# Northern Illinois Control Area Interim Market Monitoring Report for June 2004

Market Monitoring Unit

July 2004

# NICA market results – May/June 2004

- Overall, the integrated NICA markets functioned well and effectively.
- The NICA energy market results were reasonably competitive.
- Pathway flows have increased competition in NICA and in PJM CA.
- Interface pricing has been reasonably effective.
- FTRs in NICA have provided an effective congestion hedge.
- Congestion has been limited.
- Financial offer and bid levels reflect an active use of PJM hedging instruments.

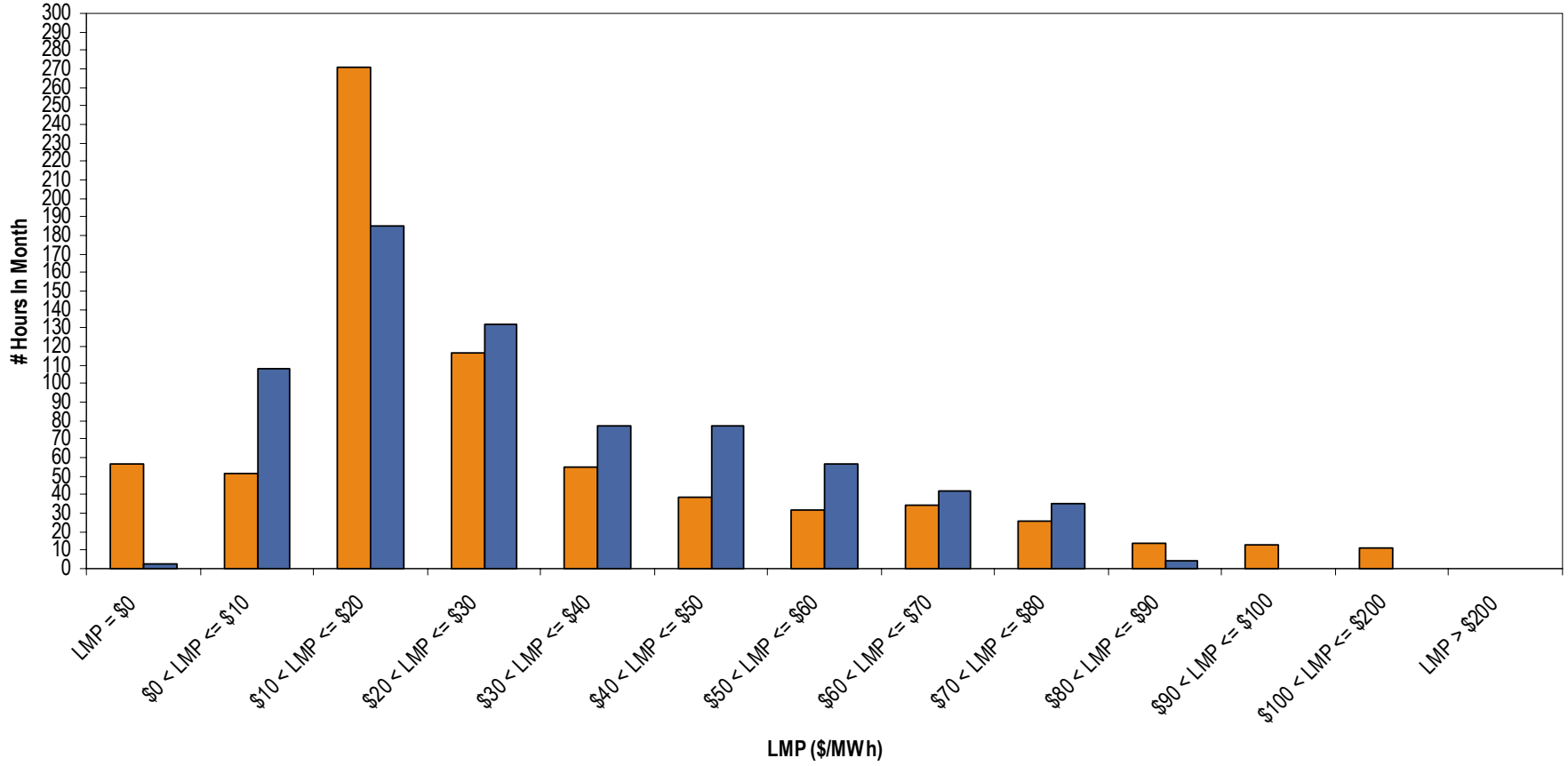
 

# Energy market prices – June 2004

- NICA real-time zonal LMP was less than $30 per MWh for 69 percent of the hours.
- NICA day-ahead zonal LMP was less than $30 per MWh for 60 percent of the hours.
- PJM CA real-time LMP was greater than NICA real-time LMP by an average of $13.19 per MWh.
- PJM CA day-ahead LMP was greater than NICA day-ahead LMP by an average of $12.40 per MWh.

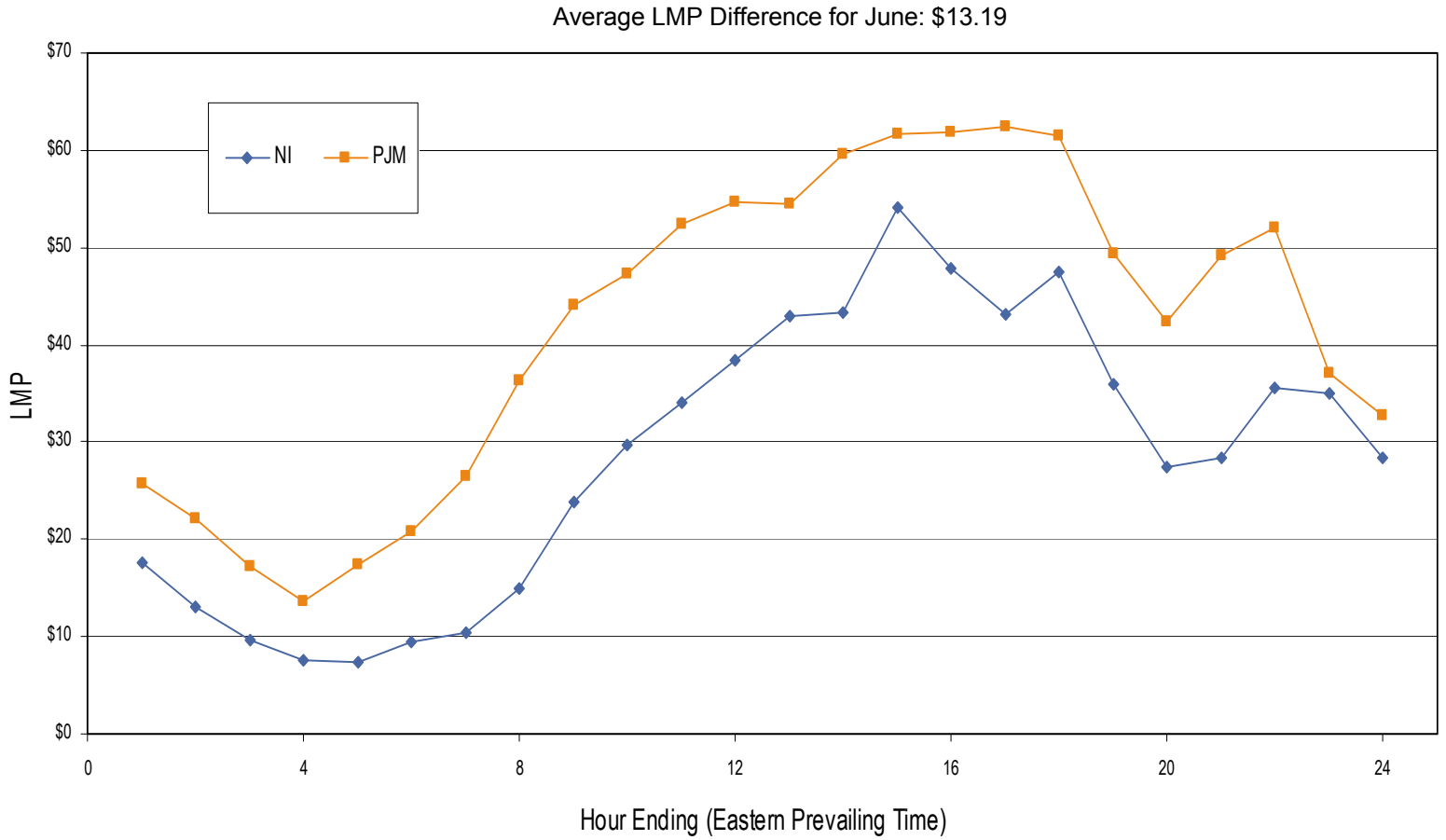
 

## NICA Zonal LMP - June 2004



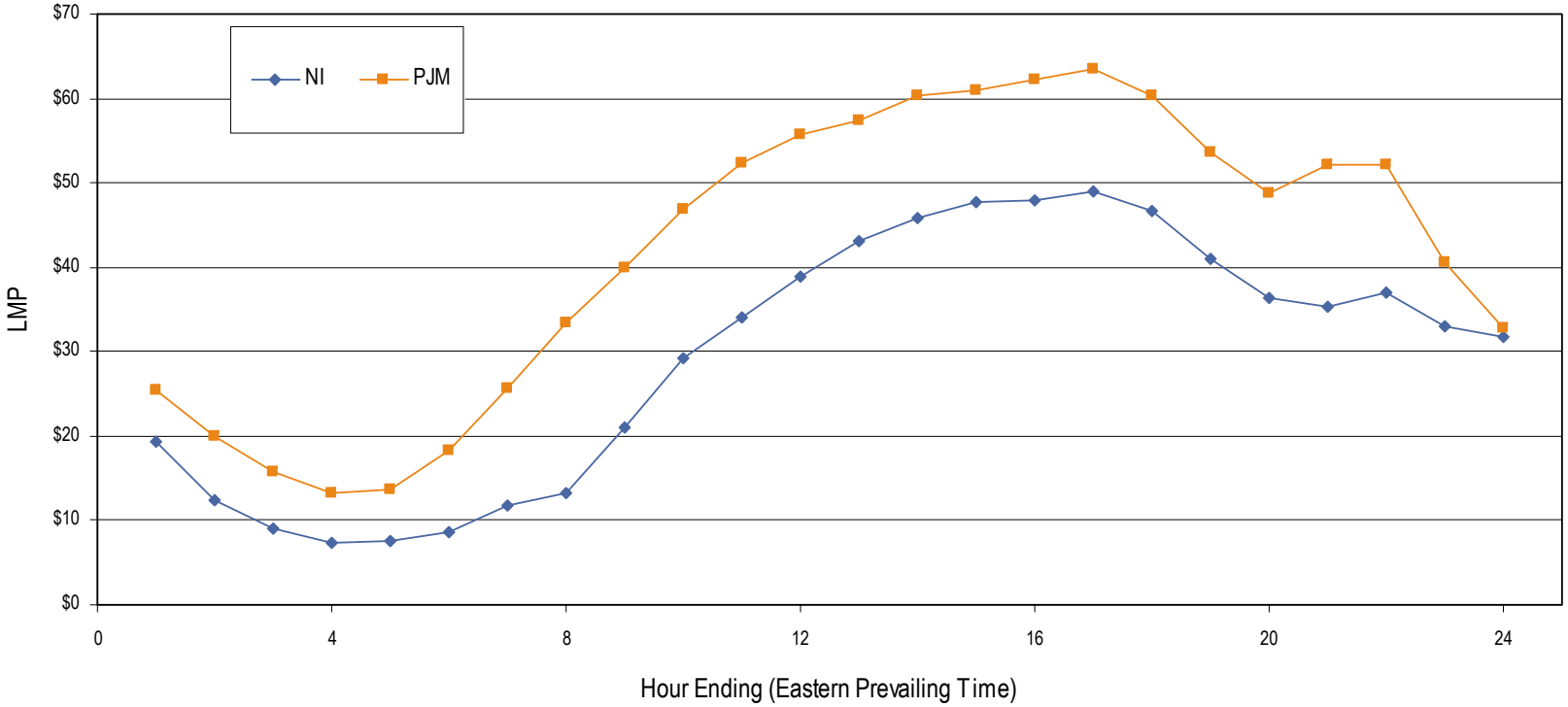
## Average Hourly Real-Time LMP - June 2004



## Average Hourly Day-Ahead LMP - June 2004

Average LMP Difference for June: $12.40



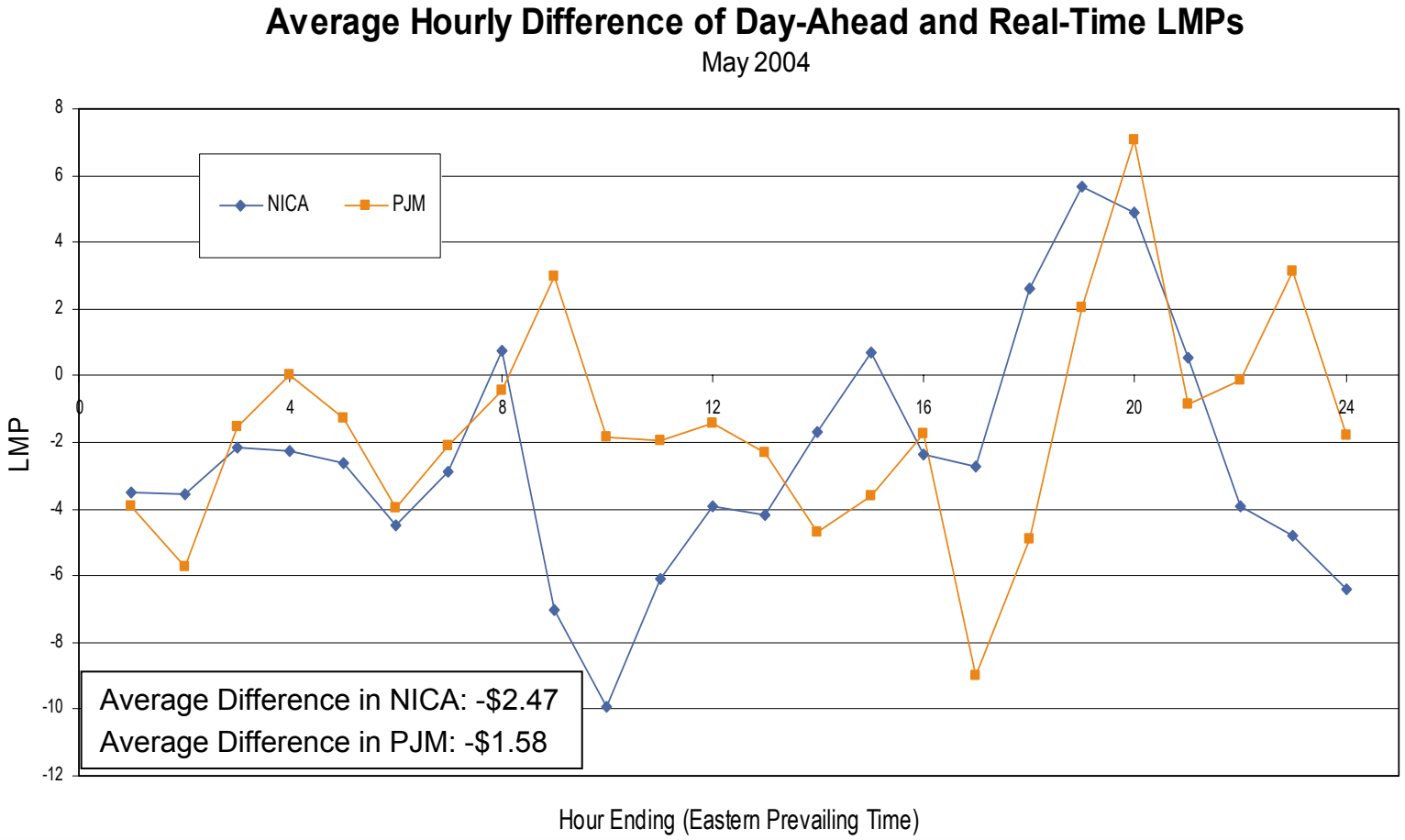

 

# Energy market price differentials – May and June 2004

- NICA day-ahead zonal LMP was less than NICA real-time zonal LMP in May. The average hourly difference was $2.47 per MWh.
- PJM CA day-ahead zonal LMP was less than PJM CA real-time zonal LMP in May. The average hourly difference was $1.58 per MWh.
- NICA day-ahead zonal LMP was greater than NICA real-time zonal LMP in June. The average hourly difference was $0.91 per MWh.
- PJM CA day-ahead zonal LMP was greater than PJM CA real-time zonal LMP in June. The average hourly difference was $0.12 per MWh.

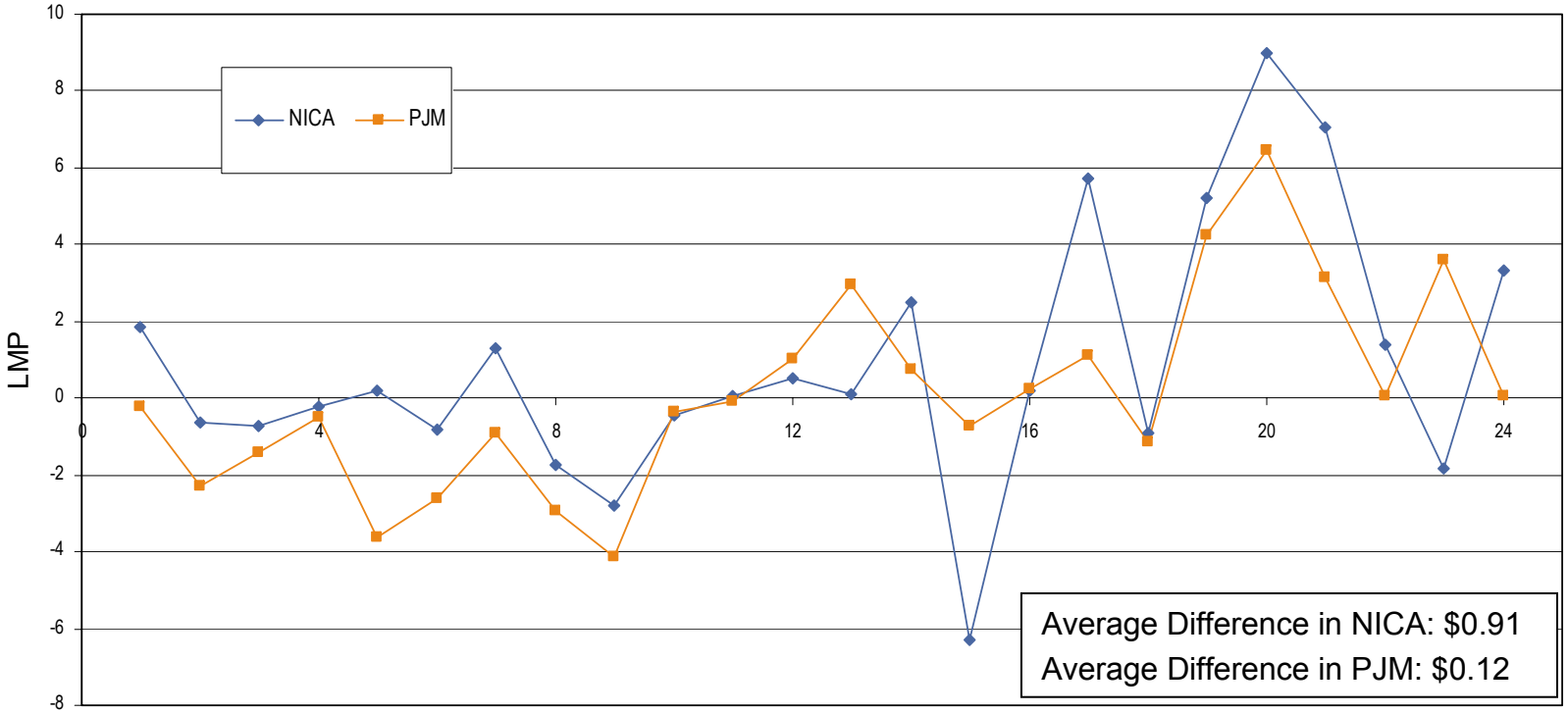
# Day-Ahead vs. Real-Time LMP Differentials



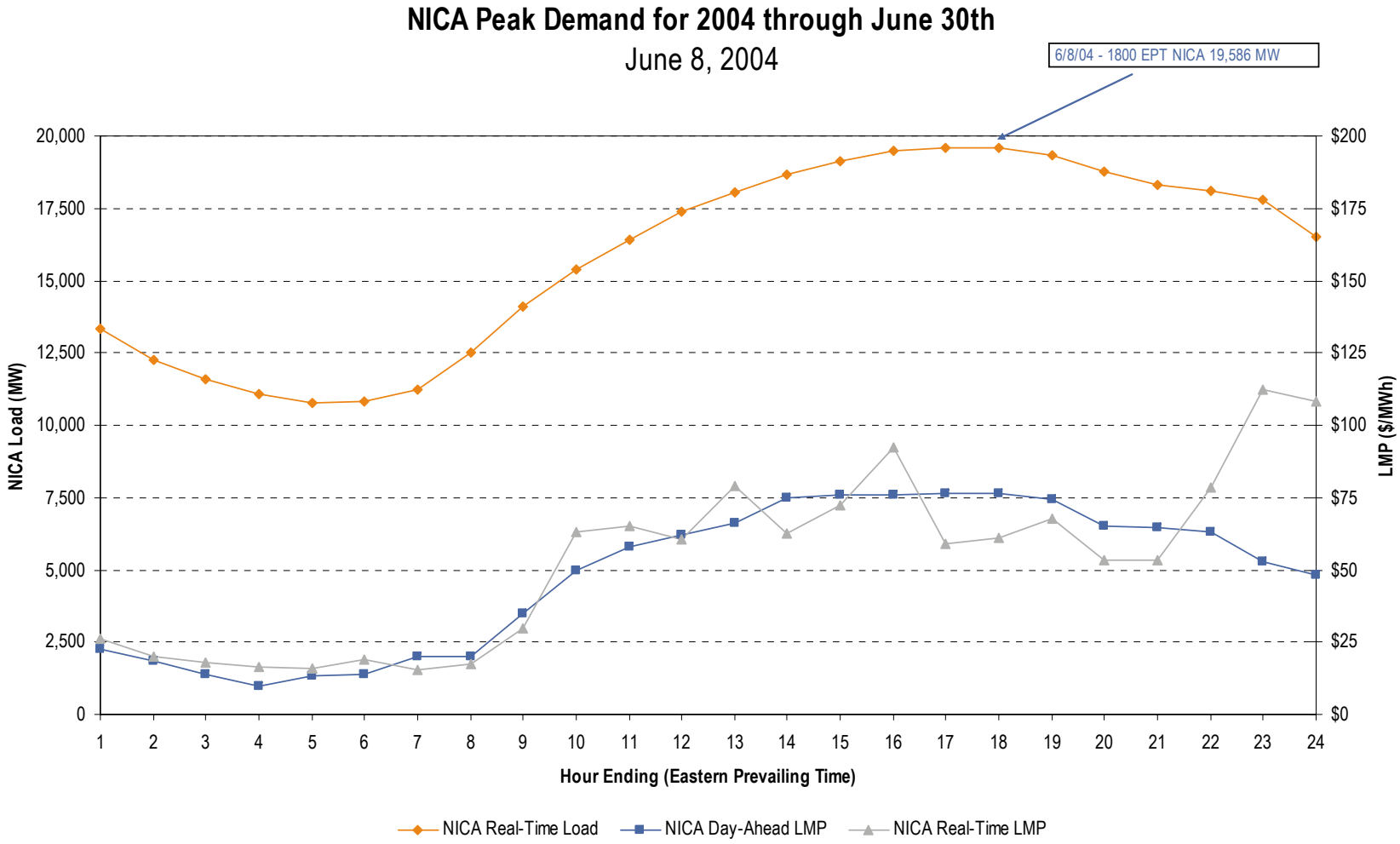
# Day-Ahead vs. Real-Time LMP Differentials

**Average Hourly Difference of Day-Ahead and Real-Time LMPs**

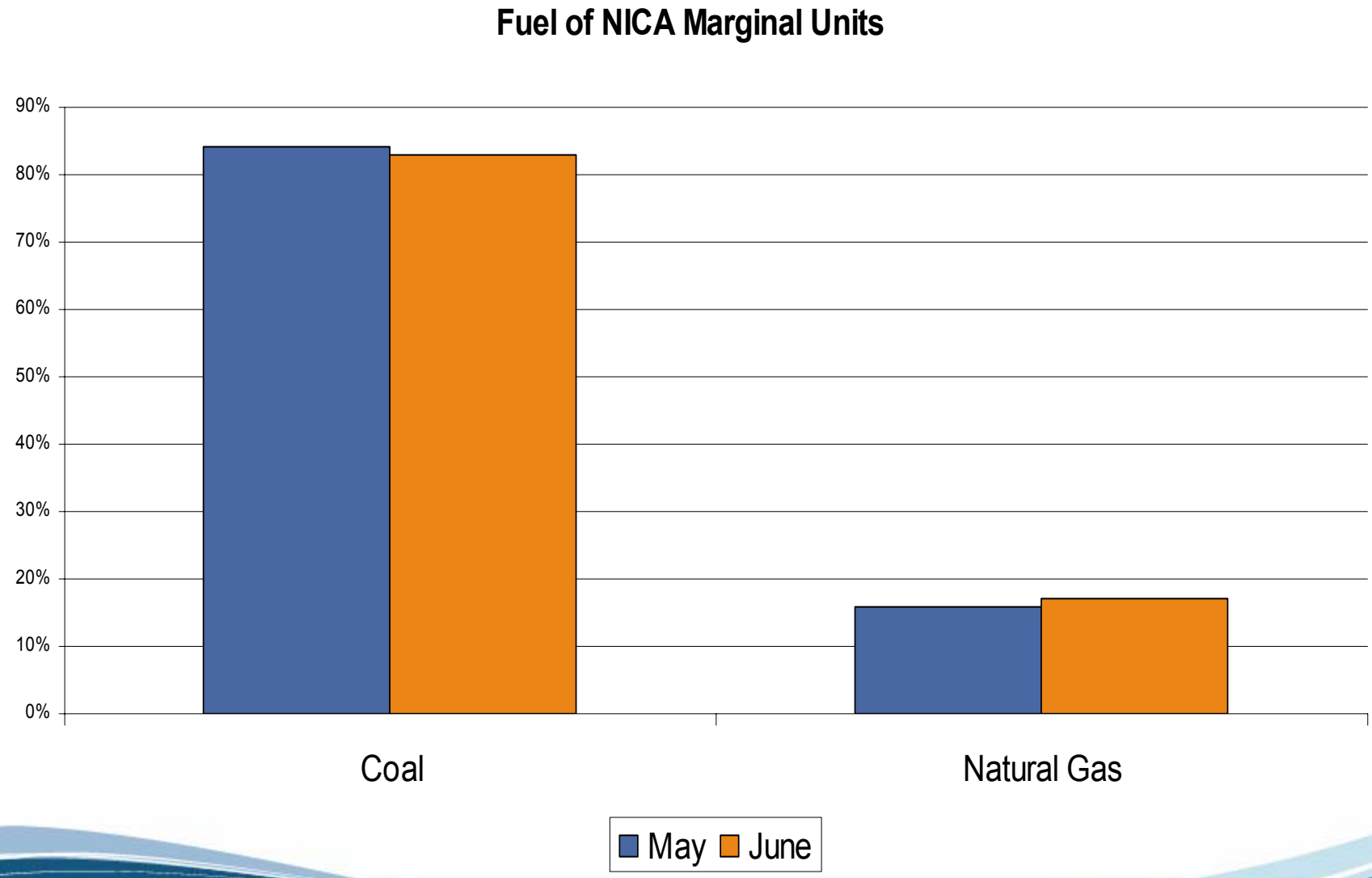
June 2004



# NICA Peak Demand Day



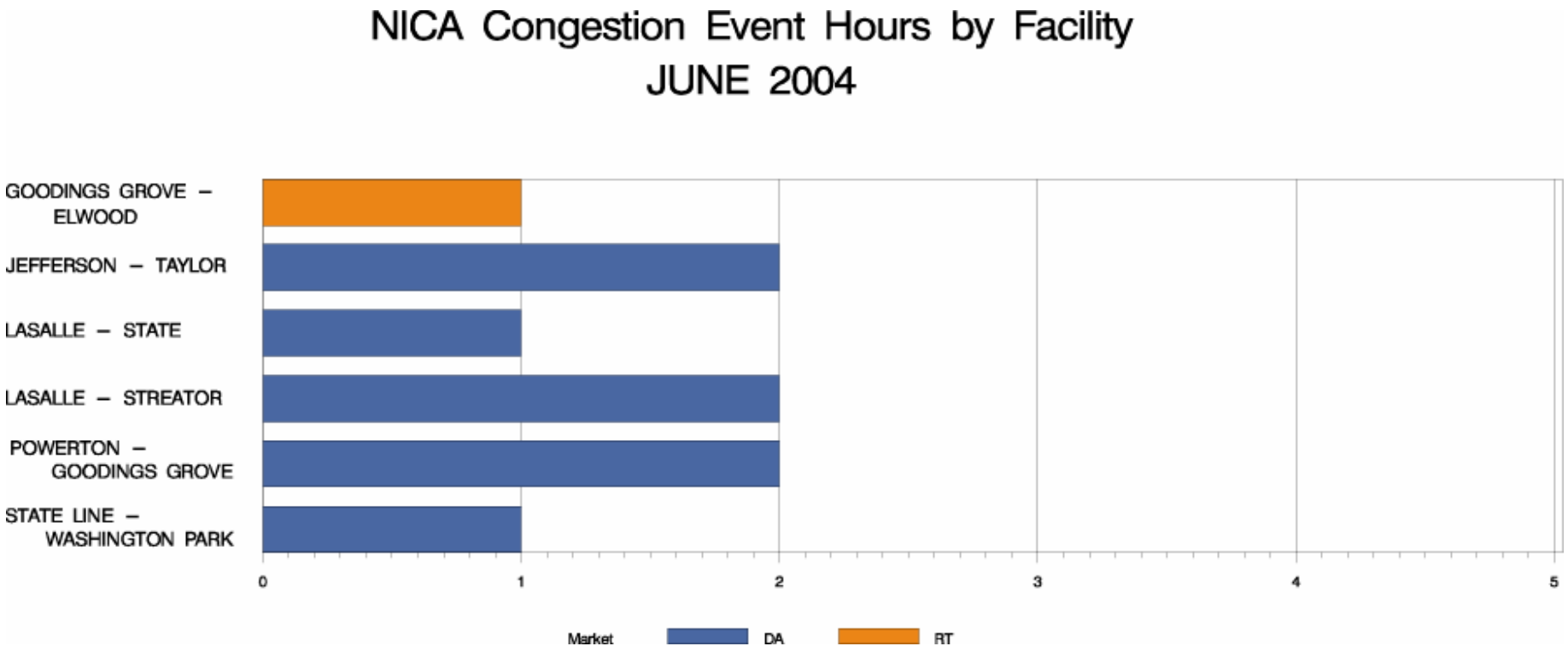
# Fuel Type of NICA Marginal Units



# NICA Congestion for June 2004

- Congestion was very limited in NICA in June.
- Day-Ahead Market congestion:
  - 8 event hours
- Real-Time Market congestion:
  - 1 event hour
- No NICA units were offer-capped in the Real-Time Markets in June 2004.
- No NICA units were offer-capped in the Day-Ahead Markets in June 2004.


NICA Congestion Event Hours by Facility
JUNE 2004
GOODINGS GROVE – ELWOOD
JEFFERSON – TAYLOR
LASALLE – STATE
LASALLE – STREATOR
POWERTON – GOODINGS GROVE
STATE LINE – WASHINGTON PARK
0
1
2
3
4
5
Market
DA
RT

## Real-time pathway statistics for June 2004

- Pathway limited from NICA to PJM 354 hours, or 49 percent.
- Pathway limited from PJM to NICA 65 hours, or 9 percent.
- Pathway not limited for 301 hours, or 41 percent.
- Pathway flowed from NICA to PJM for 485 hours, or 67 percent.
- Pathway flowed from PJM to NICA for 235 hours, or 33 percent.

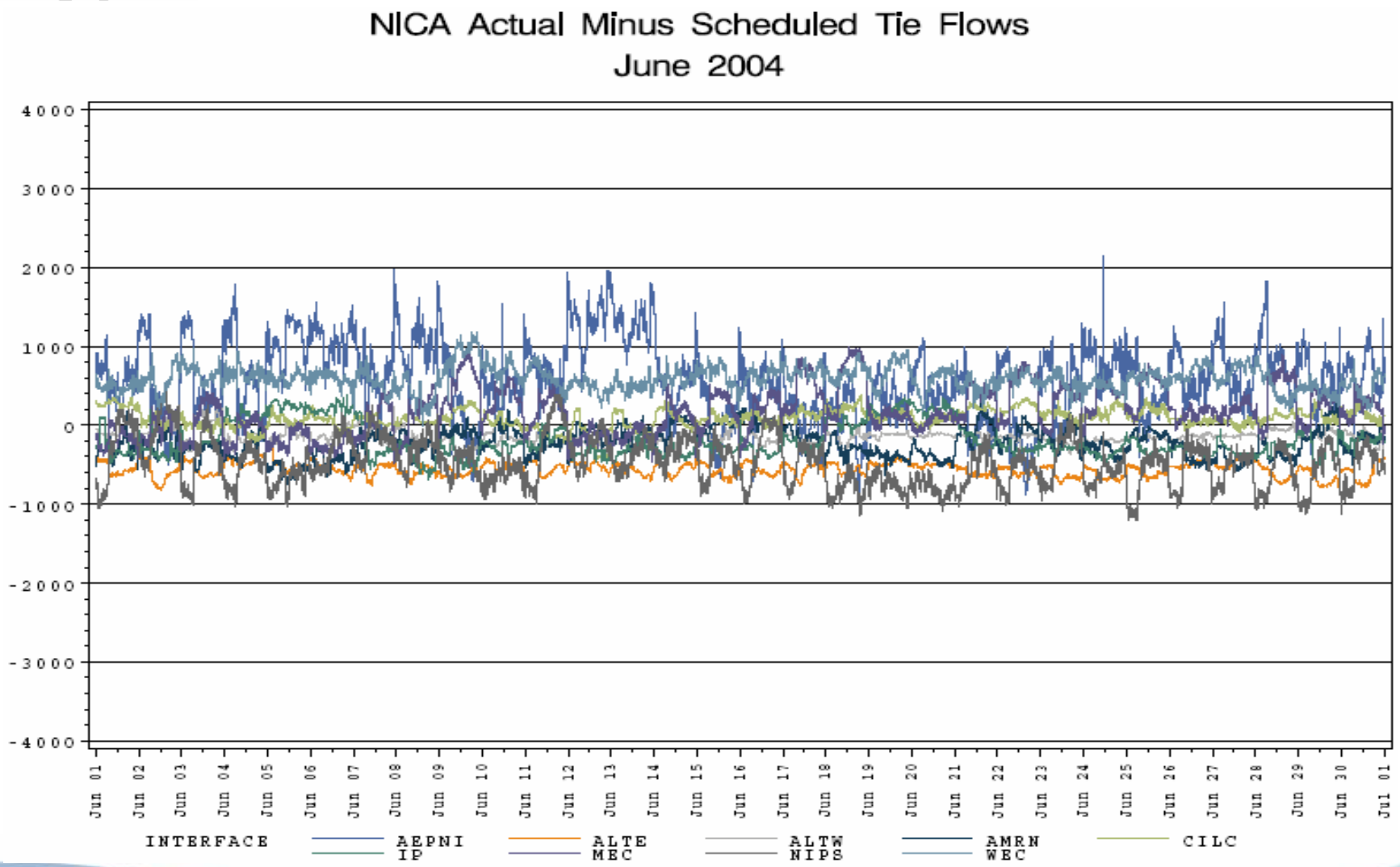
 

## Day-ahead pathway statistics for June 2004

- Pathway limited from NICA to PJM 478 hours, or 66 percent.
- Pathway limited from PJM to NICA 82 hours, or 11 percent.
- Pathway not limited for 160 hours, or 22 percent.
- Pathway flowed from NICA to PJM for 585 hours, or 81 percent.
- Pathway flowed from PJM to NICA for 135 hours, or 19 percent.
- The direction of flow on the pathway is primarily a function of interface price differentials.

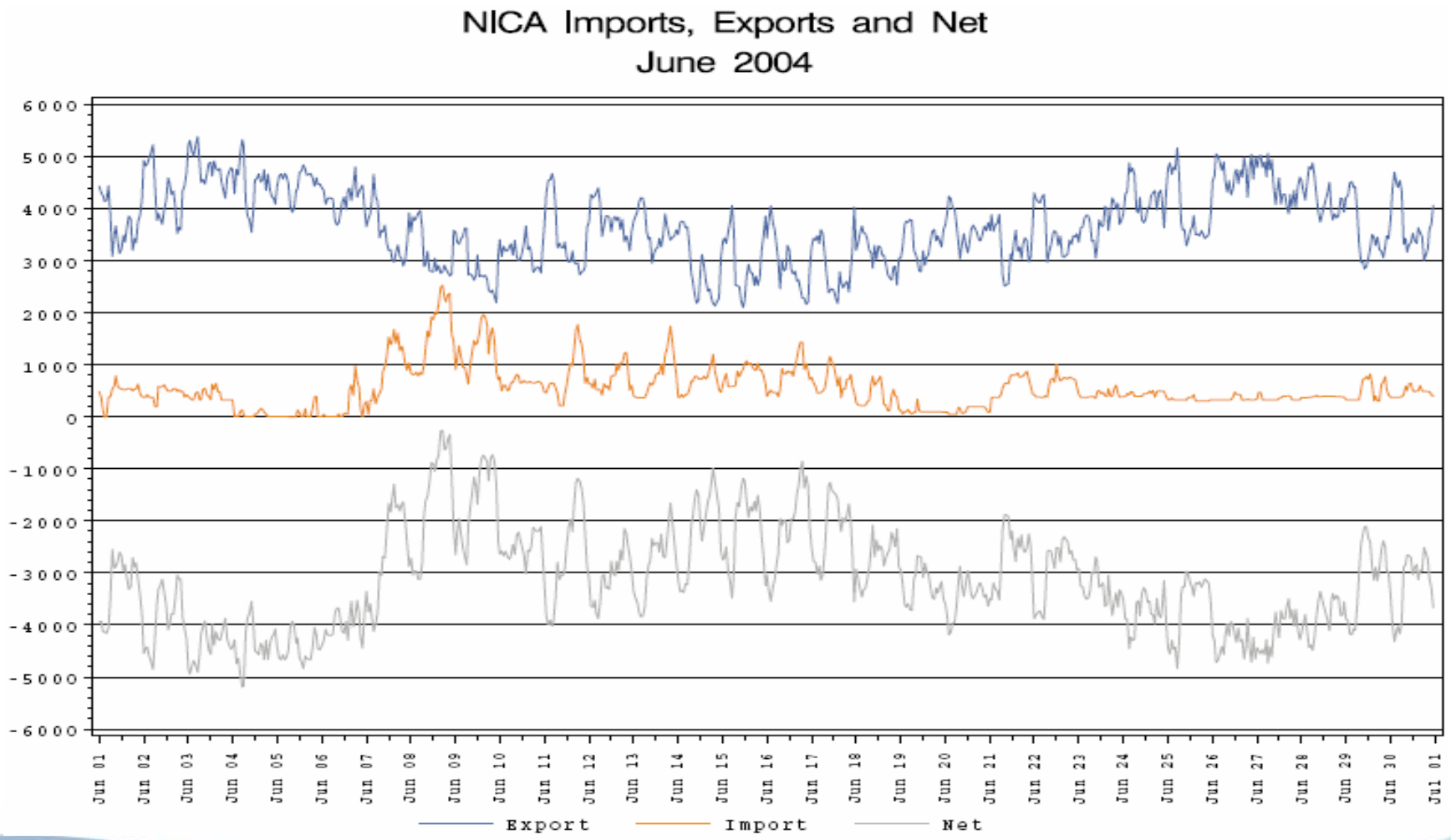
 

# Actual vs. Scheduled Tie Flows



# Imports and Exports

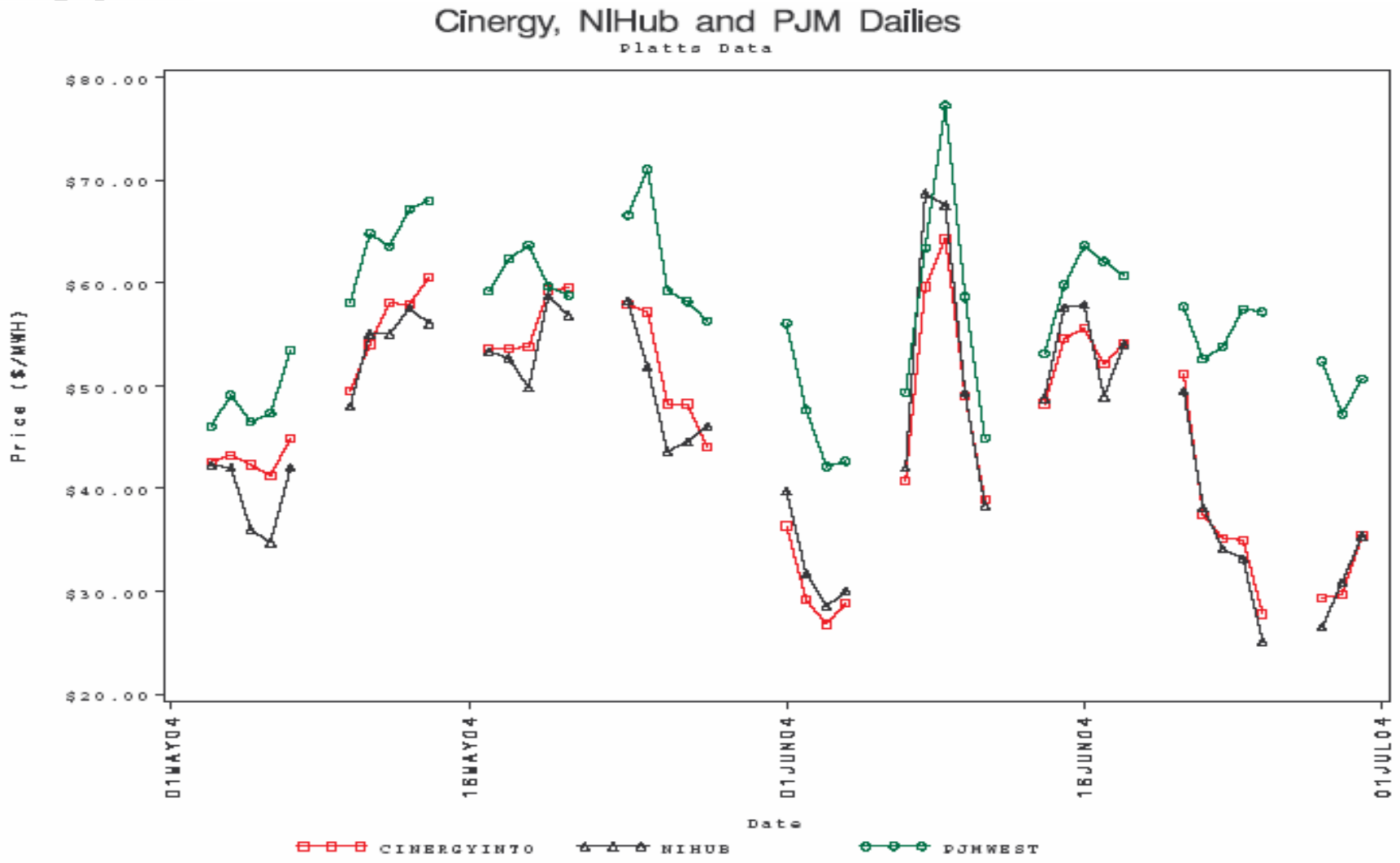


- Daily forward prices for NIHub and CINergy tracked closely in June.
  - The maximum daily NIHub – CINergy spread was $9.05 per MWh during June.
  - The average daily NIHub – CINergy spread was $0.75 per MWh during June.
  - The NIHub – CINergy spread was $0.00 per MWh on the final trading day of June.

# Forward Prices

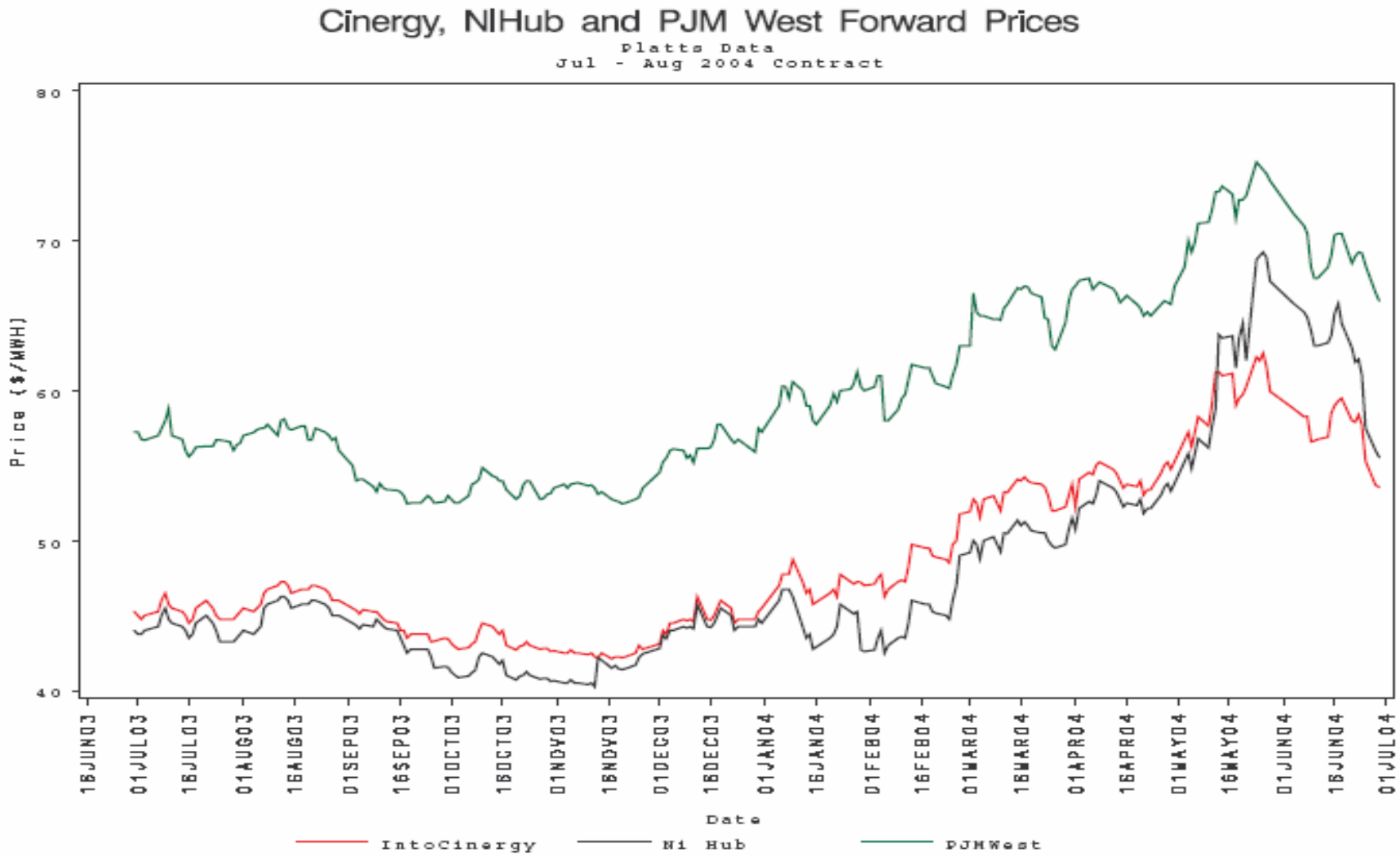


- Forward prices for the July-August contract showed varying spreads during June.
  - Spreads reflect traders' expectations about future prices.
  - The maximum NIHub – CINergy spread was $7.40 per MWh during June.
  - The average NIHub – CINergy spread was $5.12 per MWh during June
  - The NIHub – CINergy spread was $2.00 per MWh on the final trading day for the July-August contract.

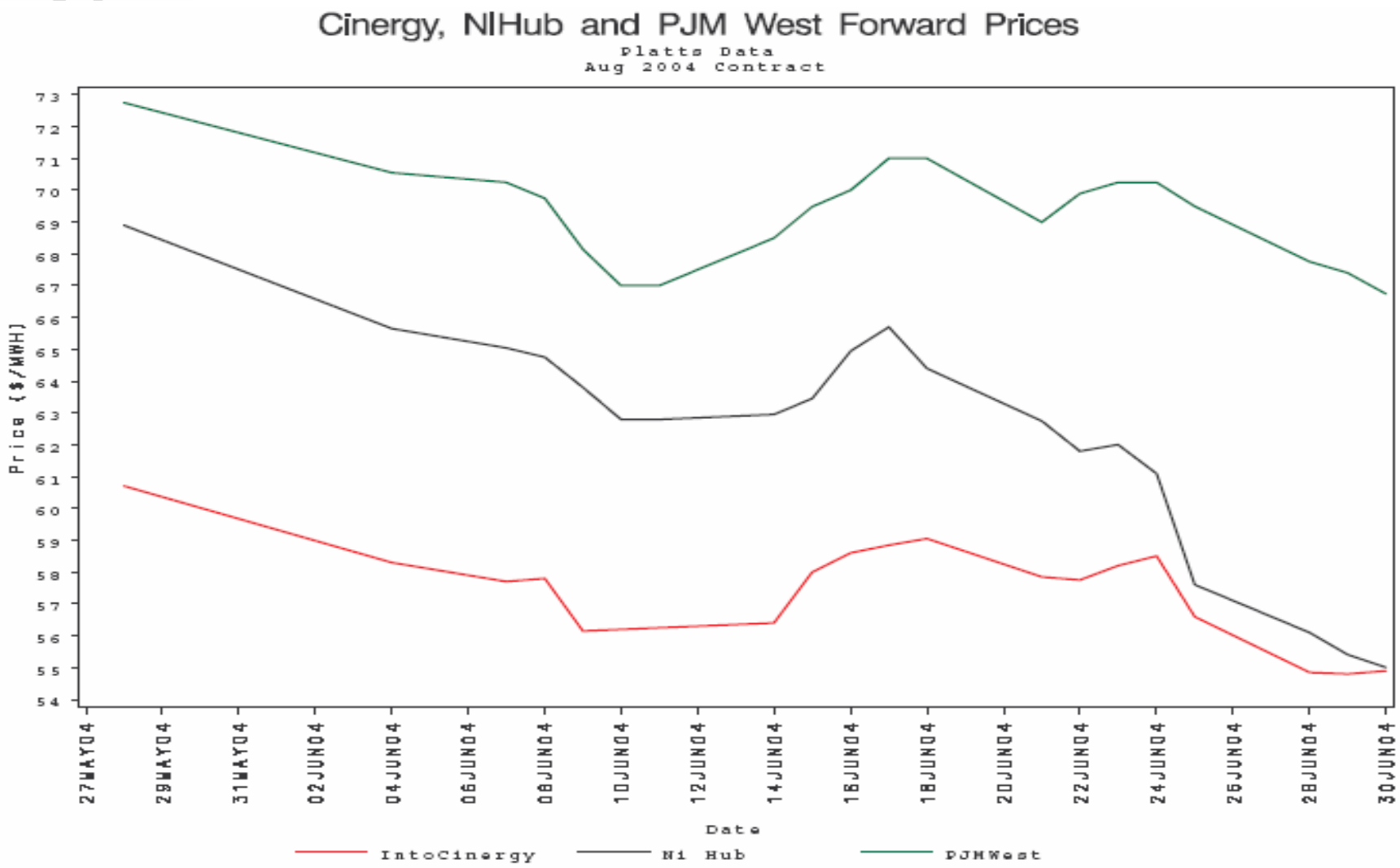
# Forward Prices



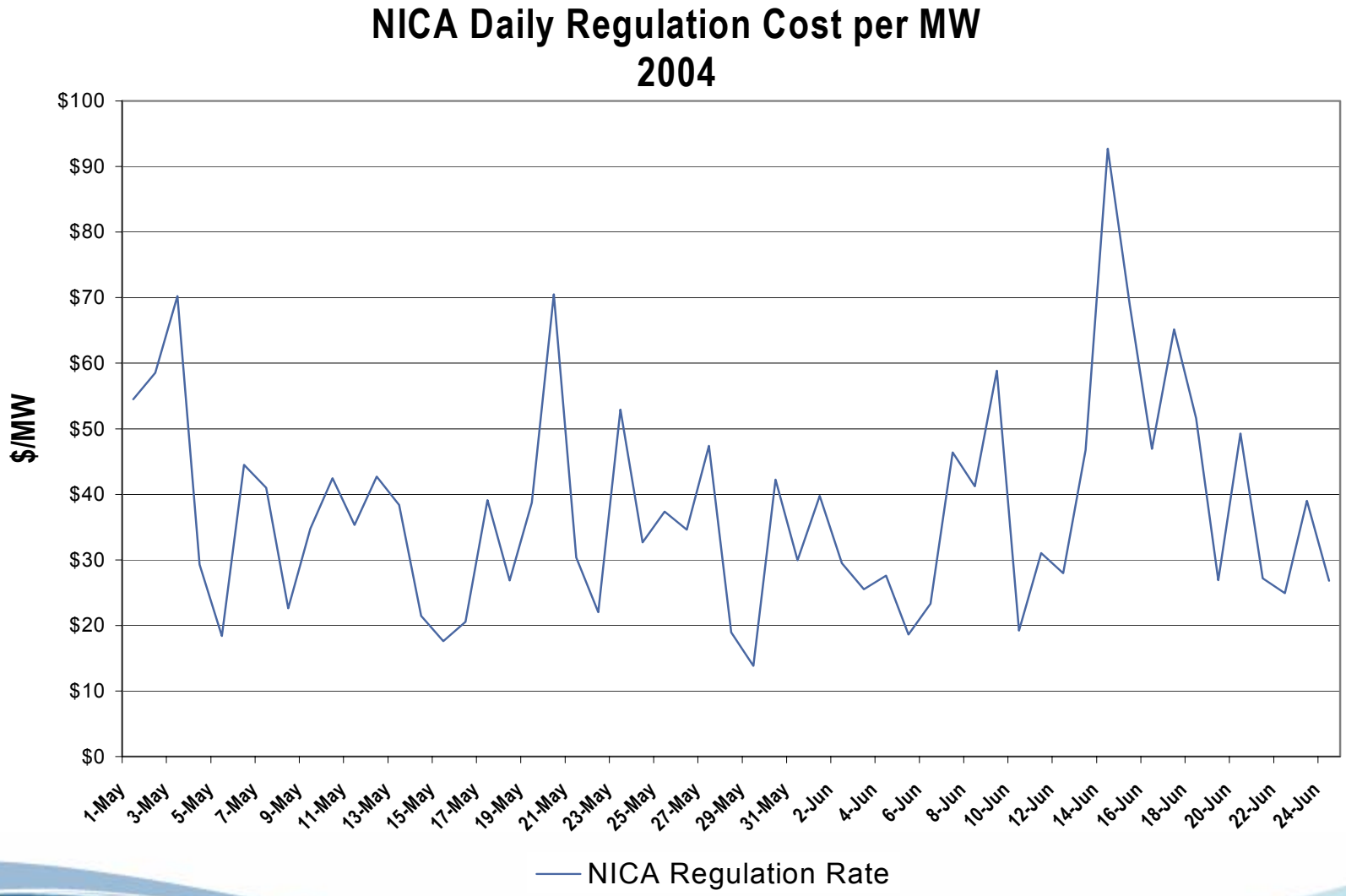
- Forward prices for the August contract showed varying spreads during June.
  - Spreads reflect traders' expectations about future prices.
  - The maximum NIHub – CINergy spread was $7.65 per MWh during June.
  - The average NIHub – CINergy spread was $4.81 per MWh during June
  - The NIHub – CINergy spread for the August contract was $0.10 per MWh on the final day of June.

# Forward Prices




NICA Daily Regulation Cost per MW
2004
$/MW
$100
$90
$80
$70
$60
$50
$40
$30
$20
$10
$0
1-May
3-May
5-May
7-May
9-May
11-May
13-May
15-May
17-May
19-May
21-May
23-May
25-May
27-May
29-May
31-May
2-Jun
4-Jun
6-Jun
8-Jun
10-Jun
12-Jun
14-Jun
16-Jun
18-Jun
20-Jun
22-Jun
24-Jun
NICA Regulation Rate

- NICA Capacity Market structural tests indicate significant potential market power.
- Results of NICA Capacity Market auctions were generally less than the proposed offer cap.

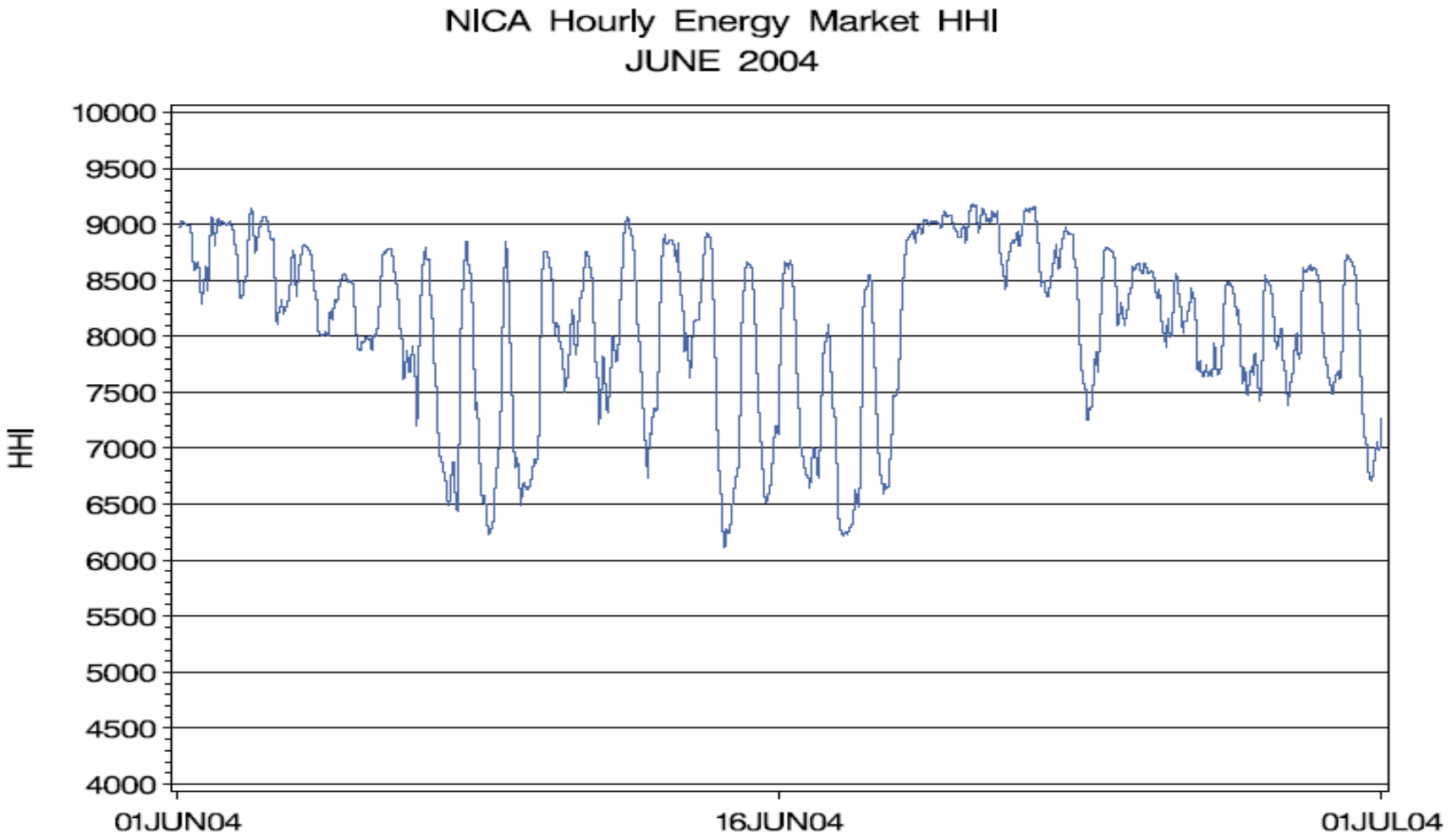
- Average capacity price per MW for the summer 2004 period was $30.39.
- Average capacity price per MW for the fall 2004 period was $25.88.
- Average capacity price per MW for the winter 2004/2005 period was $25.66.
- Average capacity price per MW for the full planning period was $27.86.

- The NICA energy market had high HHIs during June.
  - High HHIs reflect highly concentrated ownership of the units supplying energy on an hourly basis.
- The NICA energy market had low RSIs during June.
  - RSIs less than 1.0 indicate that a single supplier is pivotal during the hour.
- The pathway flows served to provide competitive pressures in the NICA energy market, offsetting the stand-alone structural market power concerns.

# Market Herfindahl-Hirschman Index (HHI)



## NICA Residual Supply Index – May 2004 (Revised)

| Number of Hours RSI < 1.10 | Number of Hours RSI < 1.00 | Percent of Hours RSI < 1.10 | Percent of Hours RSI < 1.00 | Overall Average RSI | Overall Minimum RSI |
|---|---|---|---|---|---|
| 426 | 337 | 57% | 45% | 0.93 | 0.69 |

## NICA Residual Supply Index – June 2004

| Number of Hours RSI < 1.10 | Number of Hours RSI < 1.00 | Percent of Hours RSI < 1.10 | Percent of Hours RSI < 1.00 | Overall Average RSI | Overall Minimum RSI |
|---|---|---|---|---|---|
| 570 | 470 | 77% | 63% | 0.85 | 0.47 |