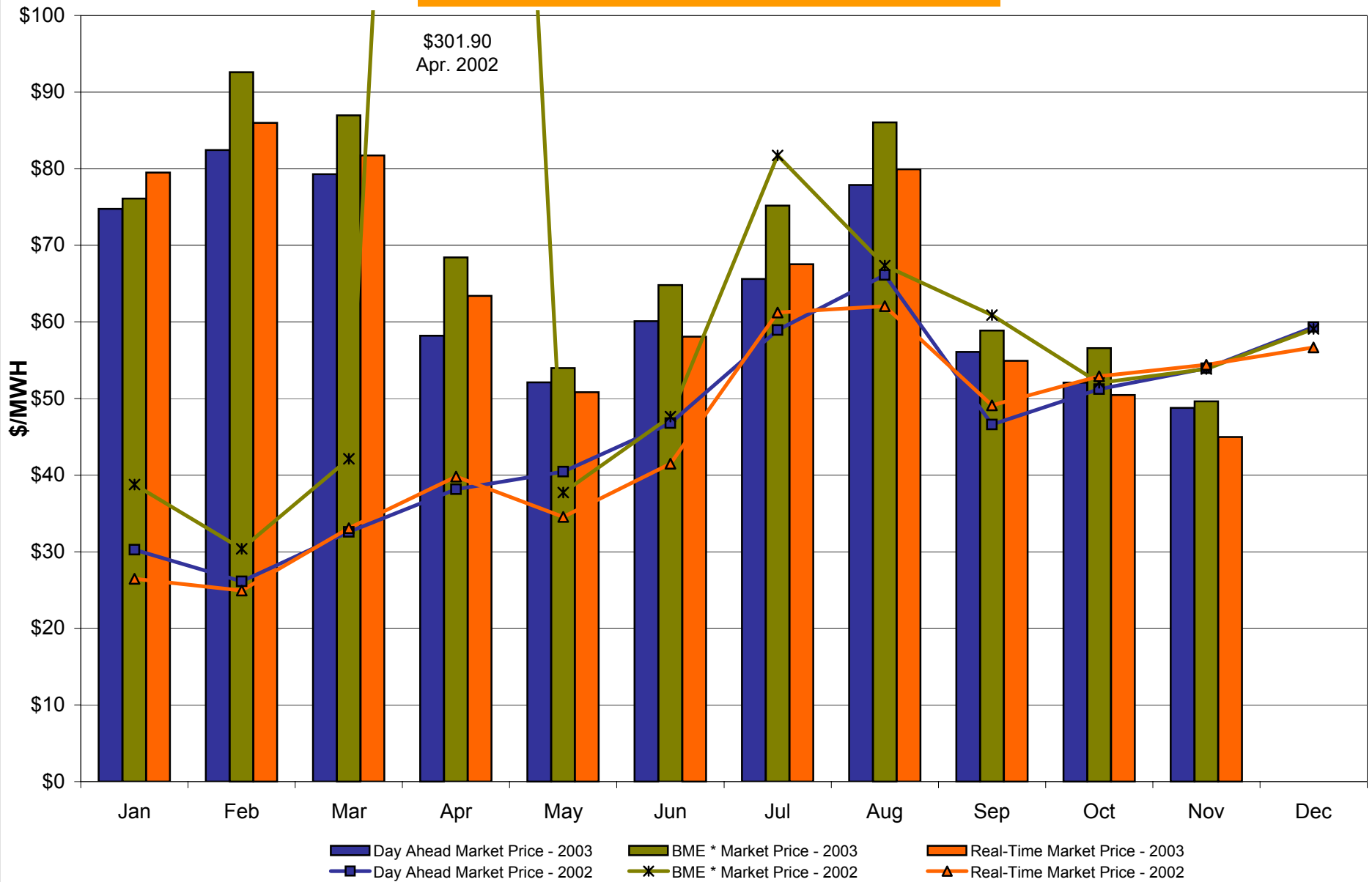
4-J

\* Commonly referred to as Hour Ahead Market (HAM)

Preliminary data thru 11/30/03

Market Monitoring  
Prepared: 12/02/2003 8:00

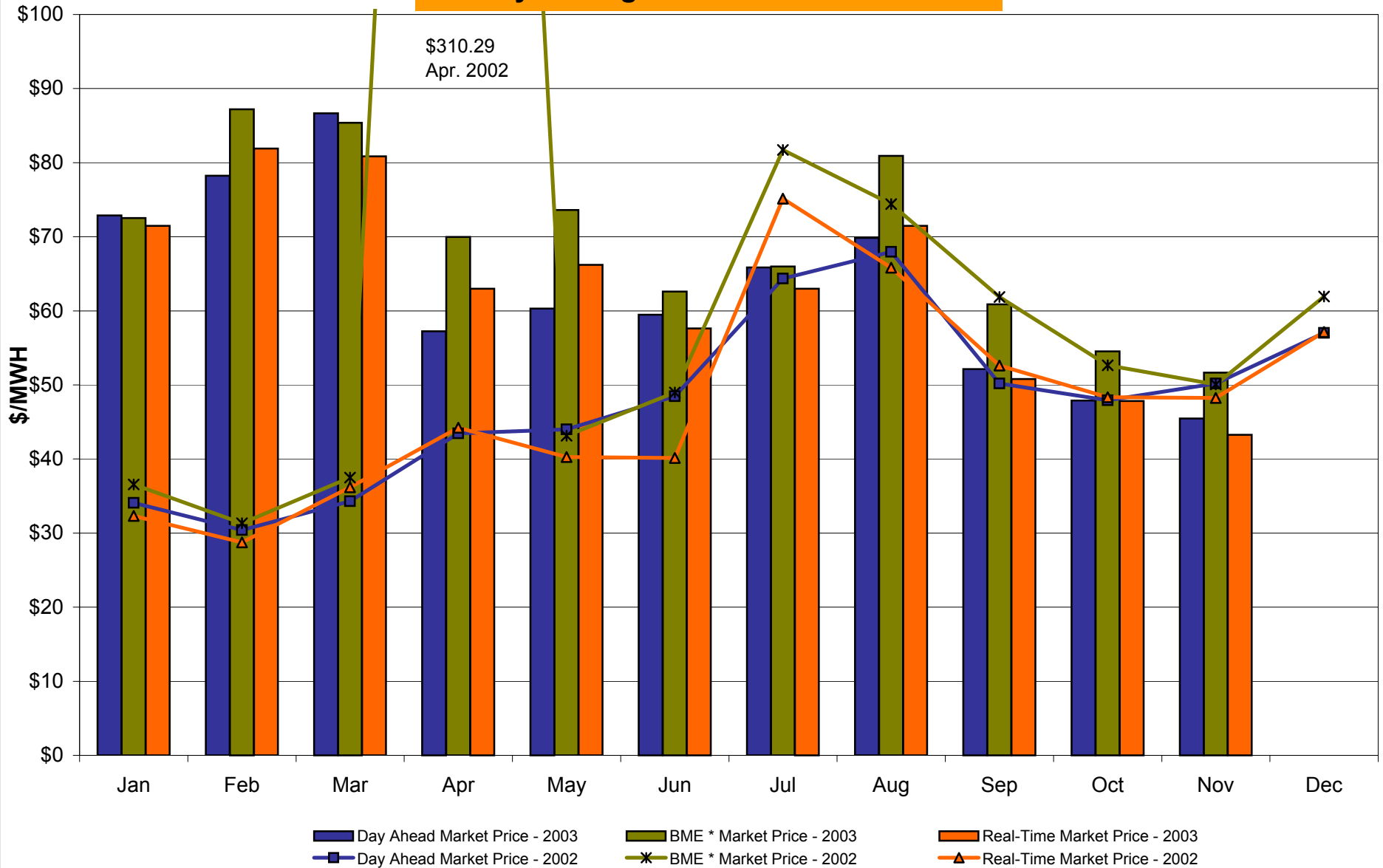
## NYC Zone J Monthly Average LBMP Prices 2002 - 2003



\* Commonly referred to as Hour Ahead Market (HAM)

4-K

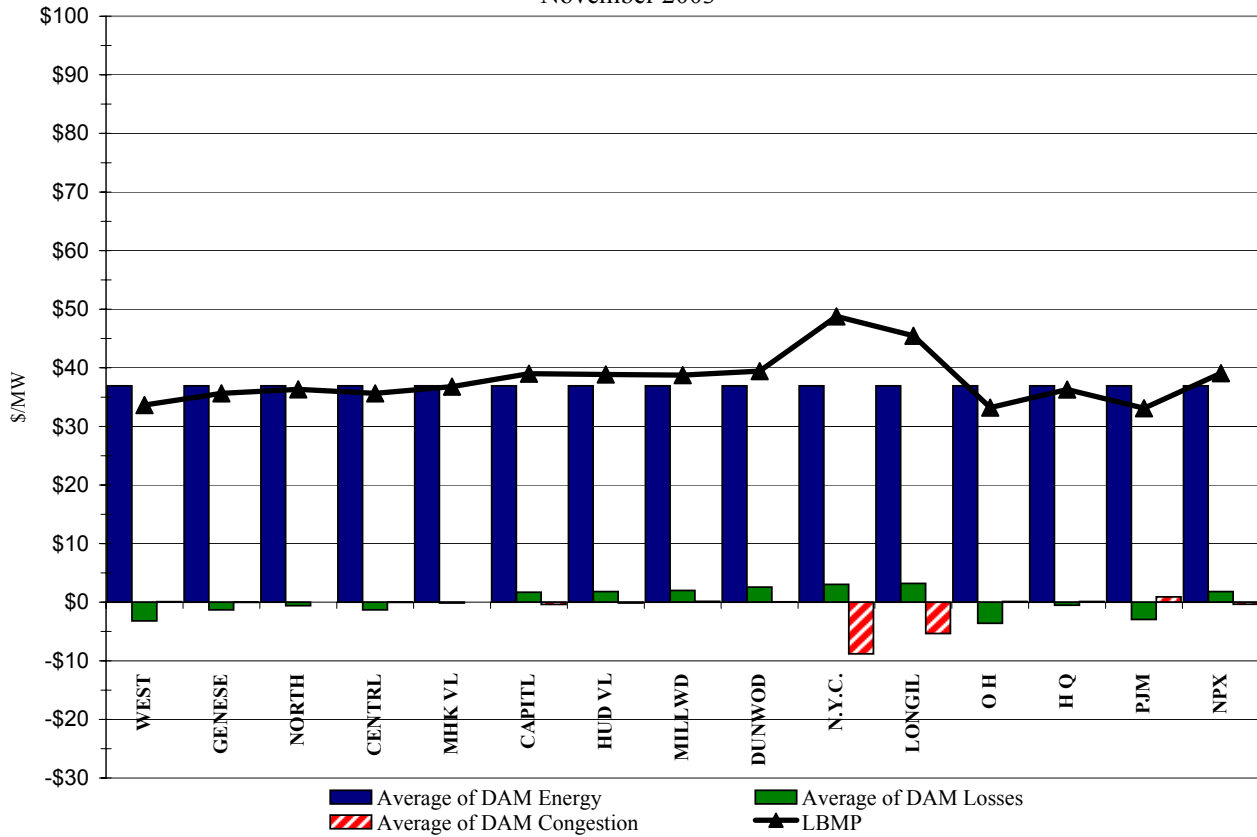
## Long Island Zone K Monthly Average LBMP Prices 2002 - 2003



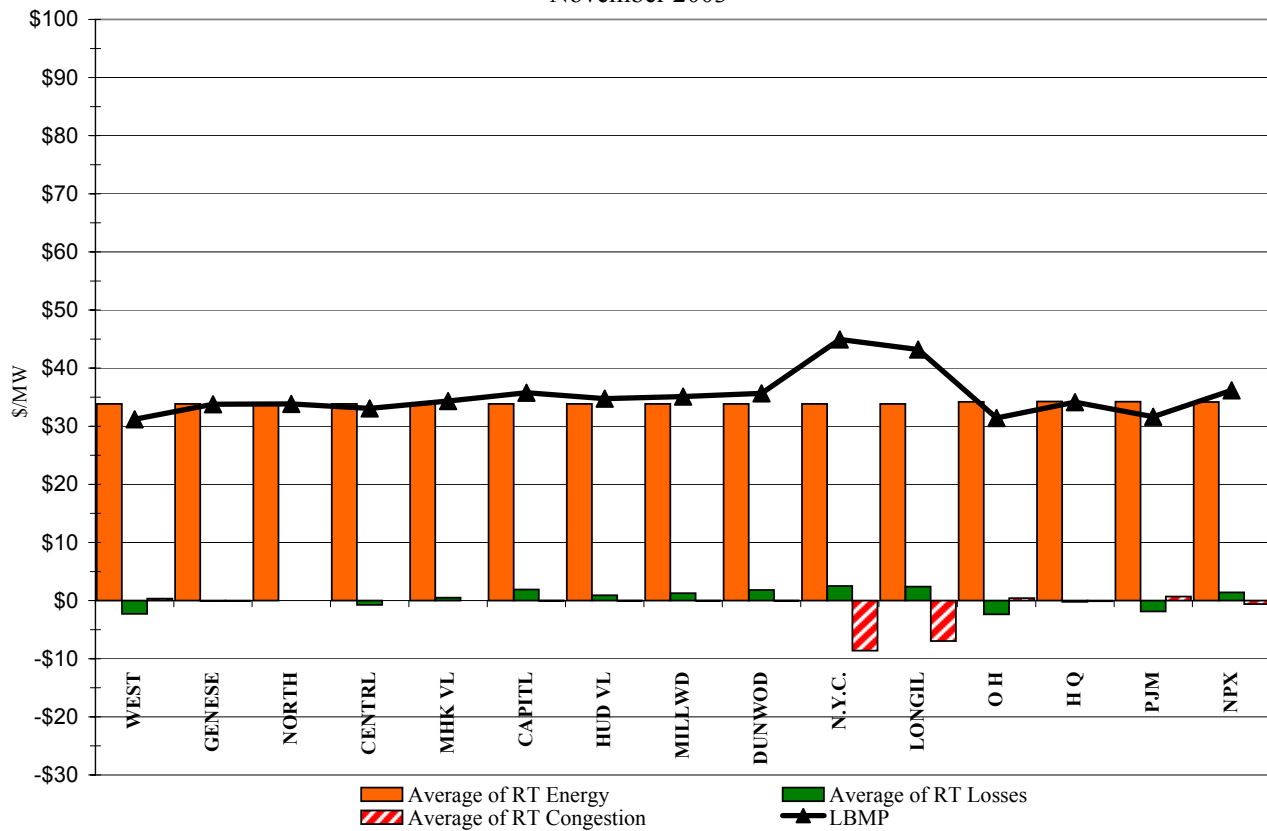
\* Commonly referred to as Hour Ahead Market (HAM)



DAM Zonal Unweighted Monthly Average LBMP Components  
November 2003

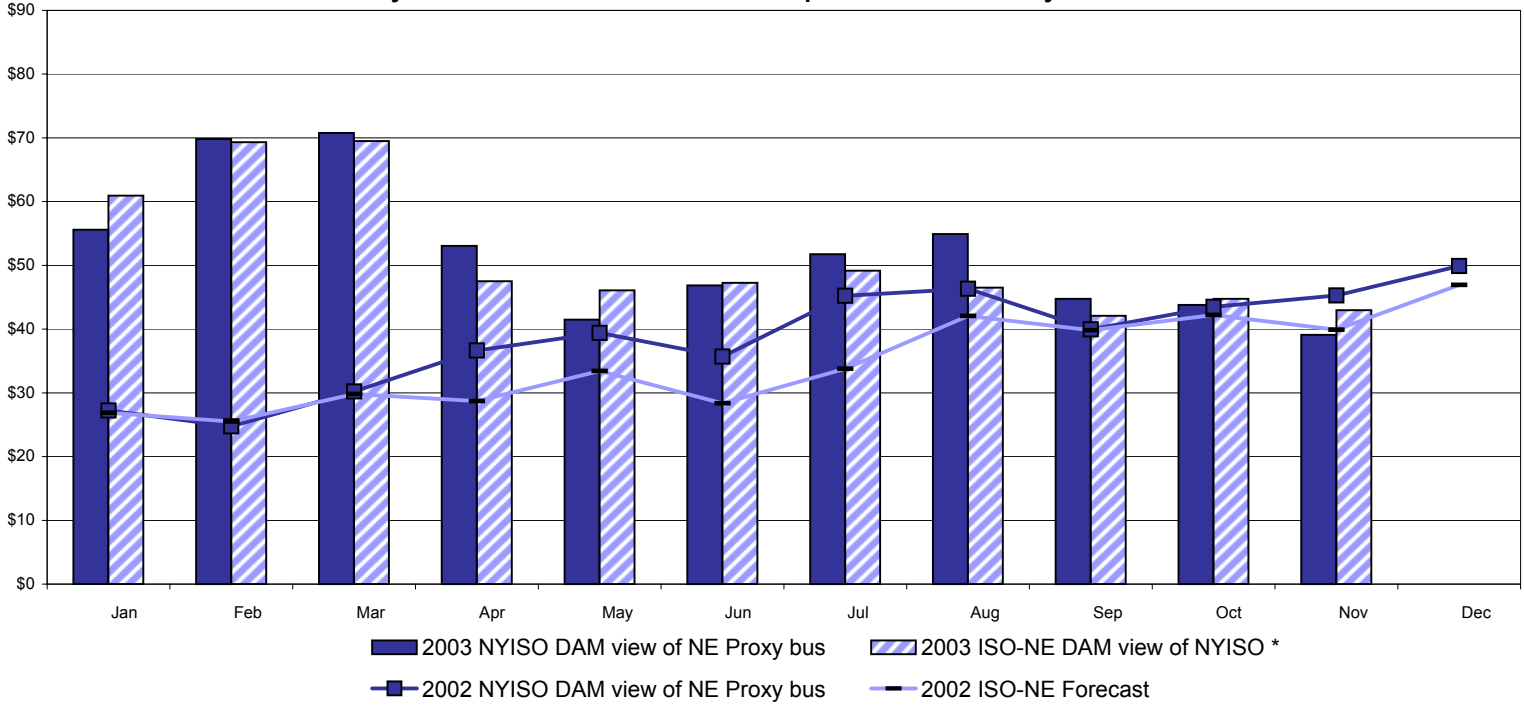


RT Zonal Unweighted Monthly Average LBMP Components  
November 2003

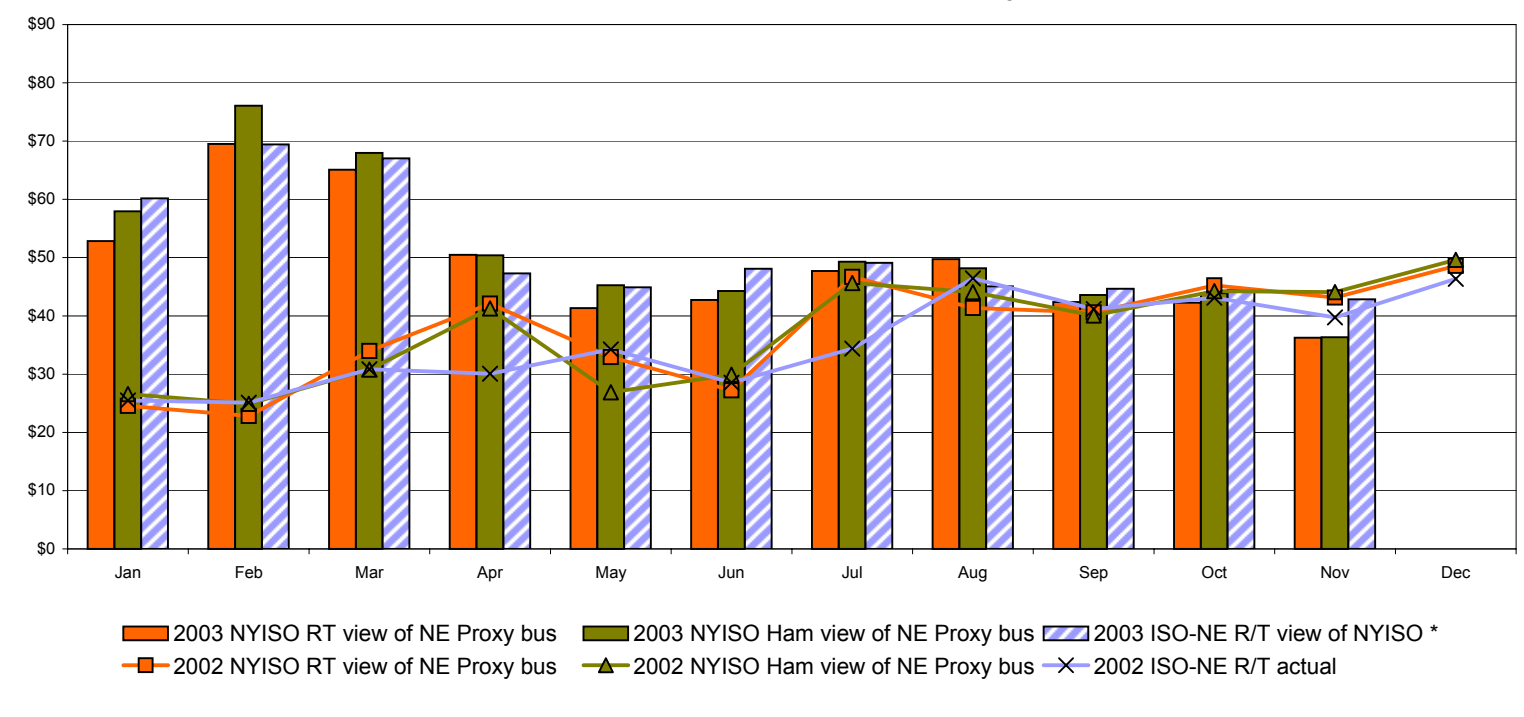


# External Comparison ISO-NE

## Day Ahead Market External Zone Comparison - ISO-NE only \$/MWH



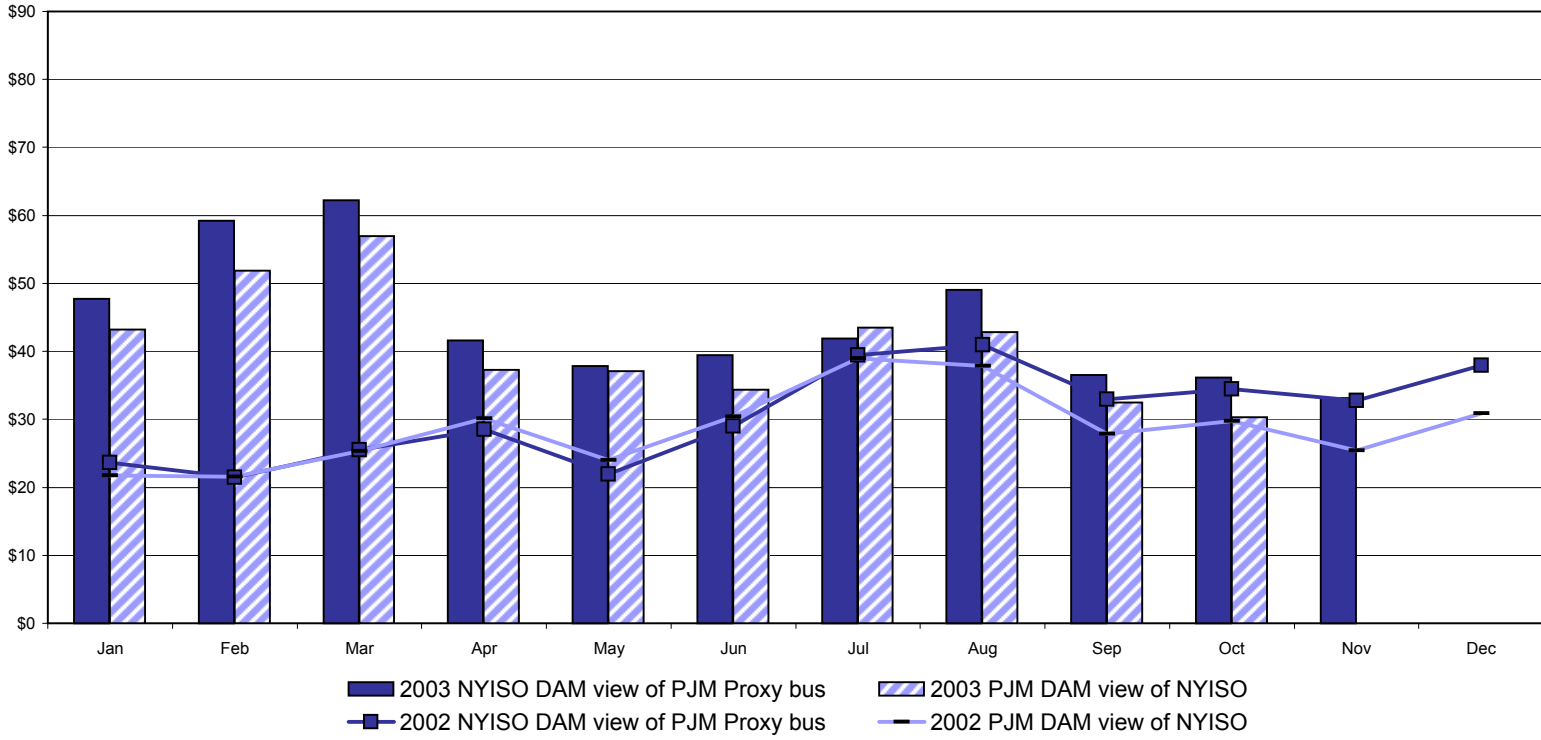
## Real Time External Zone Comparison - ISO-NE only \$/MWH



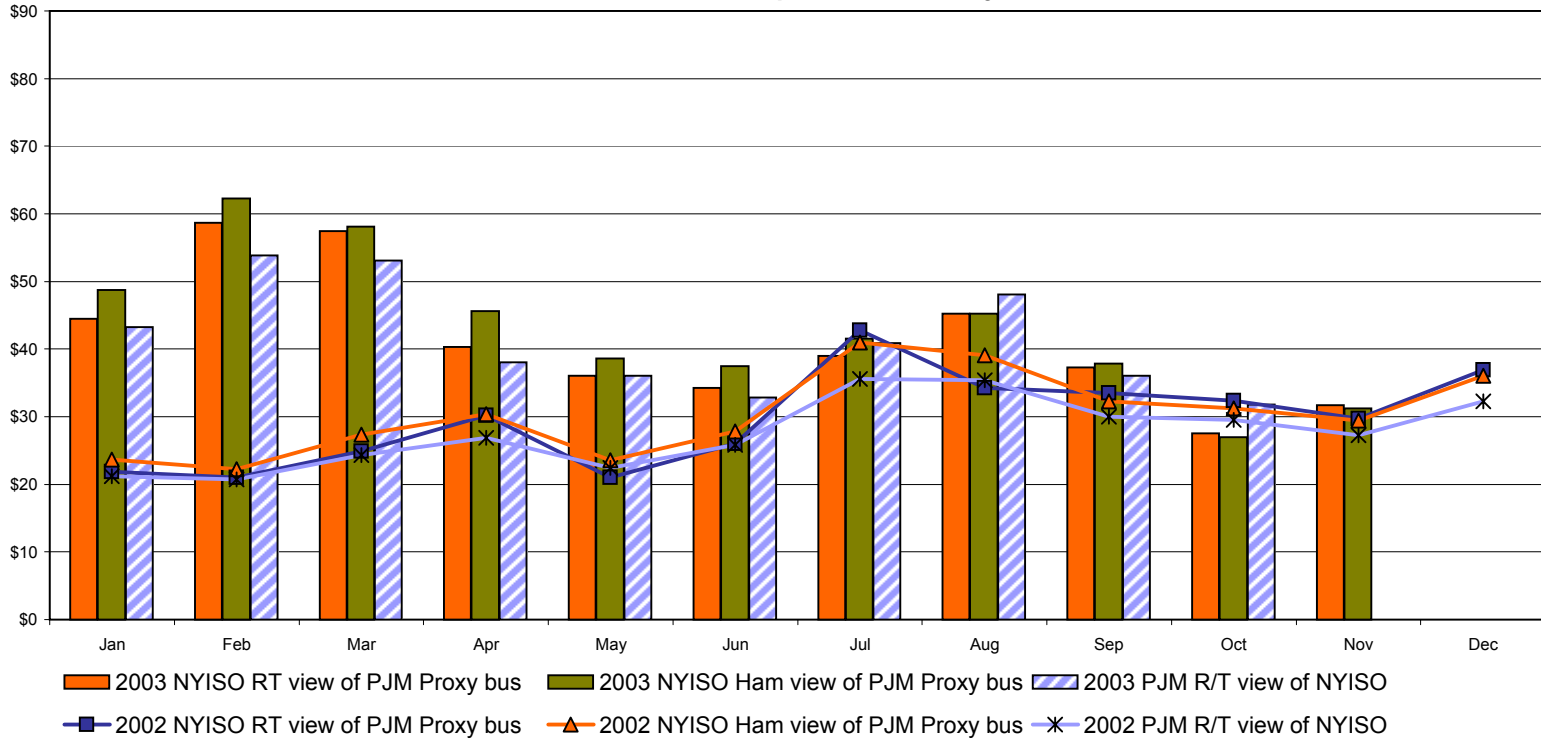
Note:  
 ISO-NE Forecast is an advisory posting @ 18:00 day before  
 \* Effective 3/1/2003 SMD implemented by ISO-NE. The DAM and R/T prices at the Roseton interface are now used.

# External Comparison PJM

## Day Ahead Market External Zone Comparison - PJM only \$/MWH

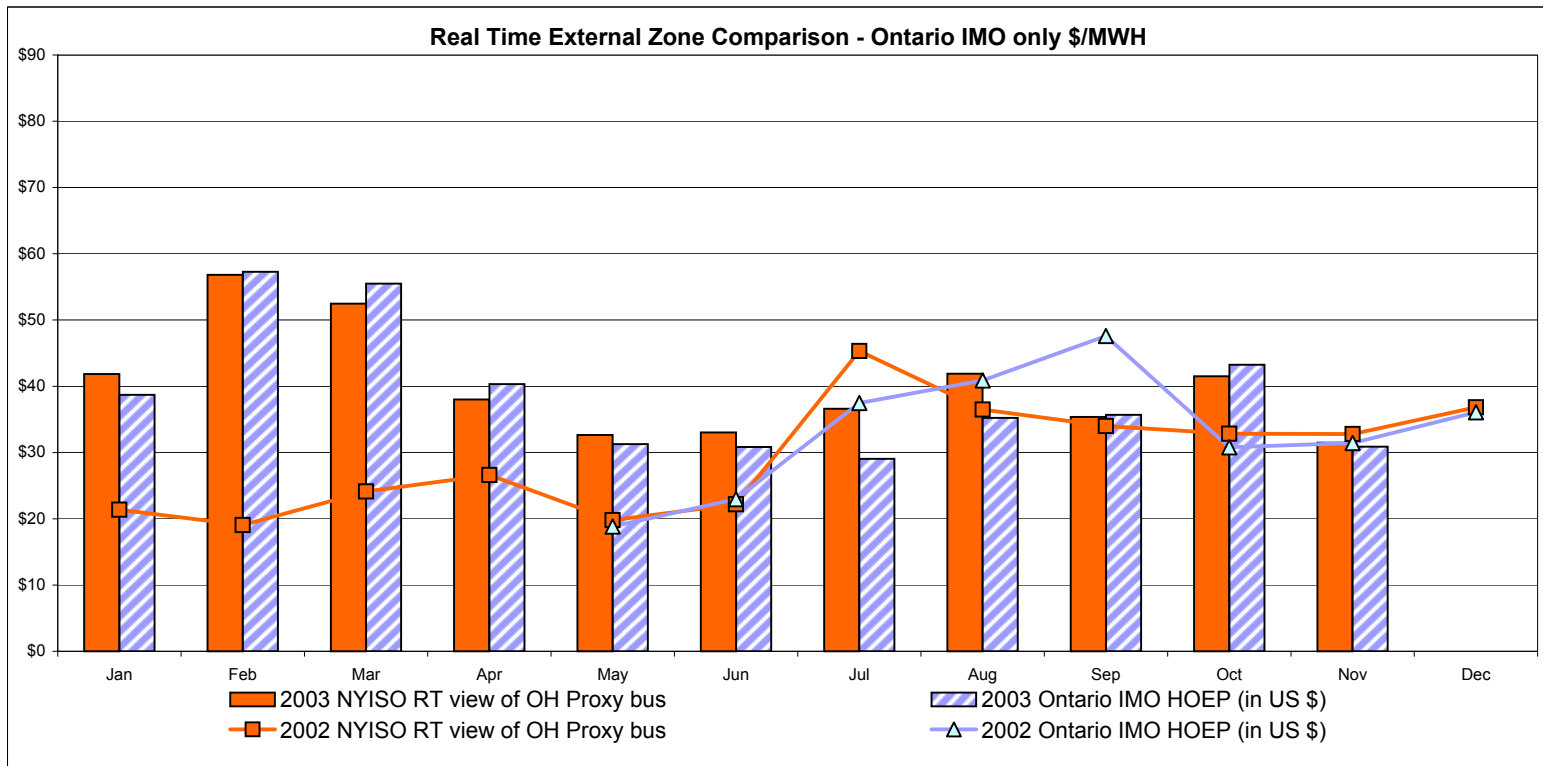
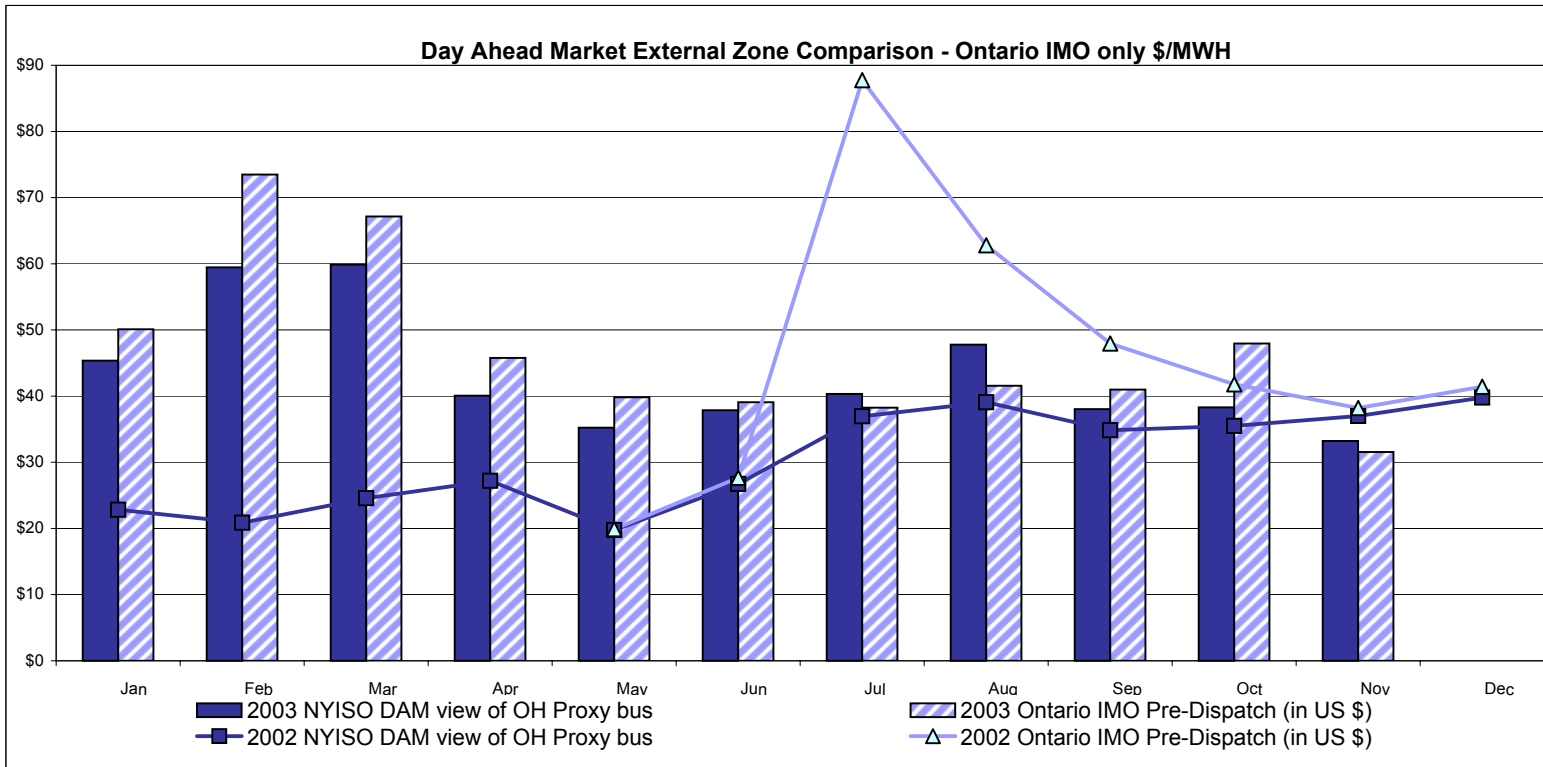


## Real Time External Zone Comparison - PJM only \$/MWH



Note:  
 After 5/1/02 PJM lists only one interface as NYIS  
 November 2003 data not yet posted by PJM

# External Comparison Ontario IMO



Notes: Exchange factor used for November 2003 was .76 to US \$  
 HOEP: Hourly Ontario Energy Price  
 Pre-Dispatch: Projected Energy Price  
 Pre-Dispatch data from 8/14/03 Hr 15 thru 8/21/03 not included

## NYISO Price Correction Statistics

### NYISO Price Corrections 2003

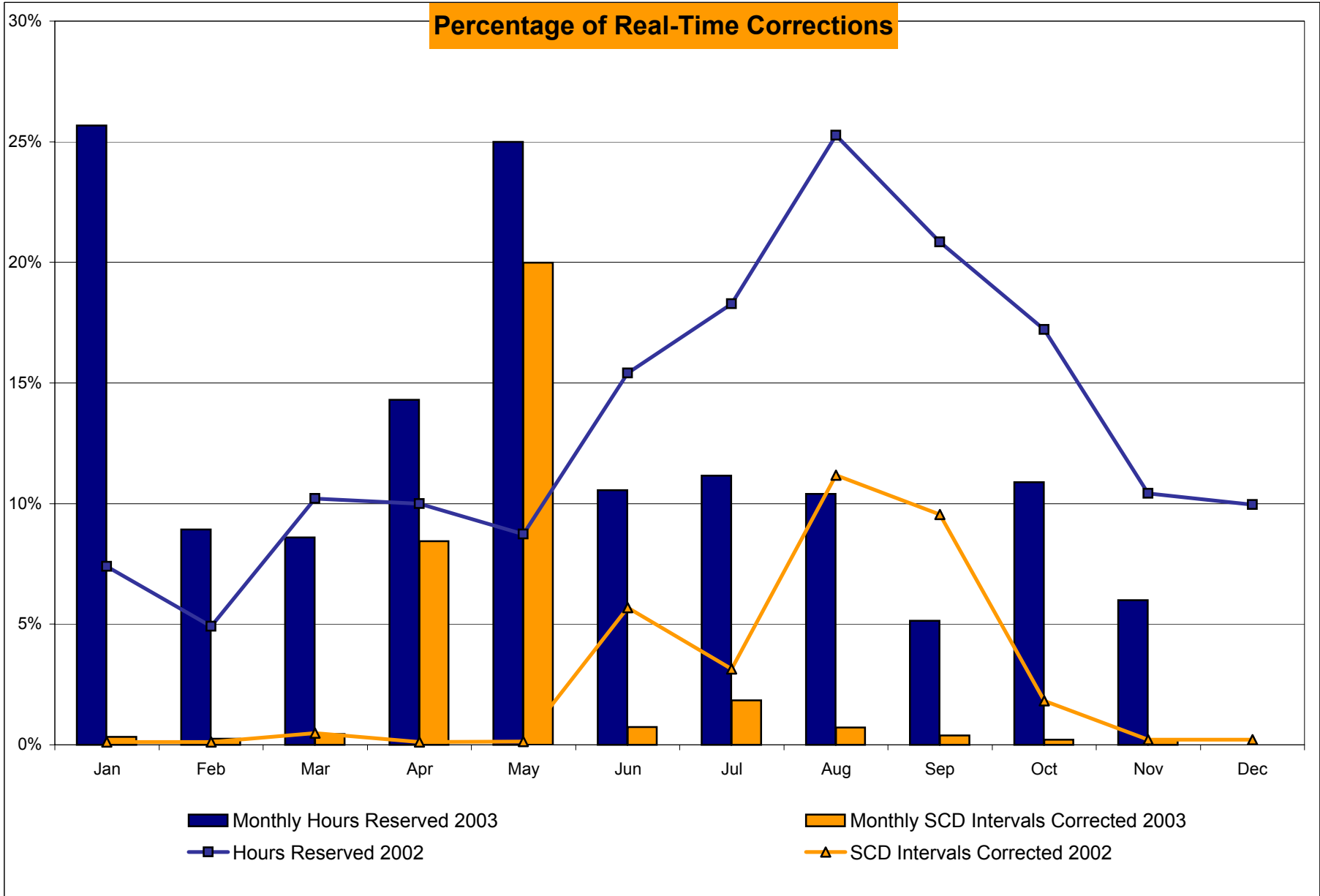
| <u>Interval Corrections</u>                    | January | February | March  | April  | May    | June   | July   | August | September | October | November | December |
|--|---------|----------|--------|--------|--------|--------|--------|--------|-----------|---------|----------|----------|
| Number of Intervals corrected in the month     | 36      | 25       | 49     | 891    | 2,254  | 79     | 202    | 71     | 41        | 25      | 20       |          |
| Number of Intervals in the month               | 10,986  | 10,197   | 10,918 | 10,554 | 11,274 | 10,729 | 10,998 | 9,973  | 10,620    | 11,248  | 8,809    |          |
| Percentage of intervals corrected in the month | 0.32%   | 0.25%    | 0.45%  | 8.44%  | 19.99% | 0.74%  | 1.84%  | 0.71%  | 0.39%     | 0.22%   | 0.23%    |          |
| Number of Intervals corrected Year-to-date     | 36      | 61       | 110    | 1,001  | 3,255  | 3,334  | 3,536  | 3,607  | 3,648     | 3,673   | 3,693    |          |
| Number of Intervals Year-to-date               | 10,986  | 21,183   | 32,101 | 42,655 | 53,929 | 64,658 | 75,656 | 85,629 | 96,249    | 107,497 | 116,306  |          |
| Percentage of intervals corrected Year-to-date | 0.32%   | 0.28%    | 0.34%  | 2.35%  | 6.04%  | 5.16%  | 4.67%  | 4.21%  | 3.79%     | 3.42%   | 3.18%    |          |
| <u>Hours Reserved</u>                          |         |          |        |        |        |        |        |        |           |         |          |          |
| Number of hours reserved in the month          | 191     | 60       | 64     | 103    | 186    | 76     | 83     | 69     | 37        | 81      | 36       |          |
| Number of hours in the month                   | 744     | 672      | 744    | 720    | 744    | 720    | 744    | 664 *  | 720       | 744     | 600      |          |
| Percentage of hours reserved in the month      | 25.67%  | 8.93%    | 8.60%  | 14.31% | 25.00% | 10.56% | 11.16% | 10.39% | 5.14%     | 10.89%  | 6.00%    |          |
| Number of hours reserved Year-to-date          | 191     | 251      | 315    | 418    | 604    | 680    | 763    | 832    | 869       | 950     | 986      |          |
| Number of hours Year-to-date                   | 744     | 1,416    | 2,160  | 2,880  | 3,624  | 4,344  | 5,088  | 5,752  | 6,472     | 7,216   | 7,816    |          |
| Percentage of hours reserved Year-to-date      | 25.67%  | 15.74%   | 14.58% | 14.51% | 16.67% | 15.65% | 15.00% | 14.46% | 13.43%    | 13.17%  | 12.62%   |          |
| <u>Days Without Corrections</u>                |         |          |        |        |        |        |        |        |           |         |          |          |
| Days without price corrections in the month    | 17      | 15       | 14     | 9      | 8      | 8      | 7      | 5      | 9         | 17      | 13       |          |
| Days without price corrections Year-to-date    | 17      | 32       | 46     | 55     | 63     | 71     | 78     | 83     | 92        | 109     | 122      |          |

### NYISO Price Corrections 2002

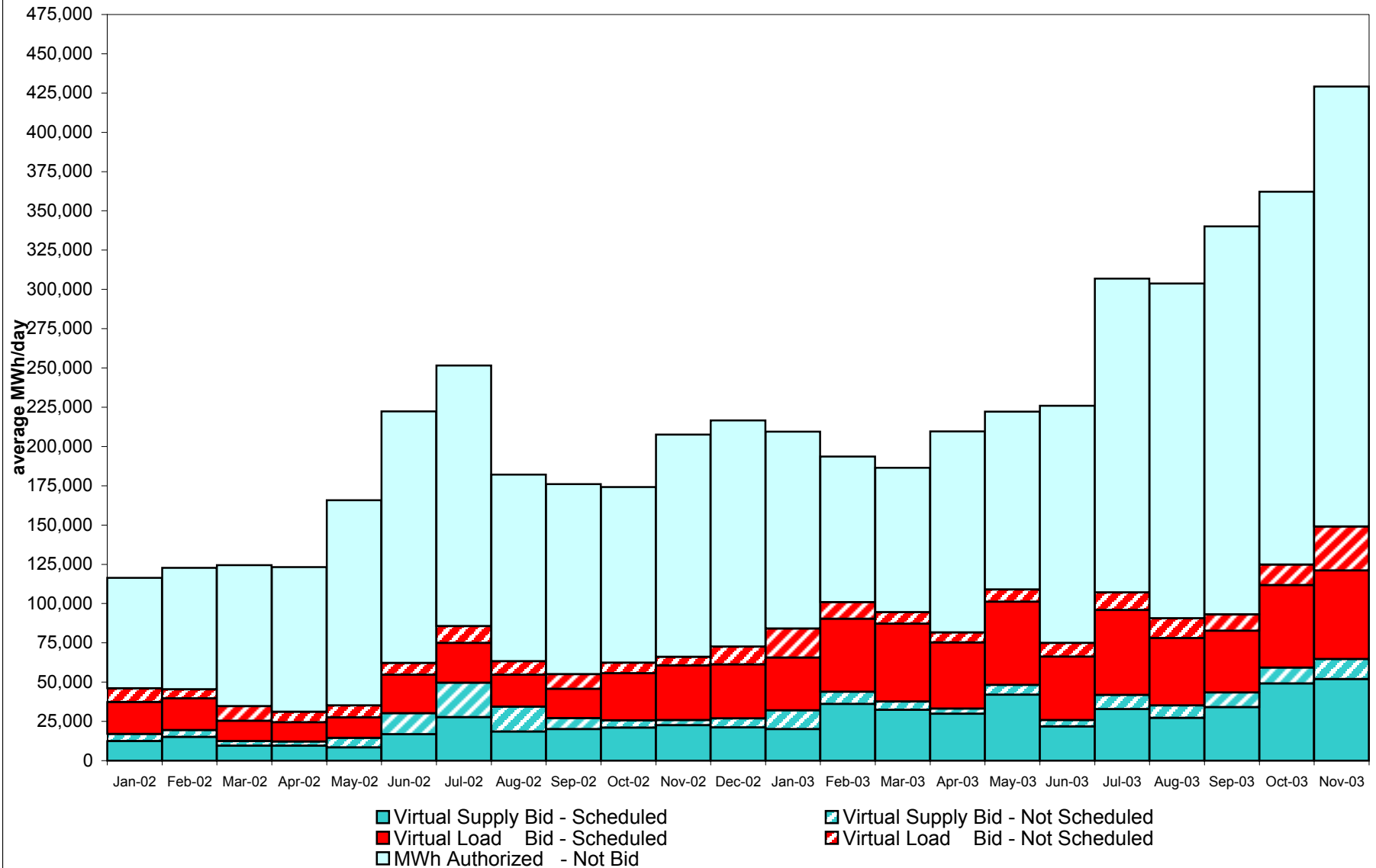
| <u>Interval Corrections</u>                    | January | February | March  | April  | May    | June   | July   | August | September | October | November | December |
|--|---------|----------|--------|--------|--------|--------|--------|--------|-----------|---------|----------|----------|
| Number of Intervals corrected in the month     | 12      | 11       | 55     | 13     | 16     | 616    | 346    | 1,261  | 1,016     | 201     | 23       | 24       |
| Number of Intervals in the month               | 11,129  | 10,111   | 11,231 | 11,075 | 11,330 | 10,845 | 11,014 | 11,291 | 10,632    | 11,068  | 10,568   | 11,043   |
| Percentage of intervals corrected in the month | 0.11%   | 0.11%    | 0.49%  | 0.12%  | 0.14%  | 5.68%  | 2.28%  | 11.17% | 9.56%     | 1.82%   | 0.22%    | 0.22%    |
| Number of Intervals corrected Year-to-date     | 12      | 23       | 78     | 91     | 107    | 723    | 1,069  | 2,330  | 3,346     | 3,547   | 3,570    | 3,594    |
| Number of Intervals Year-to-date               | 11,129  | 21,240   | 32,471 | 43,546 | 54,876 | 65,721 | 76,735 | 88,026 | 98,658    | 109,726 | 120,294  | 131,337  |
| Percentage of intervals corrected Year-to-date | 0.11%   | 0.11%    | 0.24%  | 0.21%  | 0.19%  | 1.10%  | 1.27%  | 2.65%  | 3.39%     | 3.23%   | 2.97%    | 2.74%    |
| <u>Hours Reserved</u>                          |         |          |        |        |        |        |        |        |           |         |          |          |
| Number of hours reserved in the month          | 55      | 33       | 76     | 72     | 65     | 111    | 136    | 188    | 150       | 128     | 75       | 74       |
| Number of hours in the month                   | 744     | 672      | 744    | 720    | 744    | 720    | 744    | 744    | 720       | 744     | 720      | 744      |
| Percentage of hours reserved in the month      | 7.26%   | 4.91%    | 10.22% | 10.00% | 8.74%  | 15.42% | 18.28% | 25.27% | 20.83%    | 17.20%  | 10.42%   | 9.95%    |
| Number of hours reserved Year-to-date          | 55      | 88       | 164    | 236    | 301    | 412    | 548    | 736    | 886       | 1,014   | 1,089    | 1,163    |
| Number of hours Year-to-date                   | 744     | 1,416    | 2,160  | 2,880  | 3,624  | 4,344  | 5,088  | 5,832  | 6,552     | 7,296   | 8,016    | 8,760    |
| Percentage of hours reserved Year-to-date      | 7.26%   | 6.14%    | 7.55%  | 8.16%  | 8.31%  | 9.48%  | 10.77% | 12.62% | 13.52%    | 13.90%  | 13.59%   | 13.28%   |
| <u>Days Without Corrections</u>                |         |          |        |        |        |        |        |        |           |         |          |          |
| Days without price corrections in the month    | 25      | 20       | 27     | 23     | 20     | 12     | 11     | 5      | 10        | 15      | 19       | 17       |
| Days without price corrections Year-to-date    | 25      | 45       | 72     | 95     | 115    | 127    | 138    | 143    | 153       | 168     | 187      | 204      |

\* 80 hours not included due to suspended market during system disruption

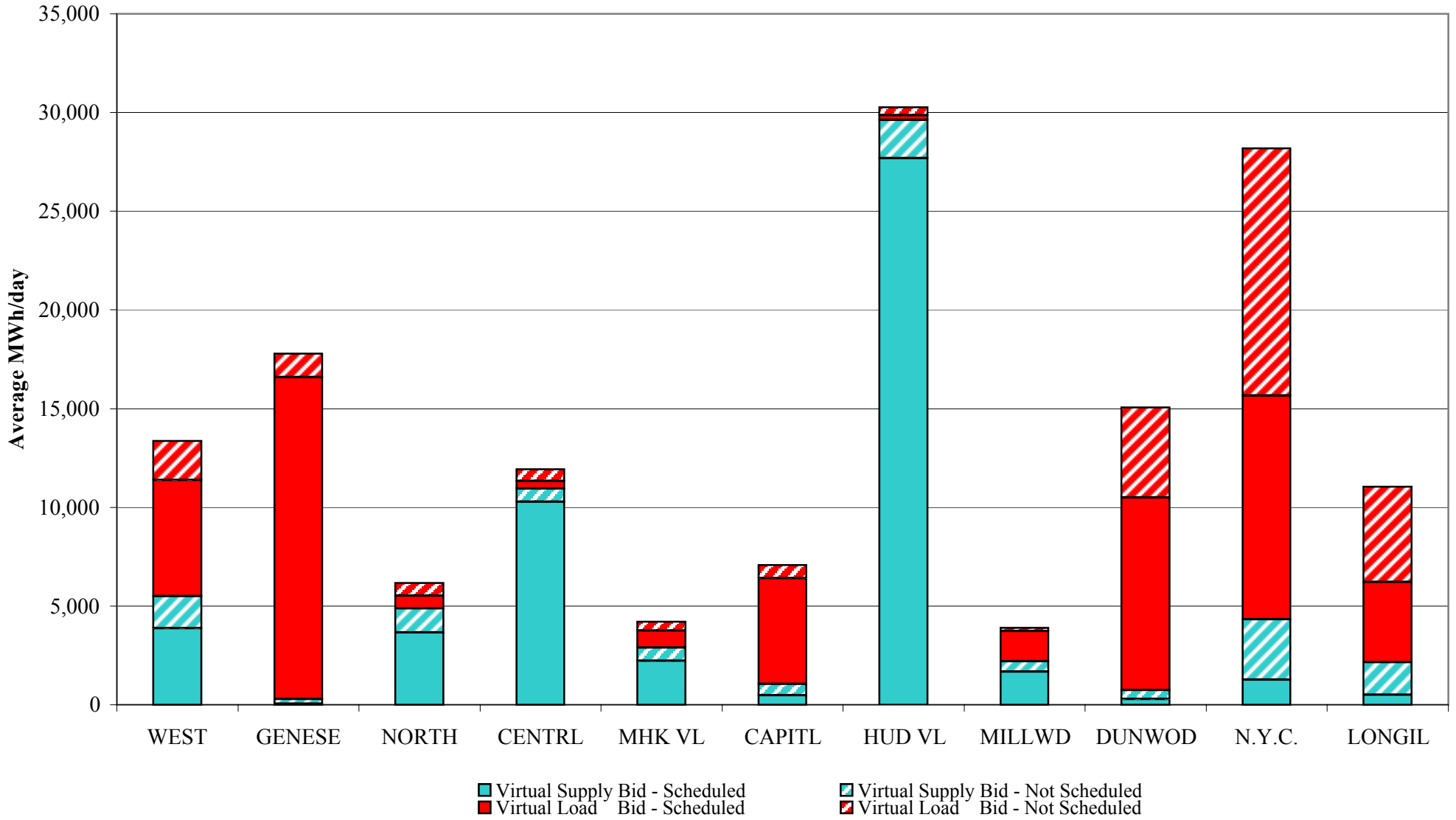
### Percentage of Real-Time Corrections



## NYISO Virtual Trading Average MWh per day



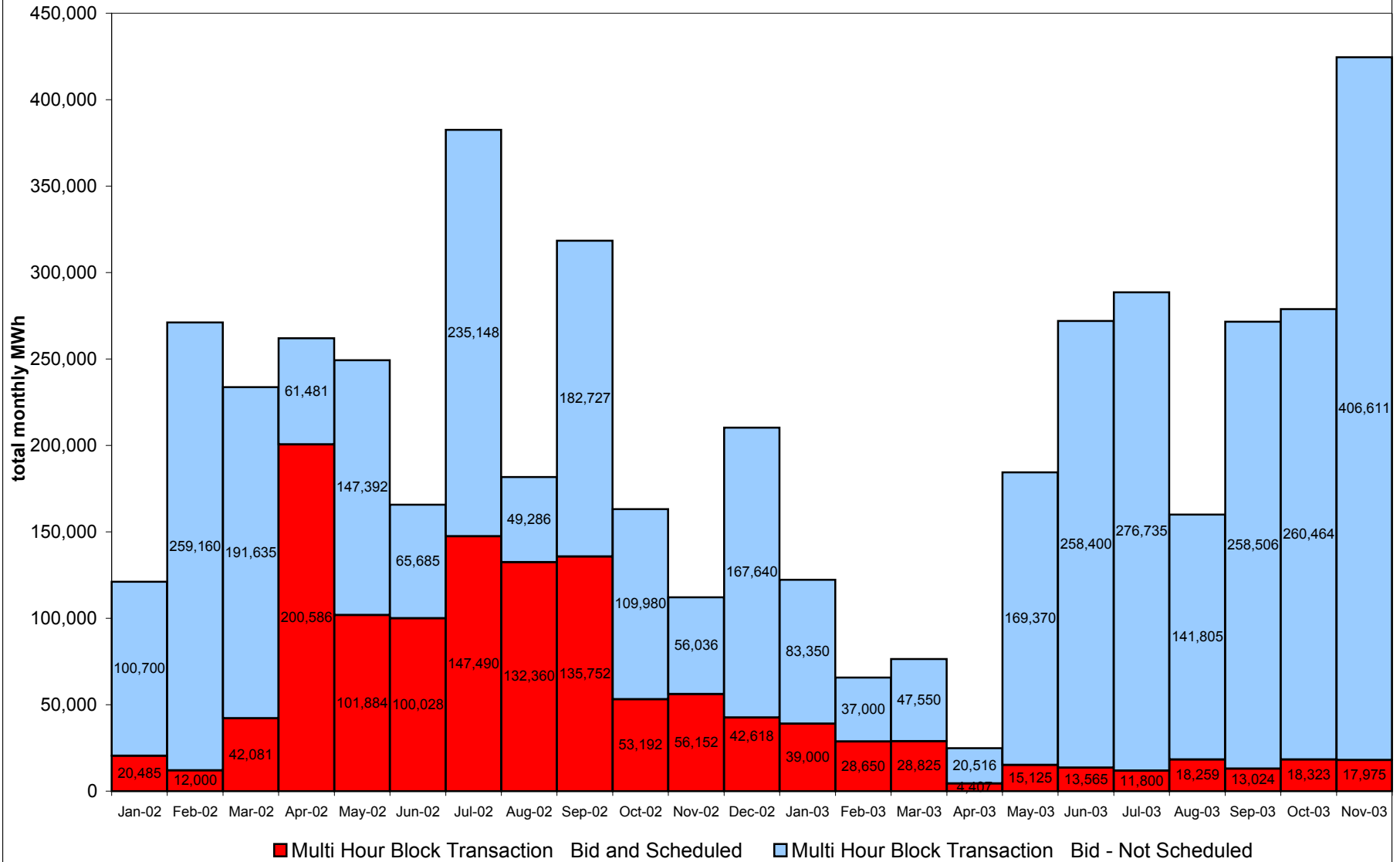
### Virtual Load and Supply Zonal Statistics November 2003



4-T



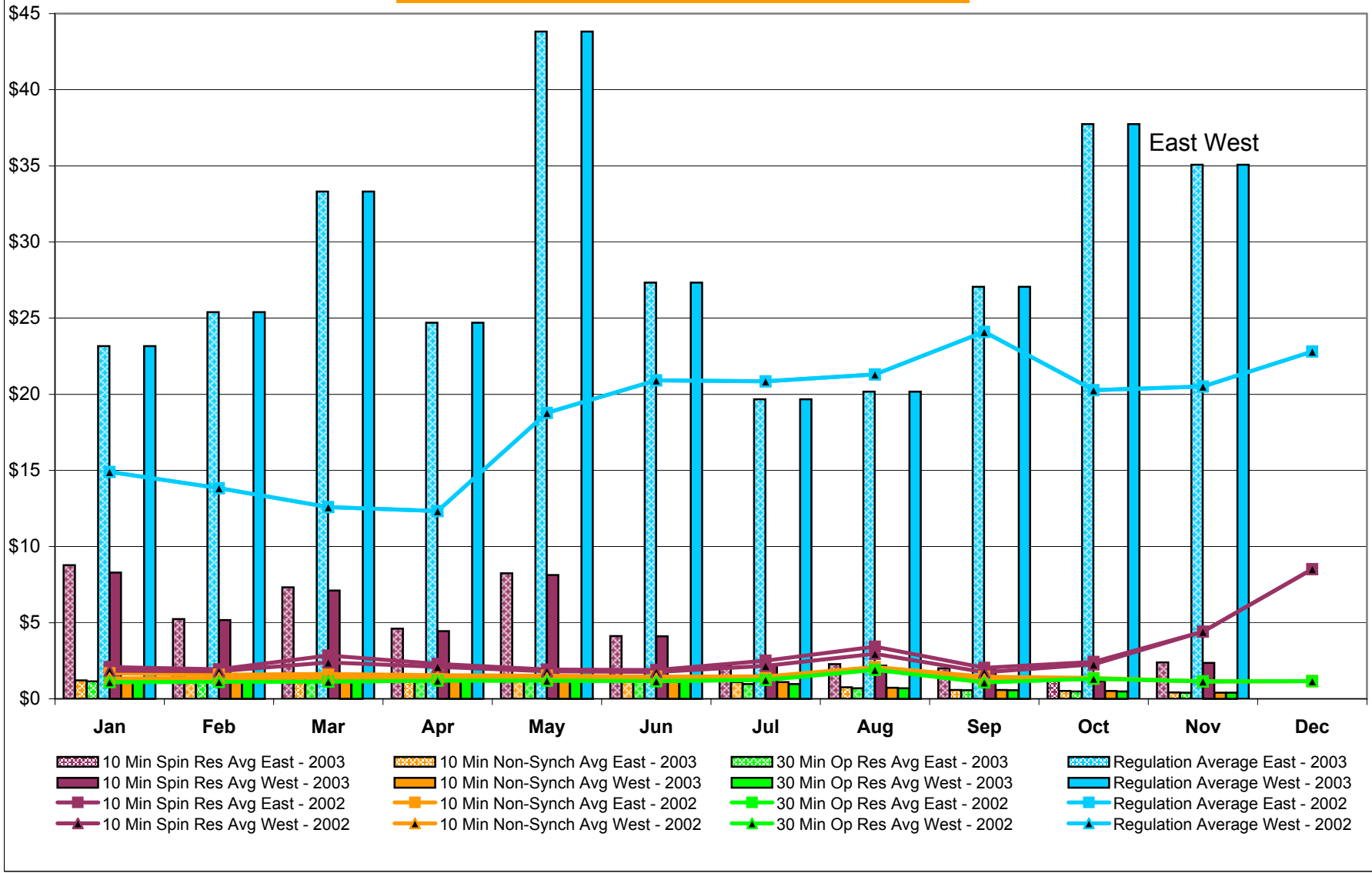
## NYISO Multi Hour Block Transactions Monthly Total MWh



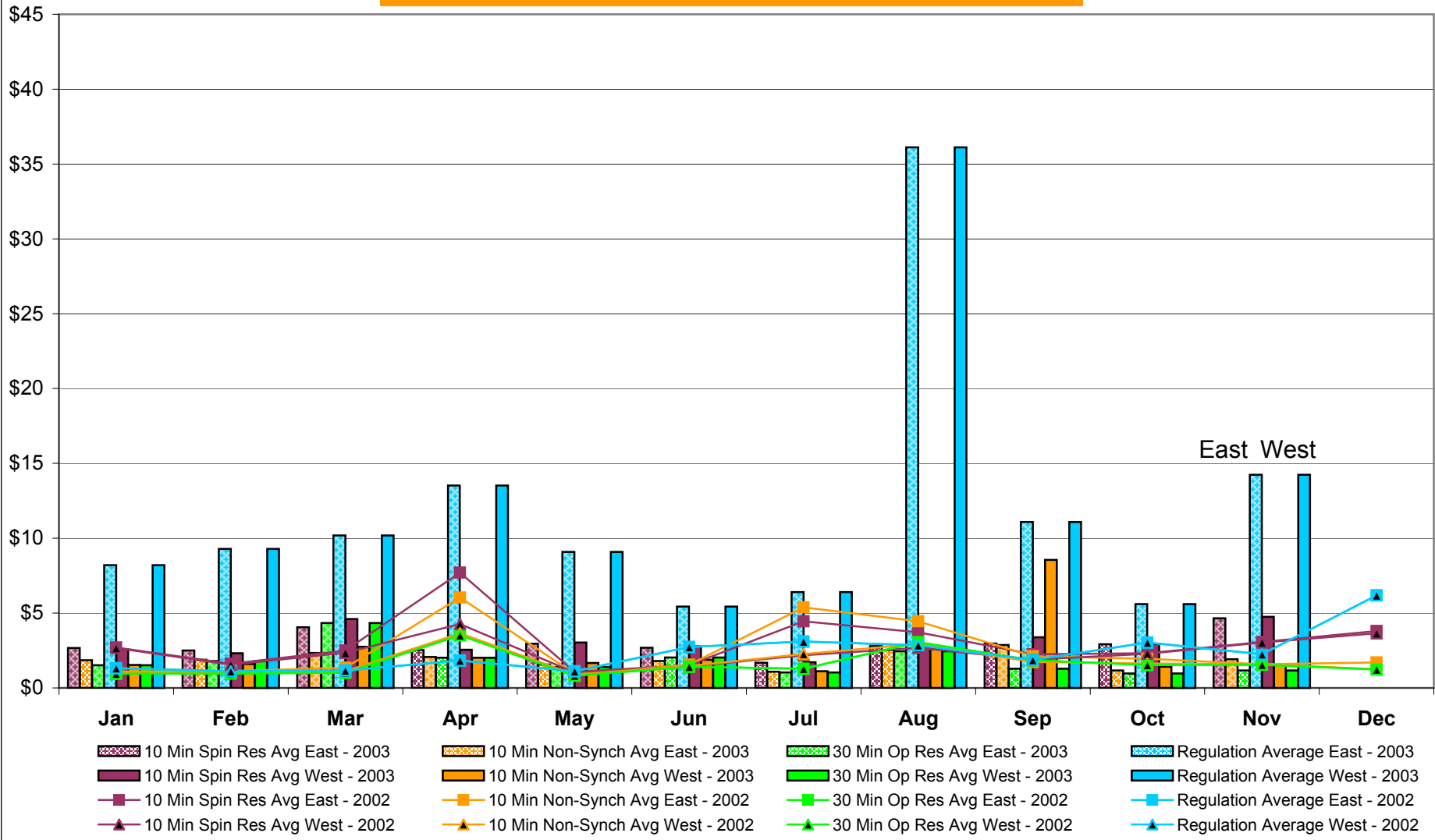
4-U

Preliminary data thru 11/30/03

### NYISO Monthly Average Ancillary Service Prices Day Ahead Market 2002 - 2003



## NYISO Monthly Average Ancillary Service Prices BME \* 2002 - 2003



\* Commonly referred to as Hour Ahead Market (HAM)

## NYISO Markets Ancillary Services Statistics

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

### ANCILLARY SERVICES Unweighted Price (\$/MWH) 2003

#### Day Ahead Market

|                       |       |       |       |       |       |       |       |       |       |       |       |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 10 Min Spin East      | 8.78  | 5.24  | 7.33  | 4.60  | 8.24  | 4.12  | 2.18  | 2.28  | 2.01  | 1.17  | 2.39  |
| 10 Min Spin West      | 8.30  | 5.17  | 7.12  | 4.45  | 8.12  | 4.11  | 2.18  | 2.18  | 2.00  | 1.17  | 2.37  |
| 10 Min Non Synch East | 1.22  | 1.36  | 1.60  | 1.61  | 1.48  | 1.40  | 1.09  | 0.76  | 0.58  | 0.52  | 0.41  |
| 10 Min Non Synch West | 1.15  | 1.32  | 1.45  | 1.54  | 1.45  | 1.39  | 1.09  | 0.72  | 0.58  | 0.52  | 0.40  |
| 30 Min East           | 1.14  | 1.30  | 1.41  | 1.48  | 1.42  | 1.35  | 0.97  | 0.69  | 0.56  | 0.48  | 0.40  |
| 30 Min West           | 1.14  | 1.30  | 1.41  | 1.48  | 1.42  | 1.35  | 0.97  | 0.69  | 0.56  | 0.48  | 0.40  |
| Regulation East       | 23.17 | 25.39 | 33.31 | 24.70 | 43.82 | 27.33 | 19.67 | 20.17 | 27.06 | 37.74 | 35.07 |
| Regulation West       | 23.17 | 25.39 | 33.31 | 24.70 | 43.82 | 27.33 | 19.67 | 20.17 | 27.06 | 37.74 | 35.07 |

#### BME\* Market

|                       |      |      |       |       |      |      |      |       |       |      |       |
|-----------------------|------|------|-------|-------|------|------|------|-------|-------|------|-------|
| 10 Min Spin East      | 2.67 | 2.50 | 4.05  | 2.54  | 2.95 | 2.69 | 1.69 | 2.82  | 2.96  | 2.92 | 4.65  |
| 10 Min Spin West      | 2.59 | 2.32 | 4.61  | 2.55  | 3.04 | 2.78 | 1.72 | 2.91  | 3.38  | 2.94 | 4.76  |
| 10 Min Non Synch East | 1.85 | 1.89 | 2.34  | 2.07  | 1.57 | 1.80 | 1.09 | 2.53  | 2.87  | 1.17 | 1.92  |
| 10 Min Non Synch West | 1.53 | 1.59 | 2.75  | 2.02  | 1.67 | 1.88 | 1.11 | 2.58  | 8.55  | 1.41 | 1.57  |
| 30 Min East           | 1.52 | 1.80 | 4.34  | 2.02  | 1.40 | 2.03 | 1.04 | 2.46  | 1.28  | 0.97 | 1.17  |
| 30 Min West           | 1.52 | 1.80 | 4.34  | 2.02  | 1.40 | 2.03 | 1.04 | 2.46  | 1.28  | 0.97 | 1.17  |
| Regulation East       | 8.21 | 9.28 | 10.19 | 13.52 | 9.08 | 5.44 | 6.41 | 36.11 | 11.09 | 5.60 | 14.24 |
| Regulation West       | 8.21 | 9.28 | 10.19 | 13.52 | 9.08 | 5.44 | 6.41 | 36.11 | 11.09 | 5.60 | 14.24 |

### ANCILLARY SERVICES Unweighted Price (\$/MWH) 2002

#### Day Ahead Market

|                       |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 10 Min Spin East      | 2.09  | 1.95  | 2.85  | 2.29  | 1.93  | 1.90  | 2.51  | 3.43  | 2.04  | 2.43  | 4.42  | 8.52  |
| 10 Min Spin West      | 1.85  | 1.81  | 2.40  | 2.11  | 1.81  | 1.75  | 2.16  | 2.96  | 1.74  | 2.26  | 4.41  | 8.52  |
| 10 Min Non Synch East | 1.68  | 1.58  | 1.64  | 1.55  | 1.52  | 1.46  | 1.47  | 2.09  | 1.46  | 1.37  | 1.15  | 1.16  |
| 10 Min Non Synch West | 1.34  | 1.36  | 1.39  | 1.40  | 1.34  | 1.32  | 1.35  | 1.96  | 1.27  | 1.33  | 1.15  | 1.16  |
| 30 Min East           | 1.09  | 1.11  | 1.13  | 1.19  | 1.20  | 1.17  | 1.24  | 1.90  | 1.09  | 1.32  | 1.15  | 1.16  |
| 30 Min West           | 1.09  | 1.11  | 1.13  | 1.19  | 1.20  | 1.17  | 1.24  | 1.90  | 1.09  | 1.32  | 1.15  | 1.16  |
| Regulation East       | 14.90 | 13.83 | 12.59 | 12.33 | 18.78 | 20.92 | 20.85 | 21.31 | 24.10 | 20.27 | 20.51 | 22.80 |
| Regulation West       | 14.90 | 13.83 | 12.59 | 12.33 | 18.78 | 20.92 | 20.85 | 21.31 | 24.10 | 20.27 | 20.51 | 22.80 |

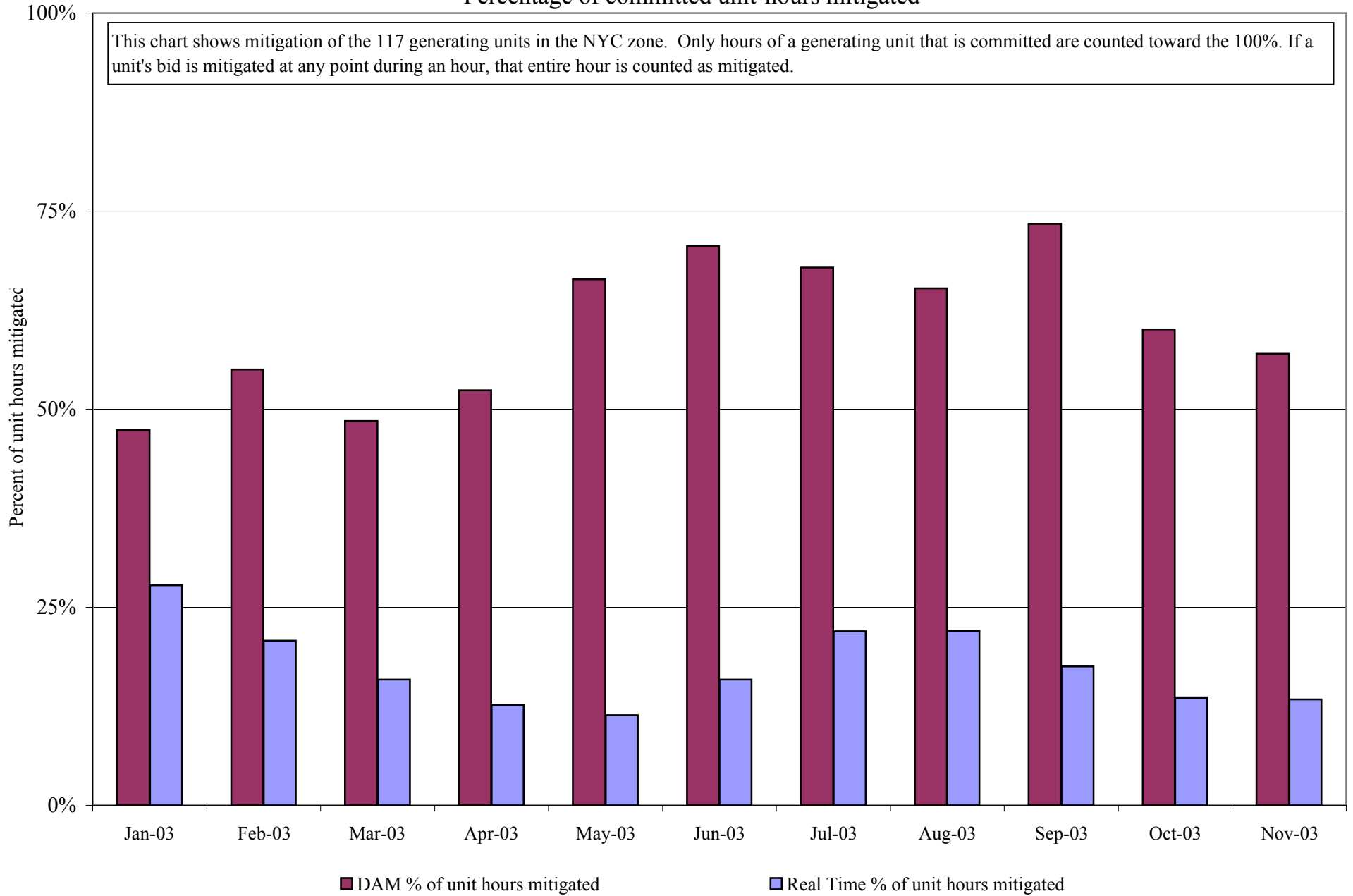
#### BME\* Market

|                       |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 10 Min Spin East      | 2.70 | 1.62 | 2.51 | 7.71 | 1.06 | 1.53 | 4.45 | 3.71 | 2.25 | 2.32 | 3.07 | 3.81 |
| 10 Min Spin West      | 2.67 | 1.55 | 2.34 | 4.26 | 1.03 | 1.43 | 2.19 | 2.69 | 1.88 | 2.29 | 3.04 | 3.66 |
| 10 Min Non Synch East | 1.11 | 1.13 | 1.35 | 6.03 | 0.94 | 1.56 | 5.38 | 4.45 | 2.12 | 1.96 | 1.58 | 1.70 |
| 10 Min Non Synch West | 0.99 | 1.05 | 1.12 | 3.65 | 0.91 | 1.46 | 2.27 | 2.94 | 1.74 | 1.63 | 1.58 | 1.26 |
| 30 Min East           | 0.95 | 0.97 | 1.01 | 3.54 | 0.82 | 1.41 | 1.28 | 3.05 | 1.85 | 1.54 | 1.55 | 1.24 |
| 30 Min West           | 0.95 | 0.97 | 1.01 | 3.51 | 0.82 | 1.41 | 1.28 | 3.05 | 1.85 | 1.54 | 1.55 | 1.24 |
| Regulation East       | 1.32 | 1.12 | 1.17 | 1.84 | 1.12 | 2.73 | 3.11 | 2.85 | 1.86 | 3.03 | 2.25 | 6.18 |
| Regulation West       | 1.32 | 1.12 | 1.17 | 1.84 | 1.12 | 2.73 | 3.11 | 2.85 | 1.86 | 3.03 | 2.25 | 6.18 |

\* Commonly Referred to as Hour Ahead Market (HAM)

# NYISO In City Mitigation (NYC Zone) - 2003

## Percentage of committed unit-hours mitigated



# NYISO LBMP ZONES

