

# NYISO Market Update

NYISO Business Issues Committee Meeting

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# Where Does the NYISO Stand After 1st Ten Months of ISO Operation ?

- ✓ NY Grid has been operated successfully without a major reliability incident.
- ✓ NYISO Staff have dealt successfully with all start-up problems encountered to date
  - *Issues have been identified*
  - *Many have already been addressed*
  - *NYISO engaged in stakeholder process to address remaining open problems*
- ✓ Remaining issues requiring additional work focus on three principle areas
  - *Real-time/SCD*
  - *Convergence of Hourly & Real-time Processes*
  - *Handling of External Transactions*

# Market Enhancements in RealTime

- ✓ **Completed Improvements in Real-time Supply Flexibility (energy & reserves)**
  - *“Stranded MWs” recovered through improved bidding flexibility*
  - *Elimination of large Quick-start unit MW block sizes*
  - *Improved real-time control of Quick-start units*
  - *Improved ISO Operator tools to manage Quick-start units*
  - *Improved Nox Emissions Management for NYC Suppliers*
  - *Improved modeling for pumped-storage generators*

# Market Enhancements in Real Time

- ✓ **Future Improvements to Real-time Supplies and Pricing**
  - *Design & deploy price-responsive load capability*
  - *Implement "State Estimation" techniques to improve dispatch accuracy*
  - *Further improve modeling and bid flexibility of pumped-storage hydro generators and Energy-Limited Resources*
  - *Improve energy trading flexibility by facilitating financial transactions through "virtual load" & trading hubs*
  - *Potential replacement of existing SCD*

# Market Enhancements for the Hour-ahead & Real-time Markets

- ✓ **Completed Projects to Improve Hour-ahead & Real-time Price Convergence**
  - *Automation of generator on/off status processing*
  - *Improved ISO Operator tools for Quick-Start unit management*
  - *Elimination of large Quick-Start unit MW block sizes*
  - *Improved ISO hour-ahead & real-time operating procedures and policies*
  - *External Transaction ECAs address two of the problems*

# Market Enhancements for the Hour-ahead & Real-time Markets

- ✓ **Future Enhancements to Improve Hour-ahead & Real-time Price Convergence**
  - *Develop methodology to eliminate constraint-set differences between markets*
  - *Improved status updates of generation “taken out-of-merit”*
  - *Resolve scheduling anomalies with PURPA unit owners*
  - *Improve hour-ahead check-out and in-hour curtailment practices*
  - *Redesign relationship between BME & SCD*

# Market Enhancements for Facilitating External Transactions

## ✓ Completed Improvements Management of External Transactions to Increase Market Confidence & Liquidity

- *Improve scheduling software to evaluate external transactions in a consistent manner with submitted bids*
- *Provide higher priority to transactions scheduled on a day-ahead basis*
- *Improve scheduling procedures with neighboring ISOs*
- *Improve curtailment notifications to MPs*
- *Improve flexibility of financial hedges (unbundled TCCs)*
- *External Transaction ECAs reduces need for curtailments*

# Market Enhancements for Facilitating External Transactions

- ✓ **Future Improvements Management of External Transactions**
  - *Further improvements to scheduling & check-out procedures with neighboring ISOs*
  - *Enhance/automate procedures for utilizing Northeast "Shared Activation of Reserves" to permit higher levels of transaction wheeling through NY*



# Market Enhancements for Ancillary Services

- ✓ **Completed Improvements of Reserve Markets**
  - *Price caps lifted on spinning reserve market*
  - *Improved modeling & flexibility of 1000MW Gilboa plant*
  - *Improved modeling & flexibility of gas turbine resources*
    - Smaller GT block sizes
    - Improved operator GT monitoring/management tools

# Market Enhancements for Ancillary Services

- ✓ **Future Improvements of Reserve Markets**
  - *Price caps gradually lifted on 10 minute non-synch market*
  - *Utilize transmission capability to hold reserve*
  - *Utilize western reserves when congestion is absent*
  - *Implement ability to self-provide reserve*
  - *Additional modeling enhancements for Gilboa/Niagara*
  - *Locational pricing for reserves*

# OTHER AREAS FOR IMPROVEMENT

## ✓ Communications

- *Strive Towards Proactive Customer Service*
- *Prompt & Timely Notification of....*
  - Software & billing changes,
  - System events & contingencies,
  - Committee assignments & action items
- *Improved & Increased Access to Market Data*
- *Enhanced Support of, and Involvement in, Committee/Governance Activities*

# OTHER AREAS FOR IMPROVEMENT

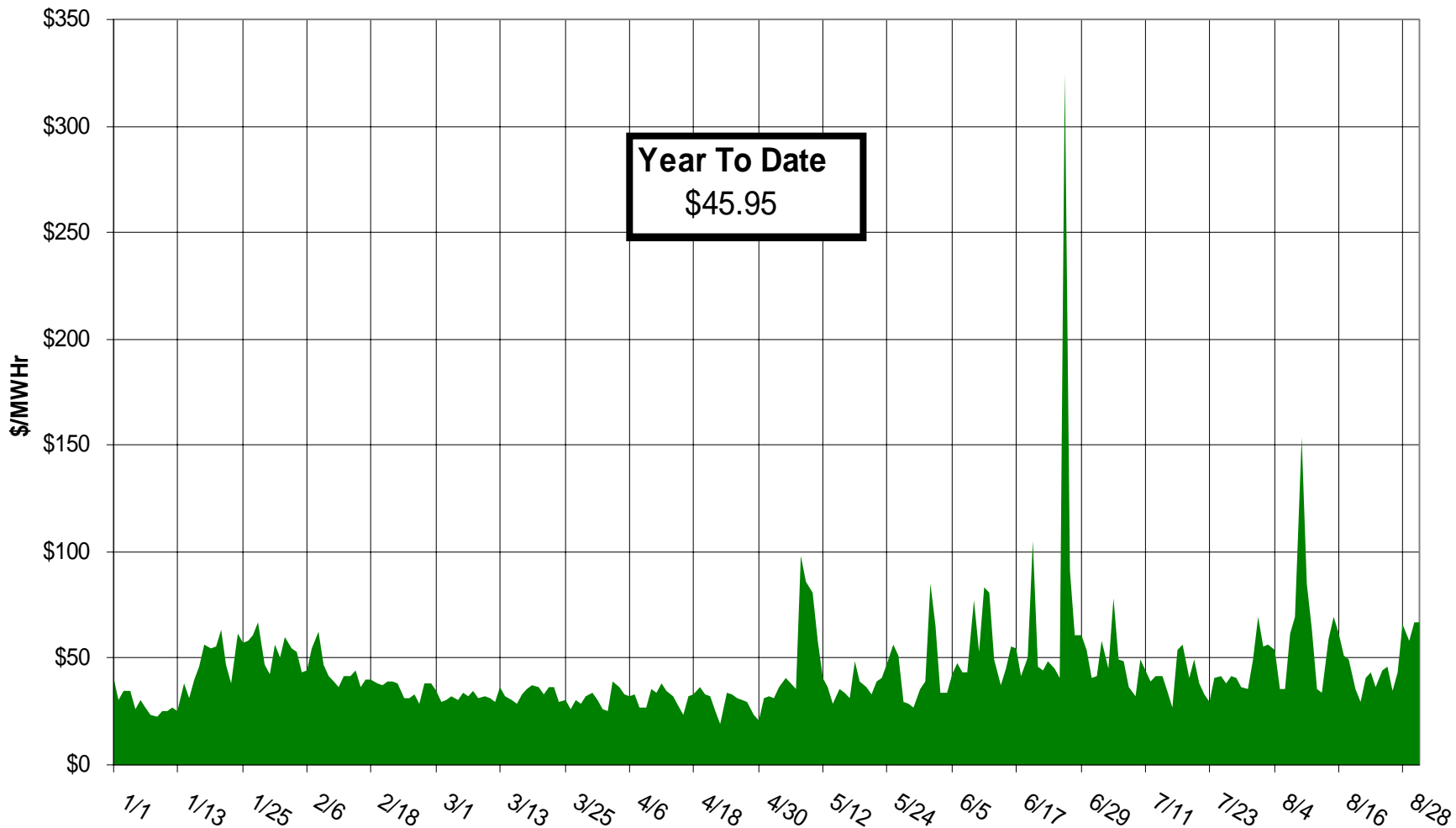
## ✓ Billing & Settlement

- *Simplified settlement statements,*
- *Access to sufficient back up data,*
- *Improved accuracy resulting in less rebills,*
- *Timely, yet accurate load true ups,*
- *Shortened billing cycles.*

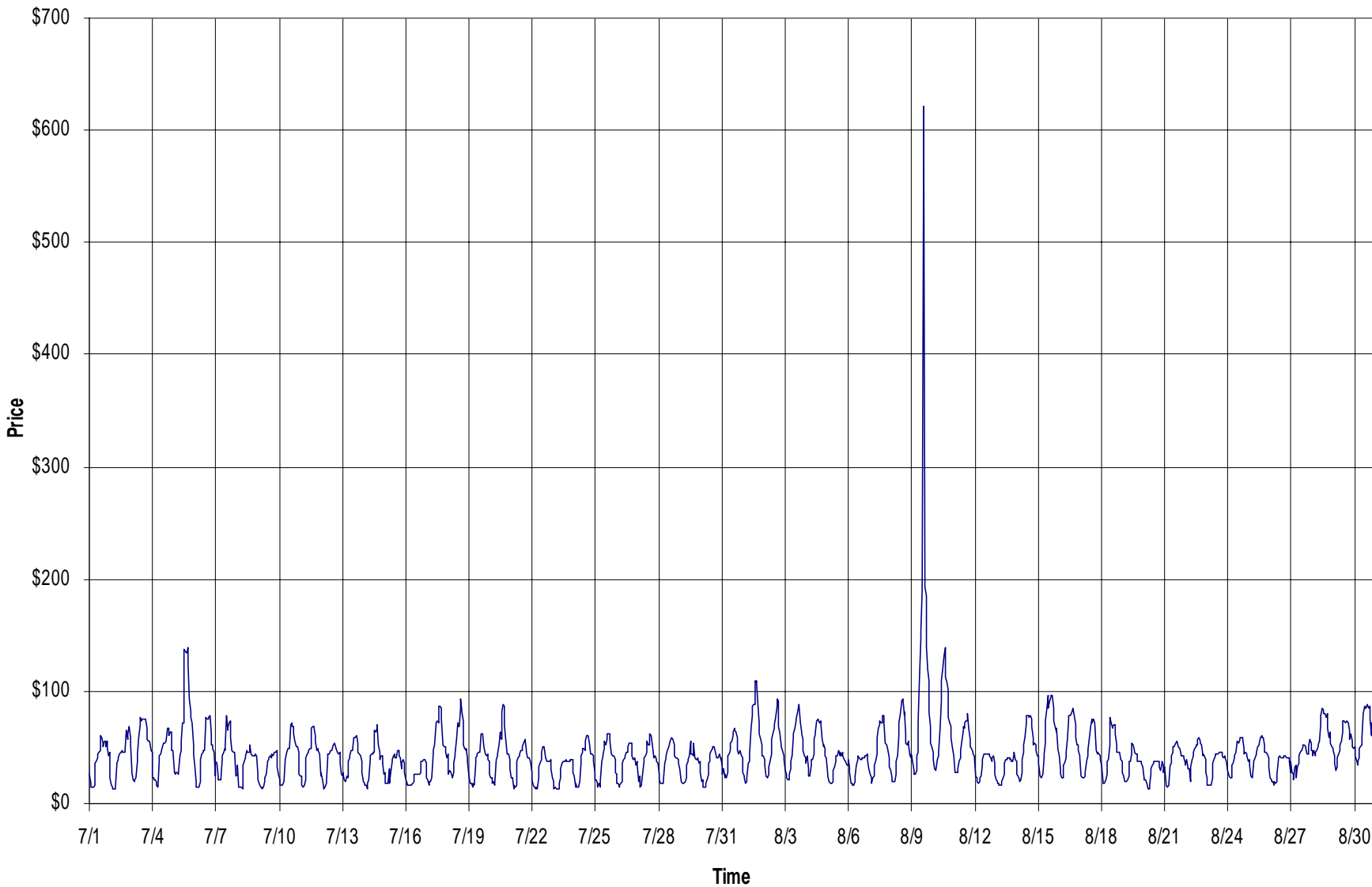
## ✓ Operations

- *Closer coordination with neighboring control area operators*
- *Enhanced procedures w/appropriate levels of automation*
- *Timely & detailed information regarding operator actions (Out-of-merit operation, TSA, emergency actions).*

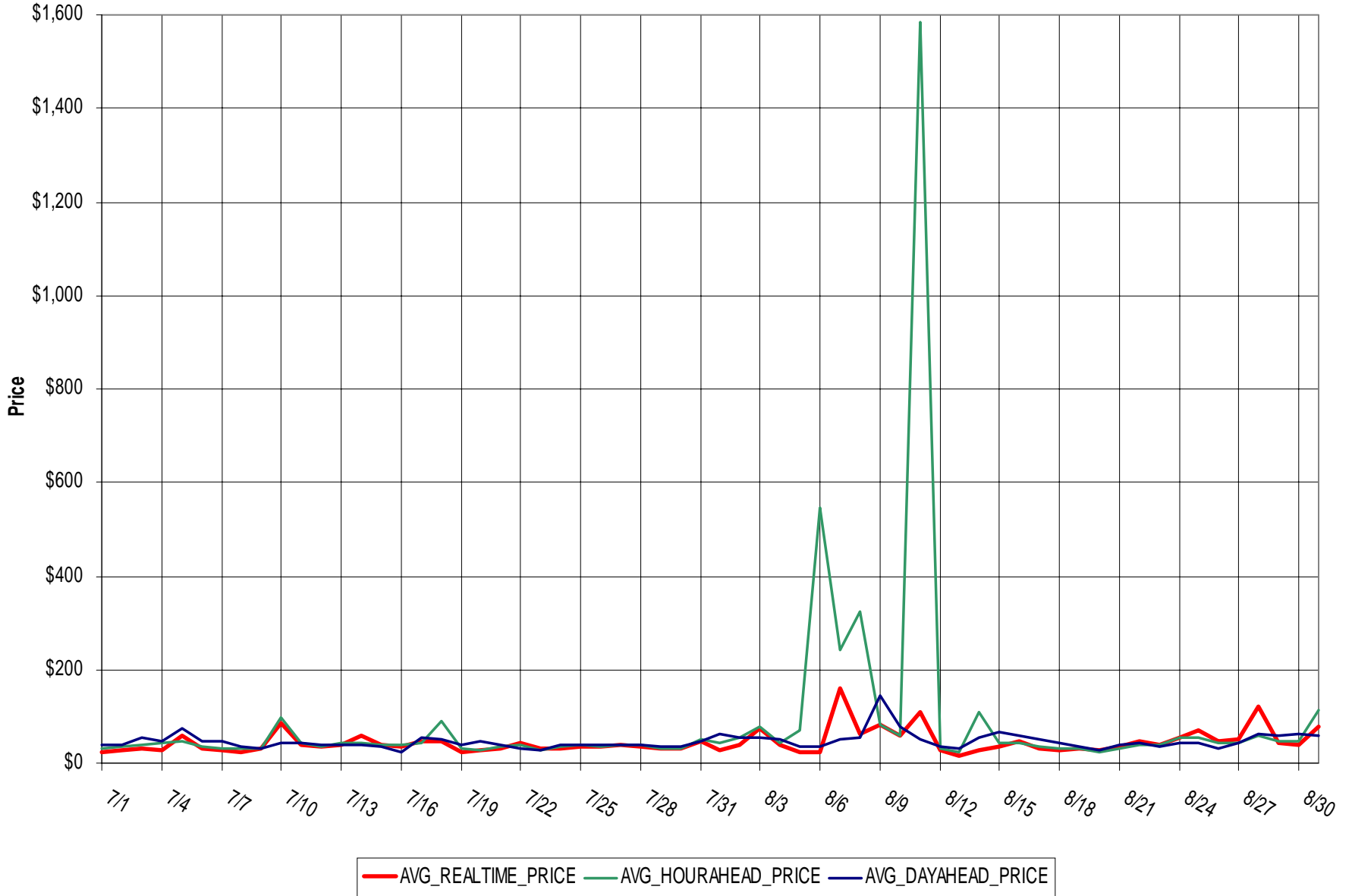
**NYISO Daily Wholesale Electricity Price  
(1/1/00 - 8/31/00)**



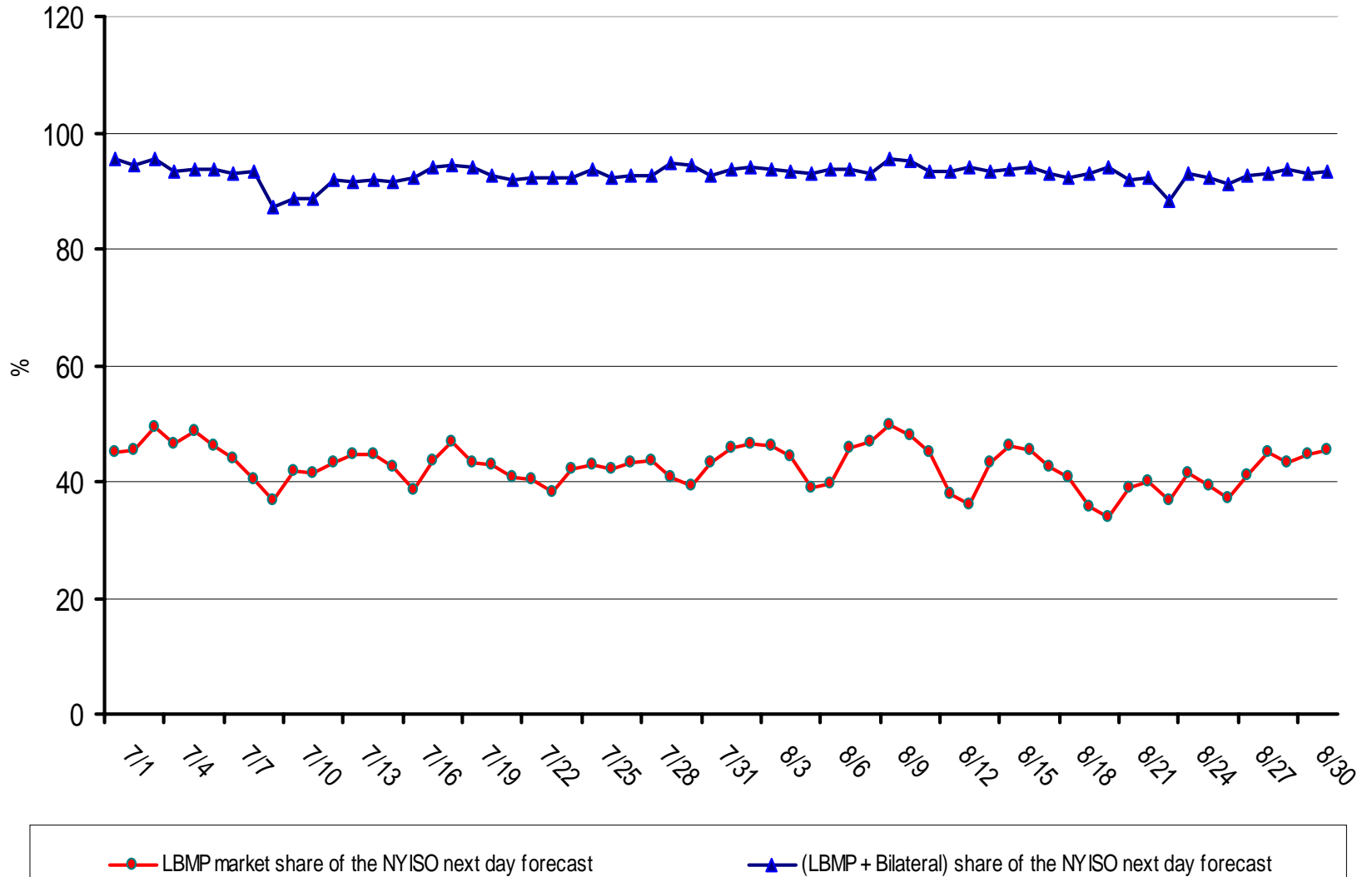
Weighted Average Day Ahead Hourly Corrected LBMP's(7/1/00 - 8/31/00)



# NYISO-wide Weighted Average Daily Corrected LBMP's (7/1/00 - 8/31/00)

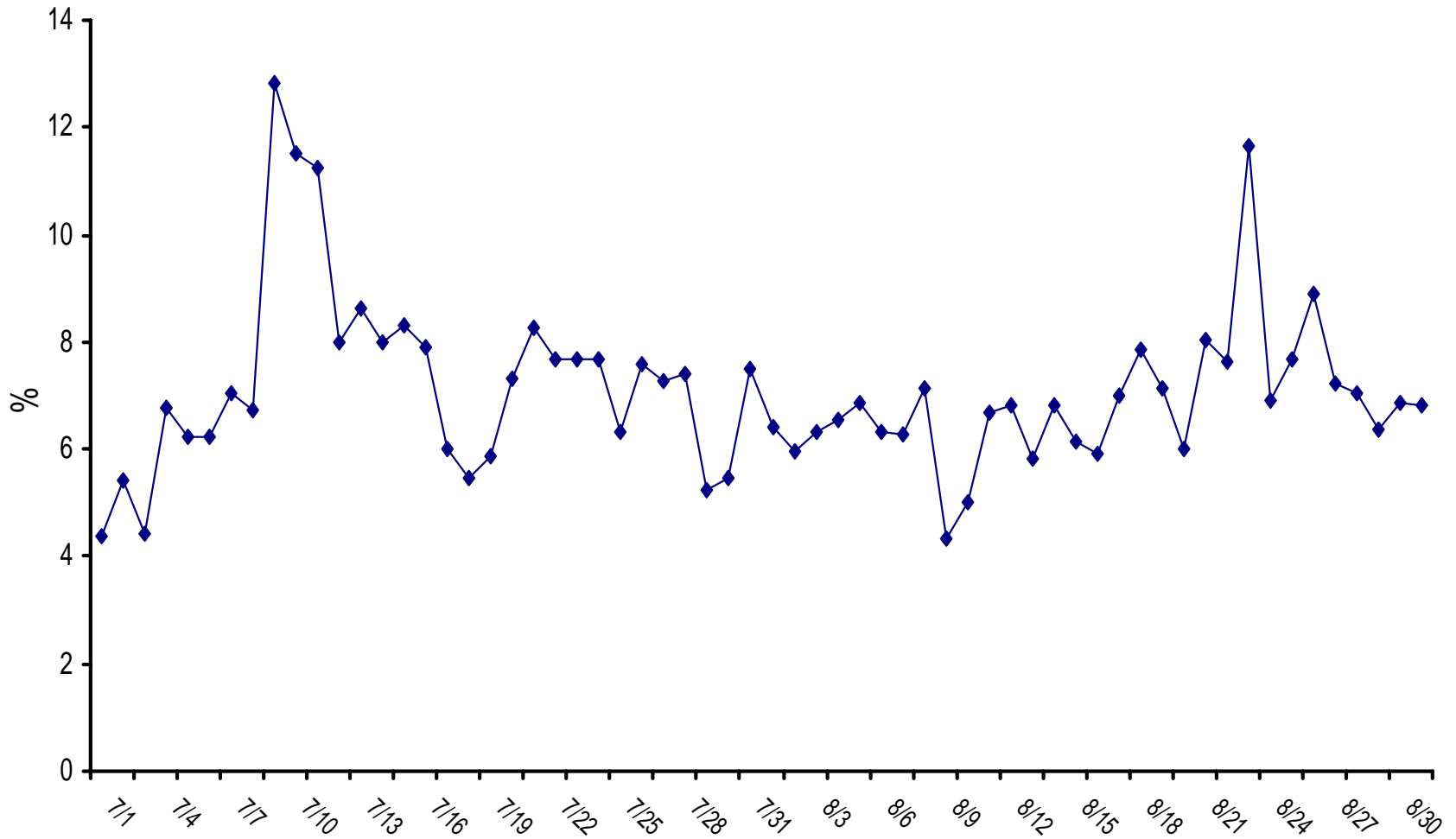


## Planned Day-Ahead Market Composition 7/1/00 - 8/31/00



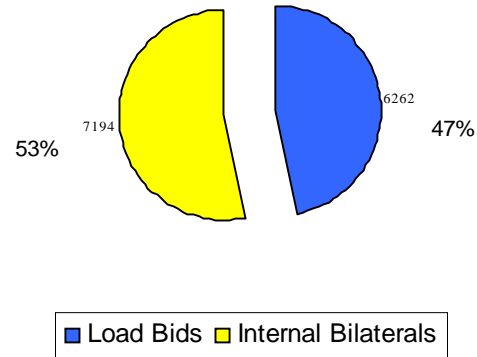


## % of Total Market Transacted in Real-Time 7/1/00 - 8/31/00

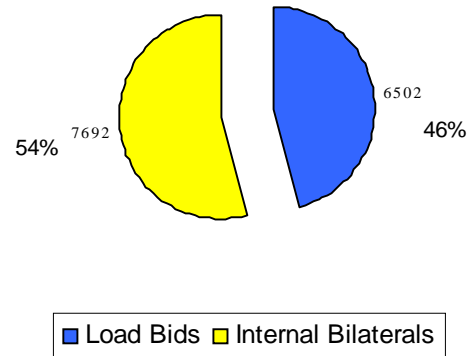


—◆— Market Participants Load Forecast - (Load Bid + Bilaterals) as % of Market Participants Load Forecast

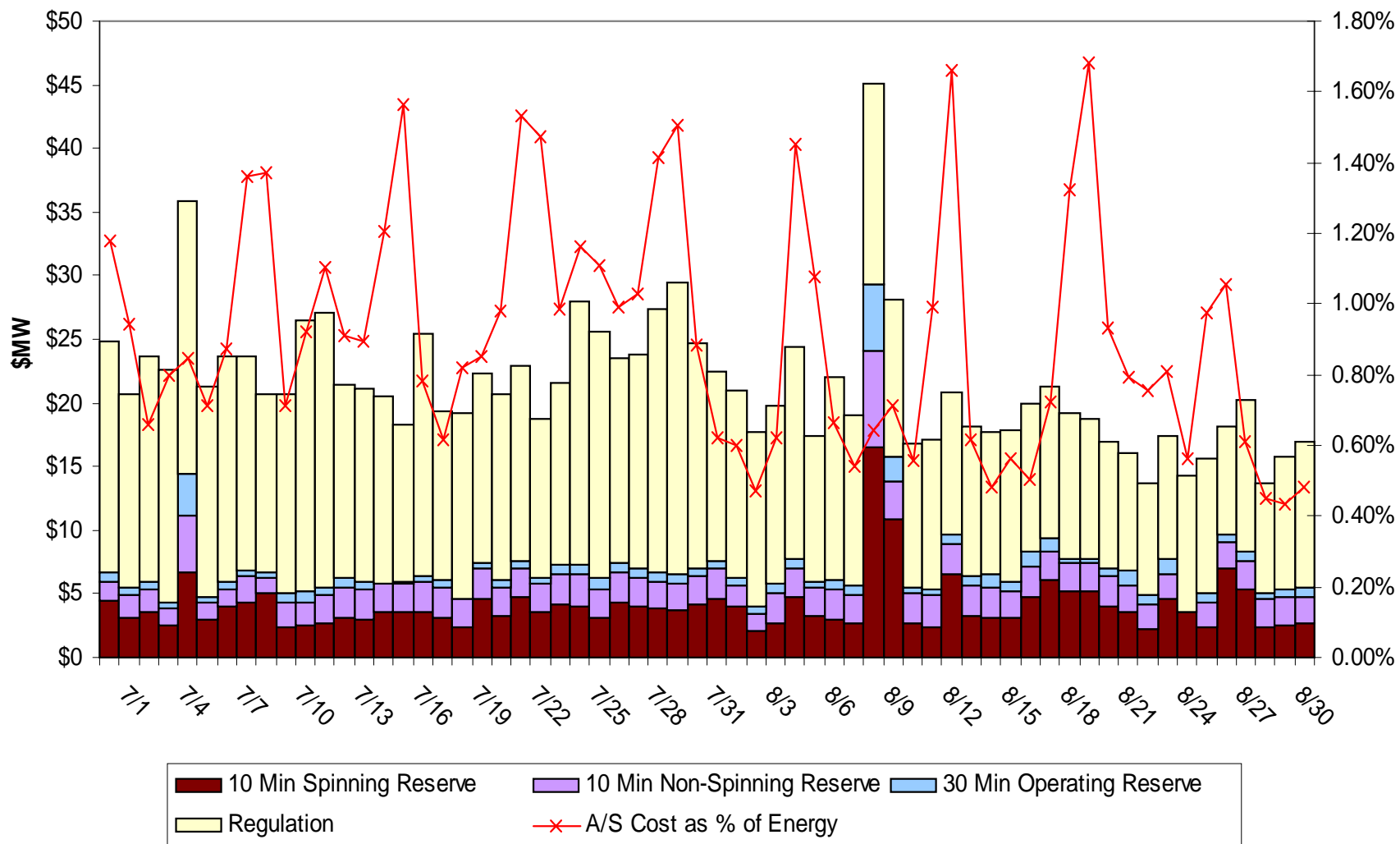
### Load Bids and Bilaterals in GWH for DAM (July 1 - 31)



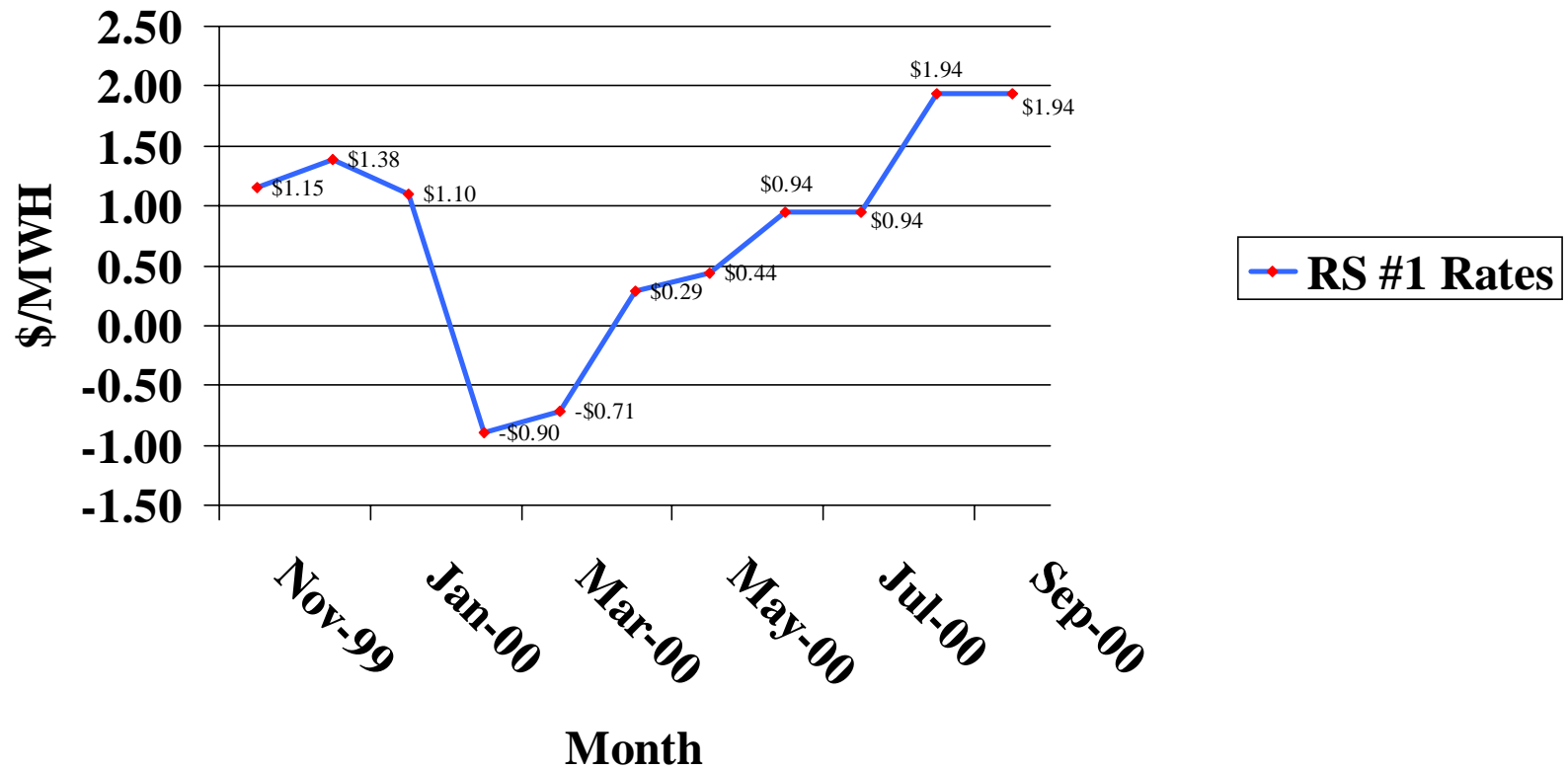
### Load Bids and Bilaterals in GWH for DAM (August 1 - 31)



## Ancillary Services for Day-Ahead Market: Prices and Impacts (7/1/00 - 8/31/00)



# Monthly Rate Schedule #1 Rates



# Conclusions

- ✓ The NYISO Energy & Ancillary Service Markets are under-control, functioning well, and improving.
- ✓ The NYISO continues to sharpen customer focus & improve communications with stakeholders.
- ✓ Major “wave” of market improvements to appear in Oct-Nov 2000 time frame.
- ✓ Improved processes for citing new generation, transmission & facilitating price-sensitive load need to be explored.