



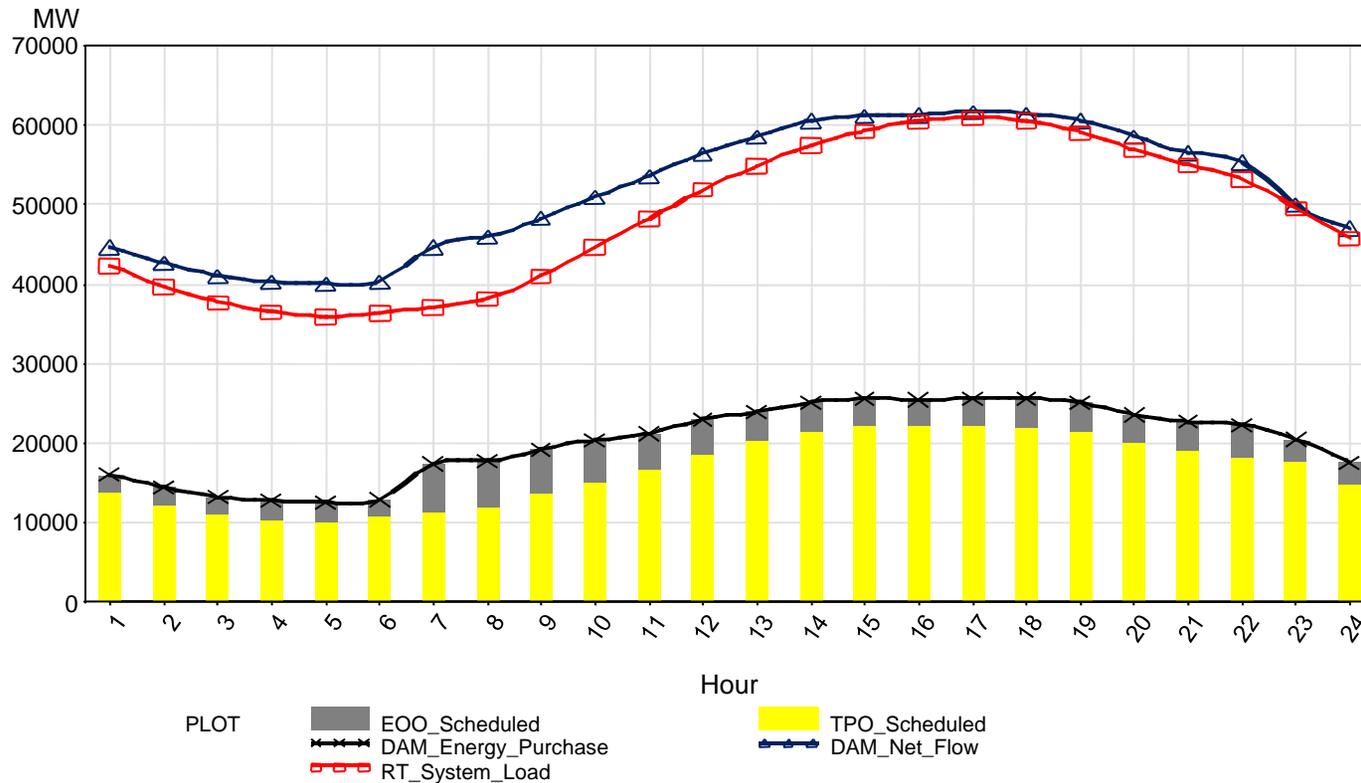
# Wholesale Market Operations Update

John Dumas  
Director, Wholesale Market Operations

Board of Directors Meeting  
August 16, 2011

# Day-Ahead Schedule

- On average DAM net transmission flow (defined below) was close to real time system load during peak hours from Hour 15 to 21 during the month of July.

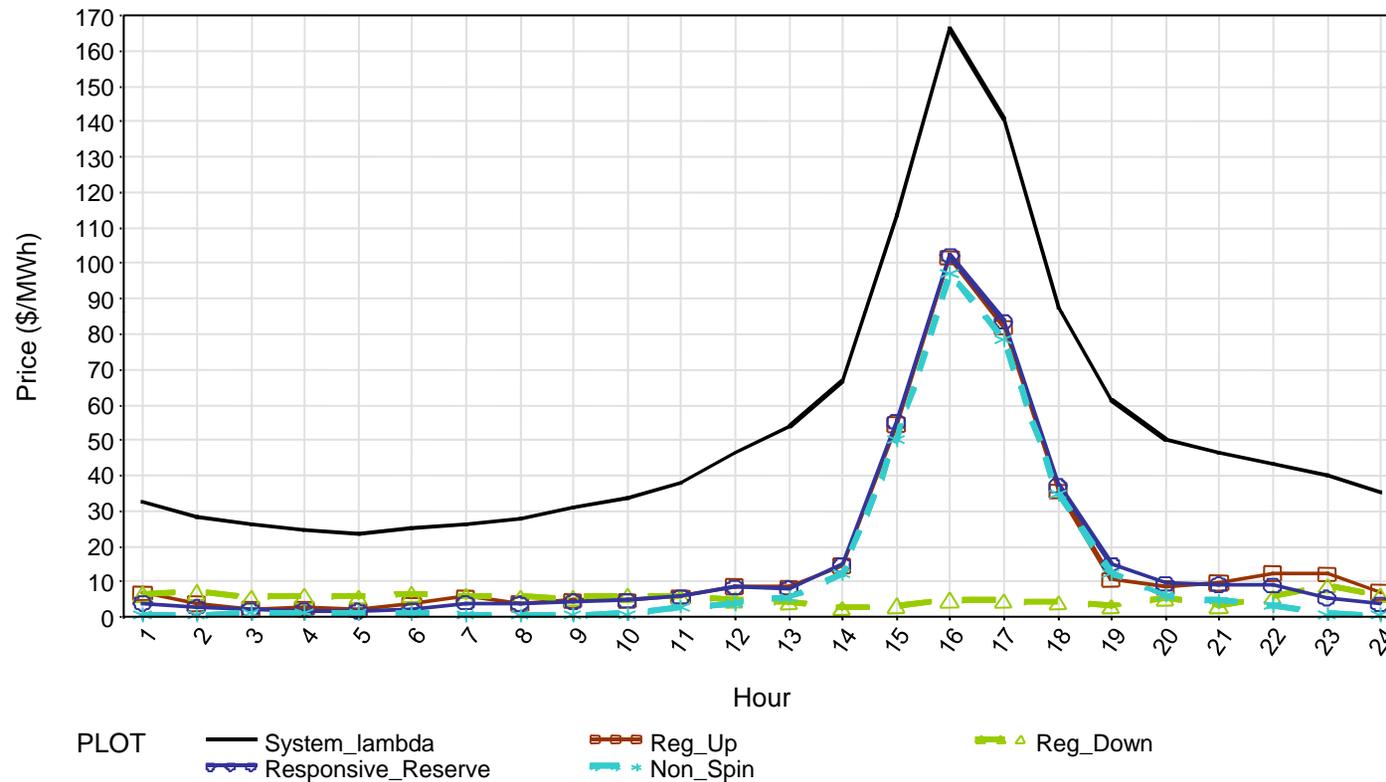


Average DAM Schedule

01JUL2011-31JUL2011

Acronym : TPO - Three Part Offer; EOO – Energy Only Offer;  
 DAM\_Net\_Flow = Combined market transmission flow of Energy purchased/sold in Day-Ahead Market plus Point-to-Point Obligations and NOIE CRR Options carried forward to real-time.

# Day-Ahead Electricity And Ancillary Service Hourly Average Prices

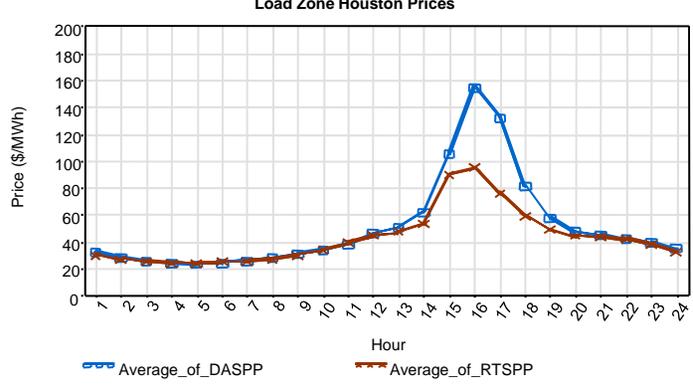
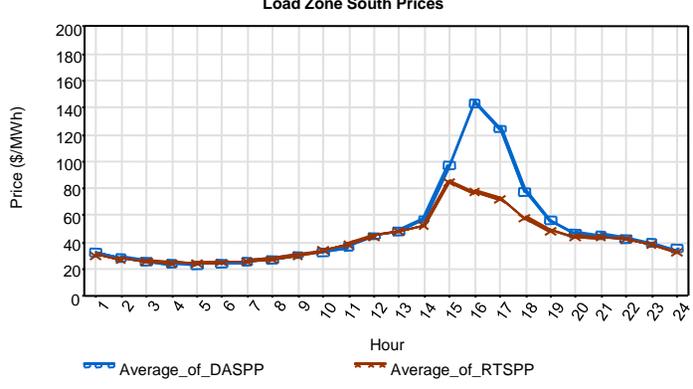
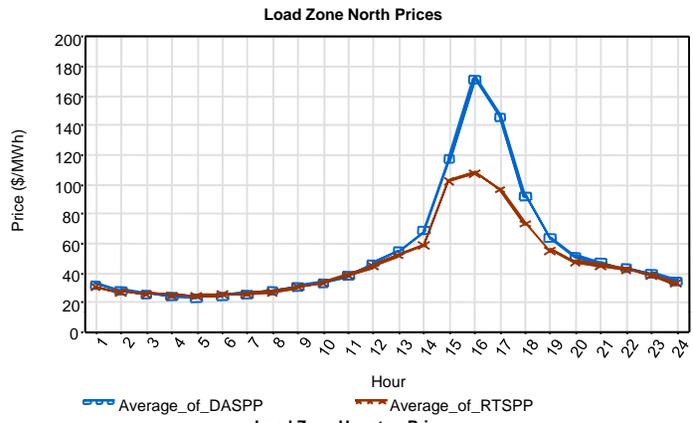
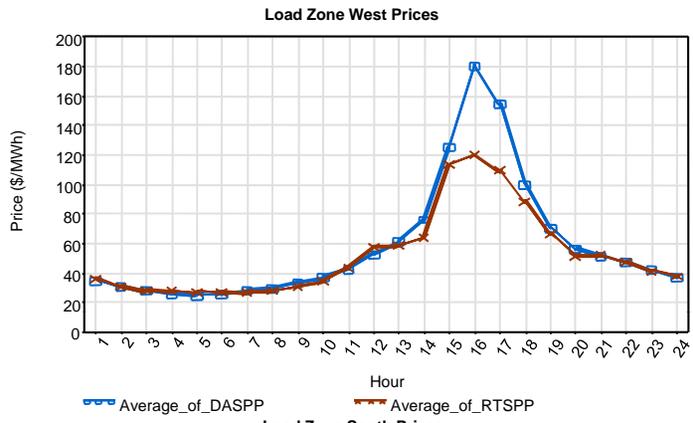


Day-Ahead Electricity and Ancillary Service Hourly Average Prices

01JUL2011-31JUL2011

- Both Energy and AS prices followed the trend of load profile on average.

# Day-Ahead Vs Real-Time Load Zone SPP (Hourly Average)

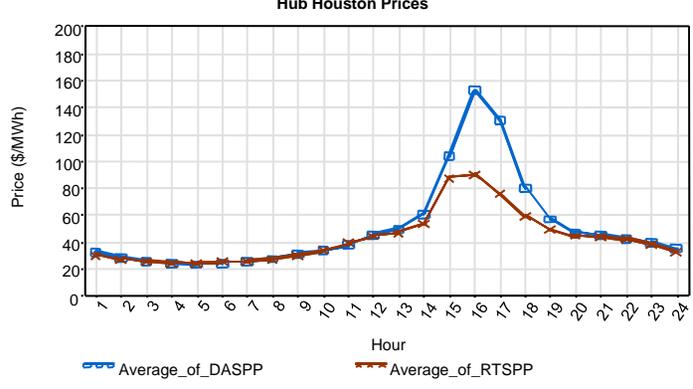
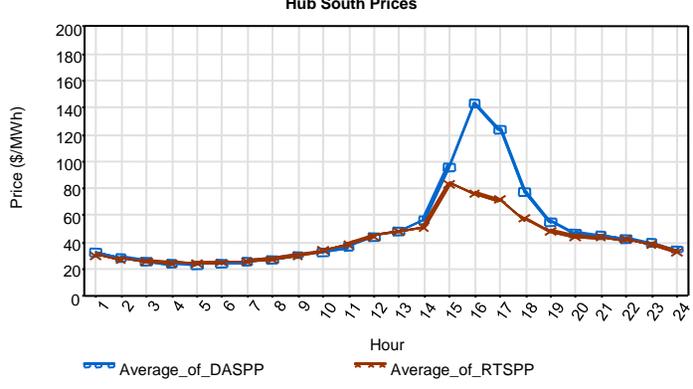
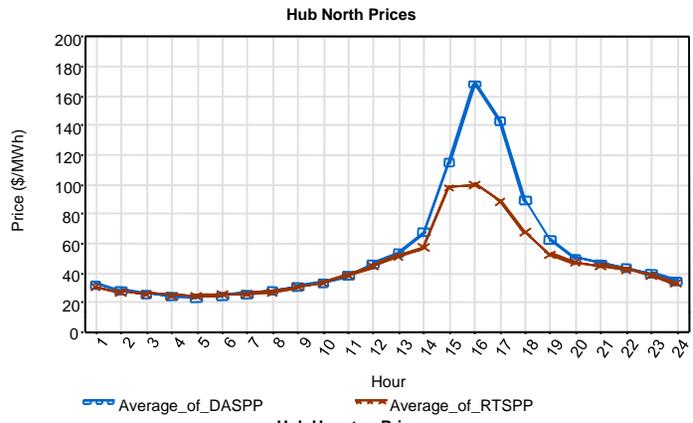
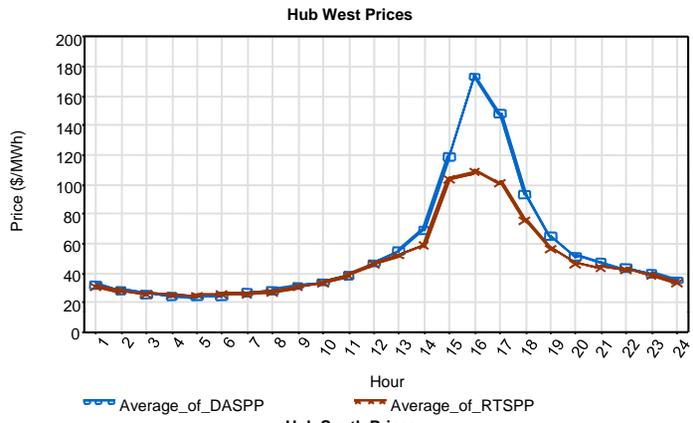


Day-Ahead Vs Real-Time Hourly Average SPP Load Zone Summary

01JUL2011-31JUL2011



# Day-Ahead vs Real-Time HUB SPP (Hourly Average)

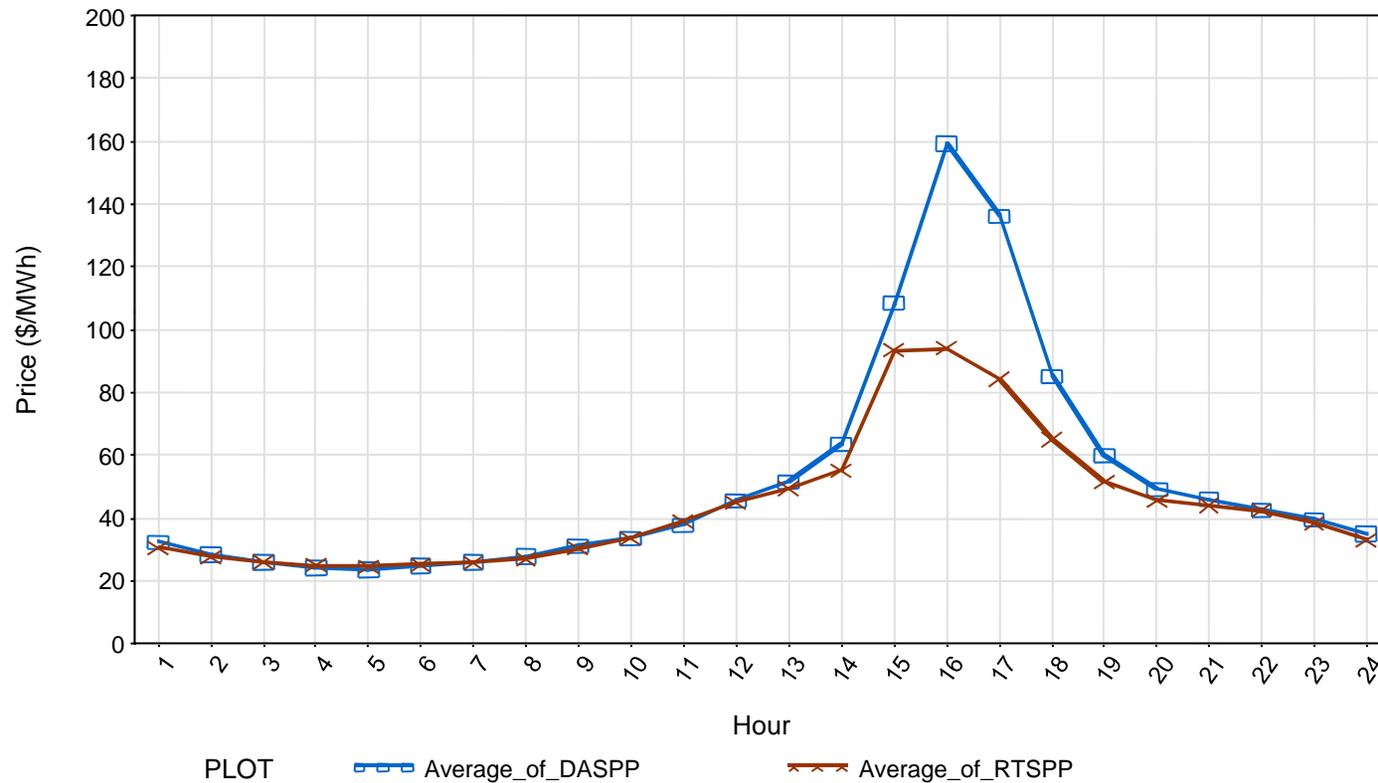


Day-Ahead Vs Real-Time Hourly Average SPP Hub Summary

01JUL2011-31JUL2011



# Day-Ahead Vs Real-Time Hub Average SPP (Hourly Average)

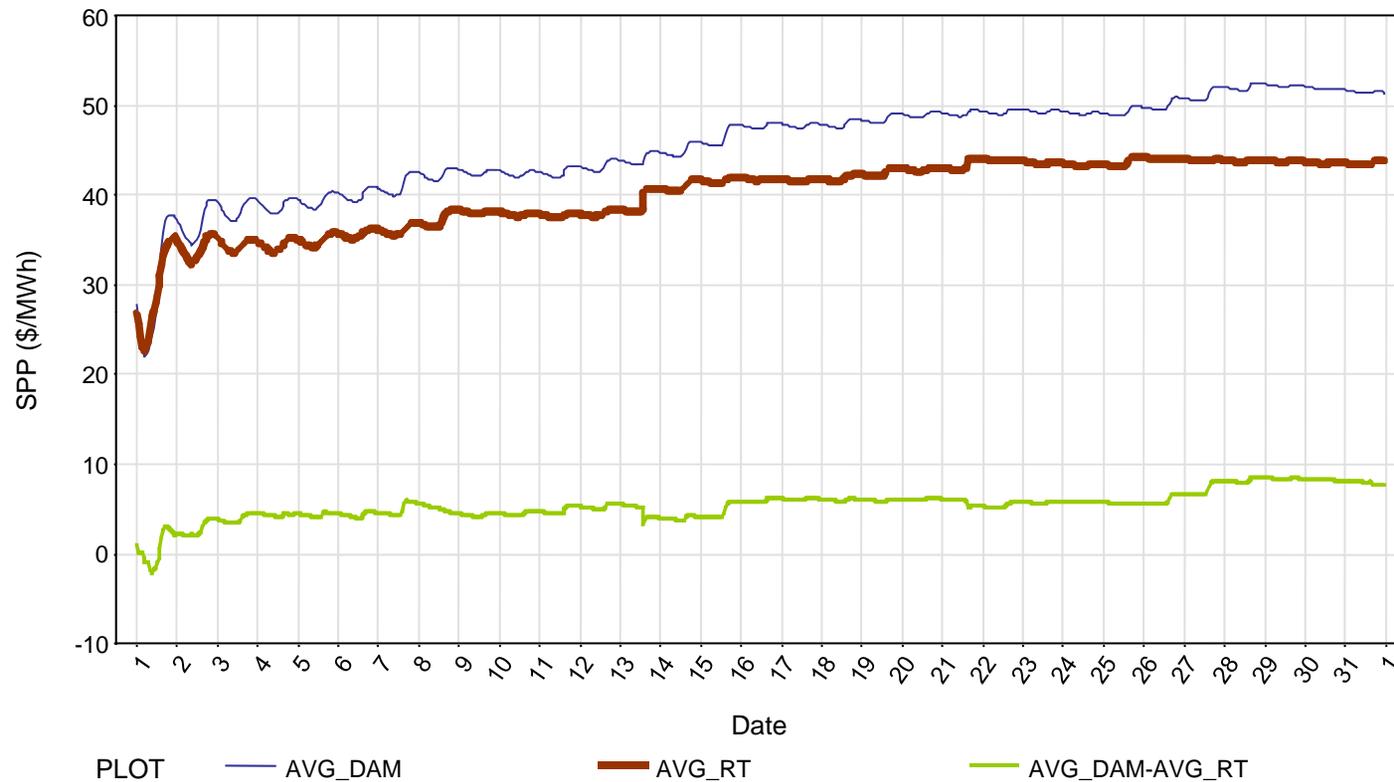


Day-Ahead Vs Real-Time Hourly Average SPP of Hub Hub-Average Prices

01JUL2011-31JUL2011

- Day Ahead prices were on average higher than real-time prices, especially during peak hours.
- Real-Time prices were very close to Day Ahead prices at off-peak hours.

# Day-Ahead Vs Real-Time Cumulative Average SPP

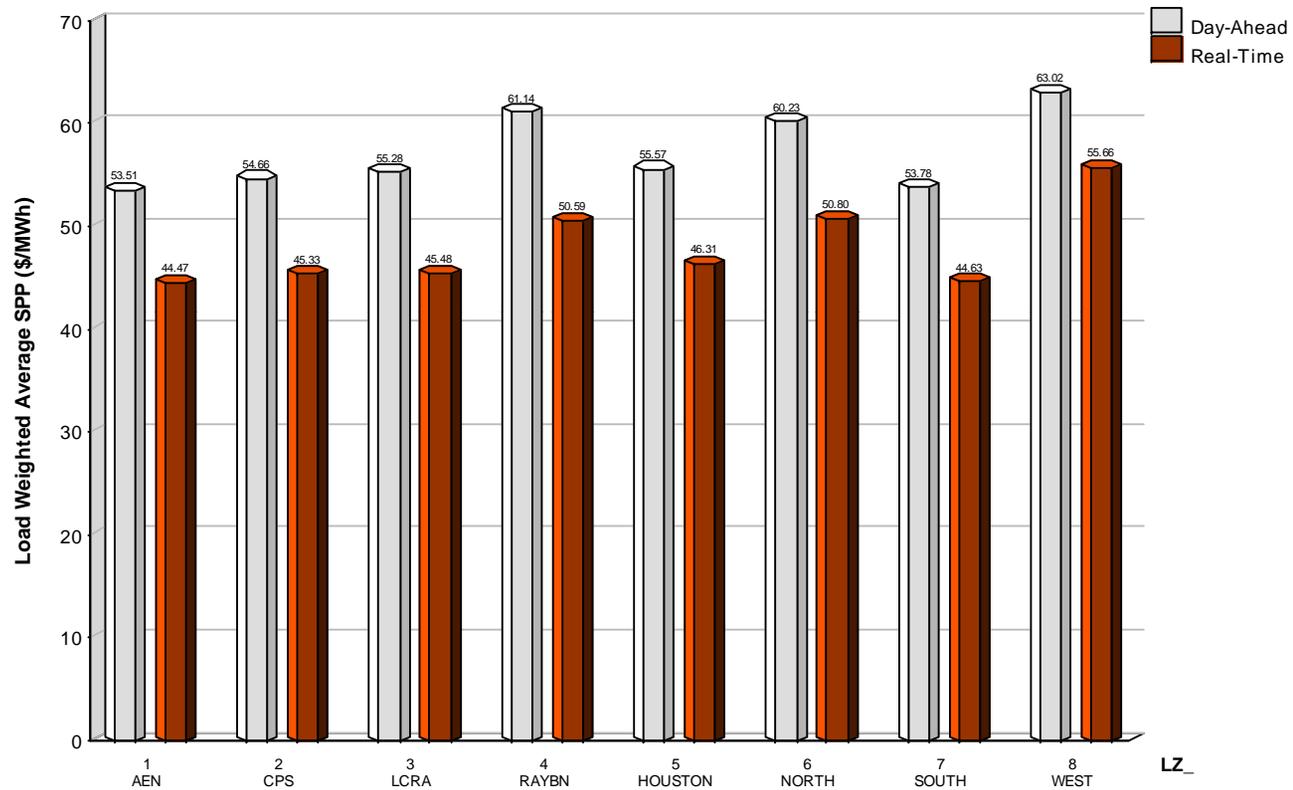


Day-Ahead Vs Real-Time Cumulative Average SPP for Simple Average Prices

01JUL2011-31JUL2011

- Overall the difference between Day Ahead prices and Real Time prices in current month was slightly increasing over the month.

# Load Weighted Average SPP



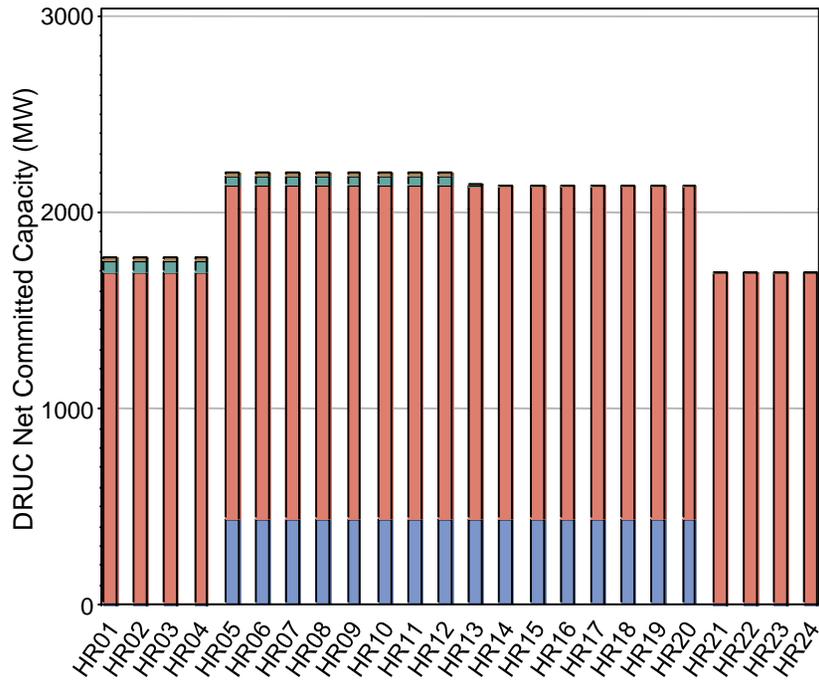
Load Weighted Average SPP for Each Zone

01JUL2011-31JUL2011

- The load weighted average RT SPPs were lower than the load weighted average DAM SPPs. The difference of DAM SPPs and RT SPPs in current month was greater than in previous month.

# DRUC

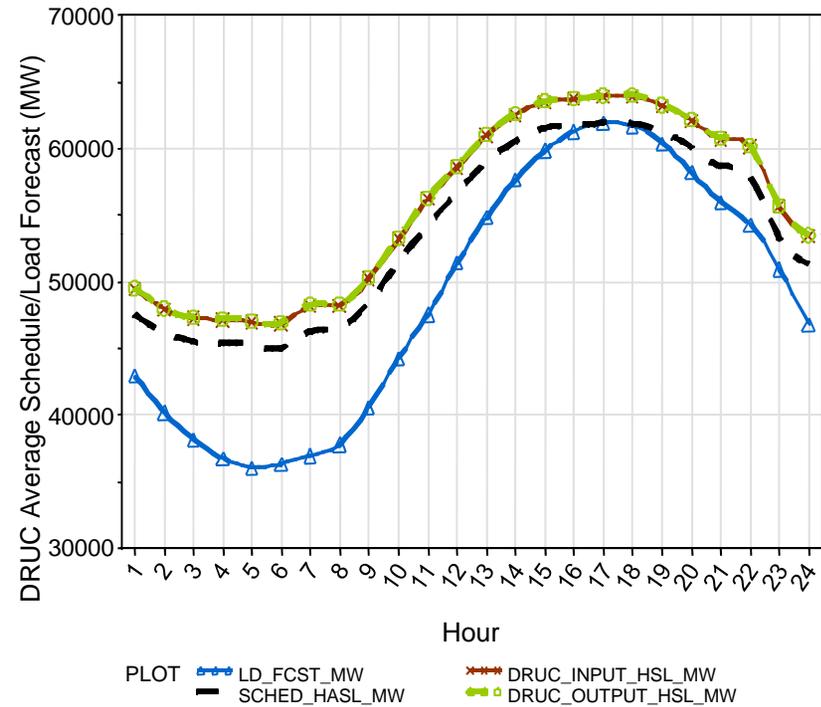
**31 Executions (0 Missed)**  
**1 Published after 1600; 0 Published after 1800**  
 Note: Colors Indicate Individual Resources



Net Committed Capacity in DRUC

01JUL2011-31JUL2011

**16.8-Min Average Execution Time**  
**48502 MWh Committed (4 Resources for 113 Hours)**

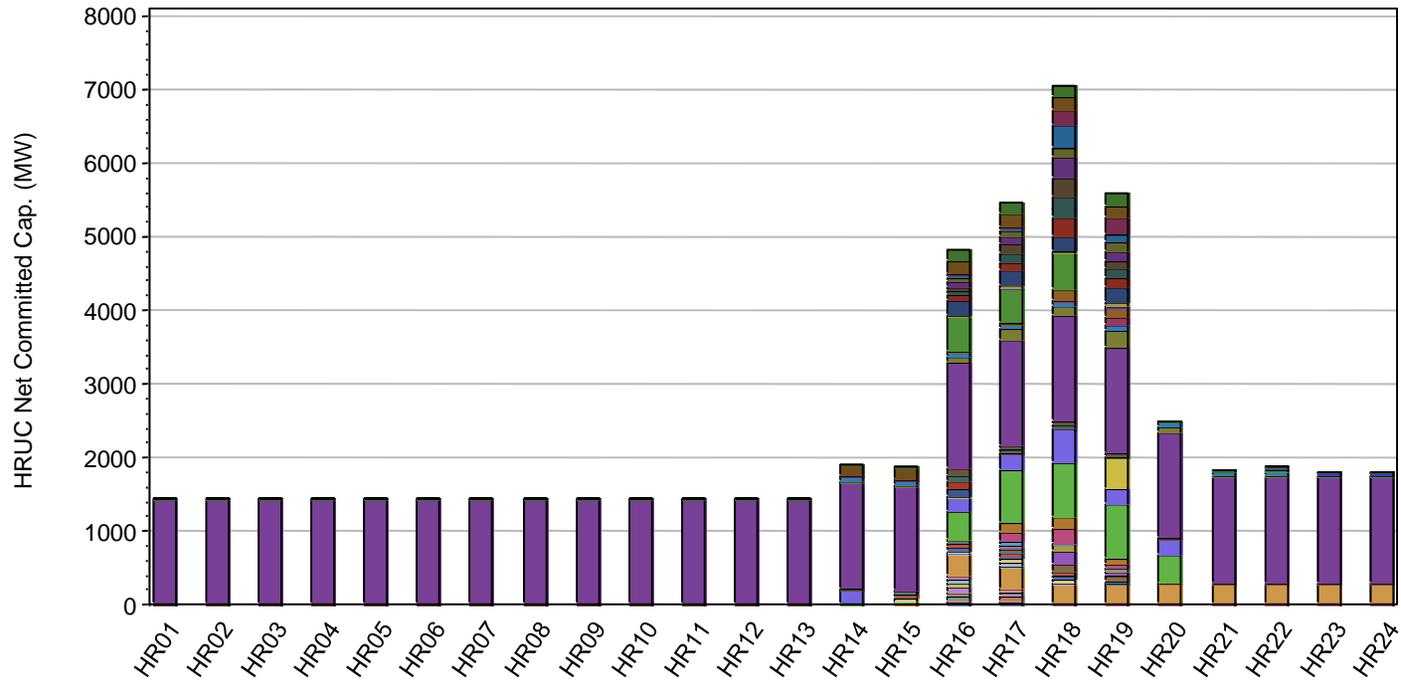


DRUC Average QSE Scheduled Capacity/Load Forecast

01JUL2011-31JUL2011

# HRUC

**741 Executions (3 Missed)**  
**14.8-Min Average Execution Time**  
Note: Colors Indicate Individual Resources

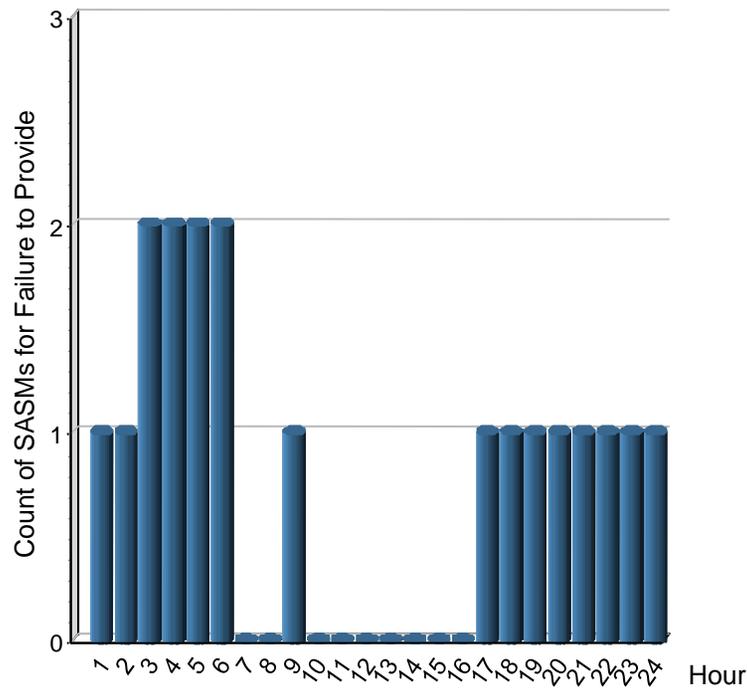


Net Committed Capacity in HRUC

01JUL2011-31JUL2011

# Supplemental Ancillary Service Market (SASM)

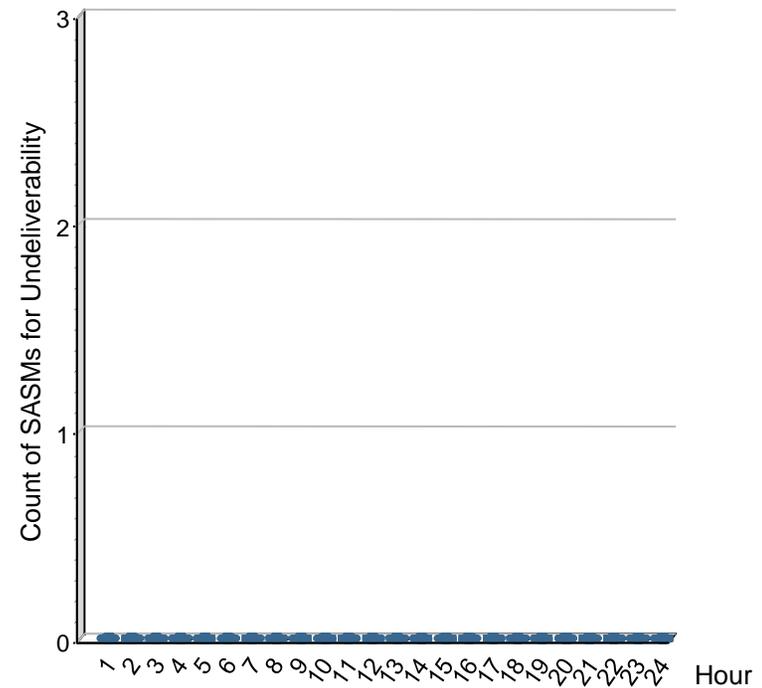
**5 SASMs in 01JUL2011-31JUL2011  
For AS Failure to Provide**



Count of SASMs for Failure to Provide by Hour

01JUL2011-31JUL2011

**0 SASMs in 01JUL2011-31JUL2011  
For AS Undeliverability**



Count of SASMs for Undeliverability by Hour

01JUL2011-31JUL2011

## CRR Auction for Operating Month August 2011

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- **156,813 Bids/Offers**
- **14,279 Auction Awards**
  - **153,295.8 MW**
    - **55,683.6 Peak WD**
    - **48,017.7 Peak WE**
    - **49,594.5 Off-peak**
- **Total Auction/Allocation Revenue = \$ 24.480 M**

## CRR Price Convergence

	June 2011	May 2011	April 2011	March 2011	February 2011	January 2011
Net Amount Paid for CRRs (Cost)	\$31.7M	\$31.4M	\$20.4M	\$20.2M	\$15.0M	\$16.4M
Net Amount Paid to Account Holders for CRRs (Value)	\$59.2M	\$41.5M	\$24.8M	\$19.6M	\$80.2M	\$17.8M
Convergence (Value/Cost)	186.7%	132.1%	121.5%	96.8%	534%	109%

# Nodal Market Challenges after Eight Months of Operation

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- **ERCOT engaged with the WMS reliability deployments task force**
  - ERCOT provided detail analysis of Non-spinning Reserve deployments on two days in July
  - The reliability actions taken on the two days analyzed indicated that online non-spinning reserve offers and offline non-spin offers lowered energy prices when released to SCED through non –spinning reserve deployment actions.
- **ERCOT is still evaluating Look-Ahead SCED options to frame for market consideration in 2012**
  - Address Load participation in SCED and Real-Time AS/Energy co-optimization
  - Target date is draft NPRR in late 2011 for detailed market consideration and refinement in 2012