



Wholesale Market Operations Update

John Dumas

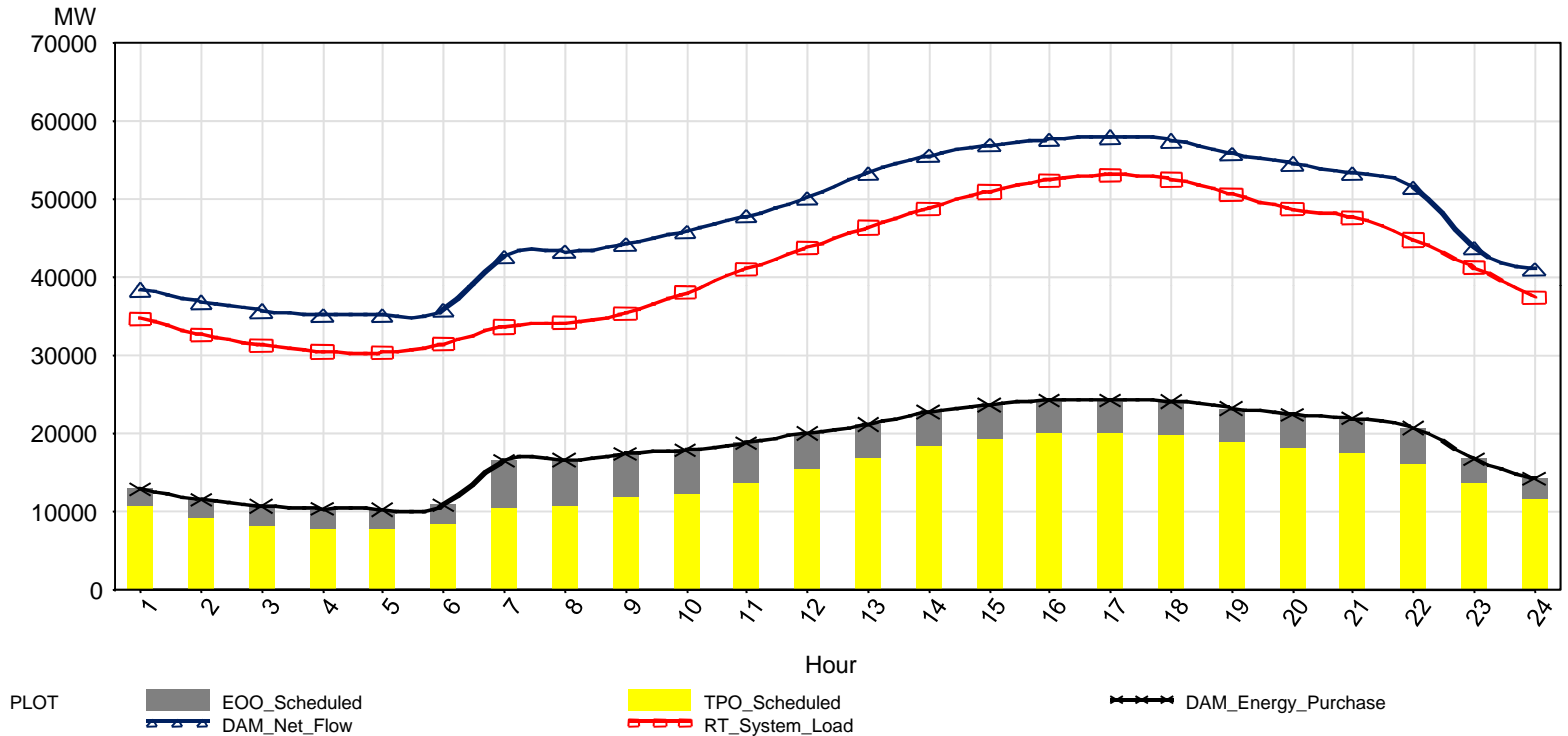
Director Wholesale Market Operations

Board of Directors Meeting

October 18, 2011

Day-Ahead Schedule

- On average the DAM net transmission flow (defined below) was greater than the real-time system load for all 24 hours

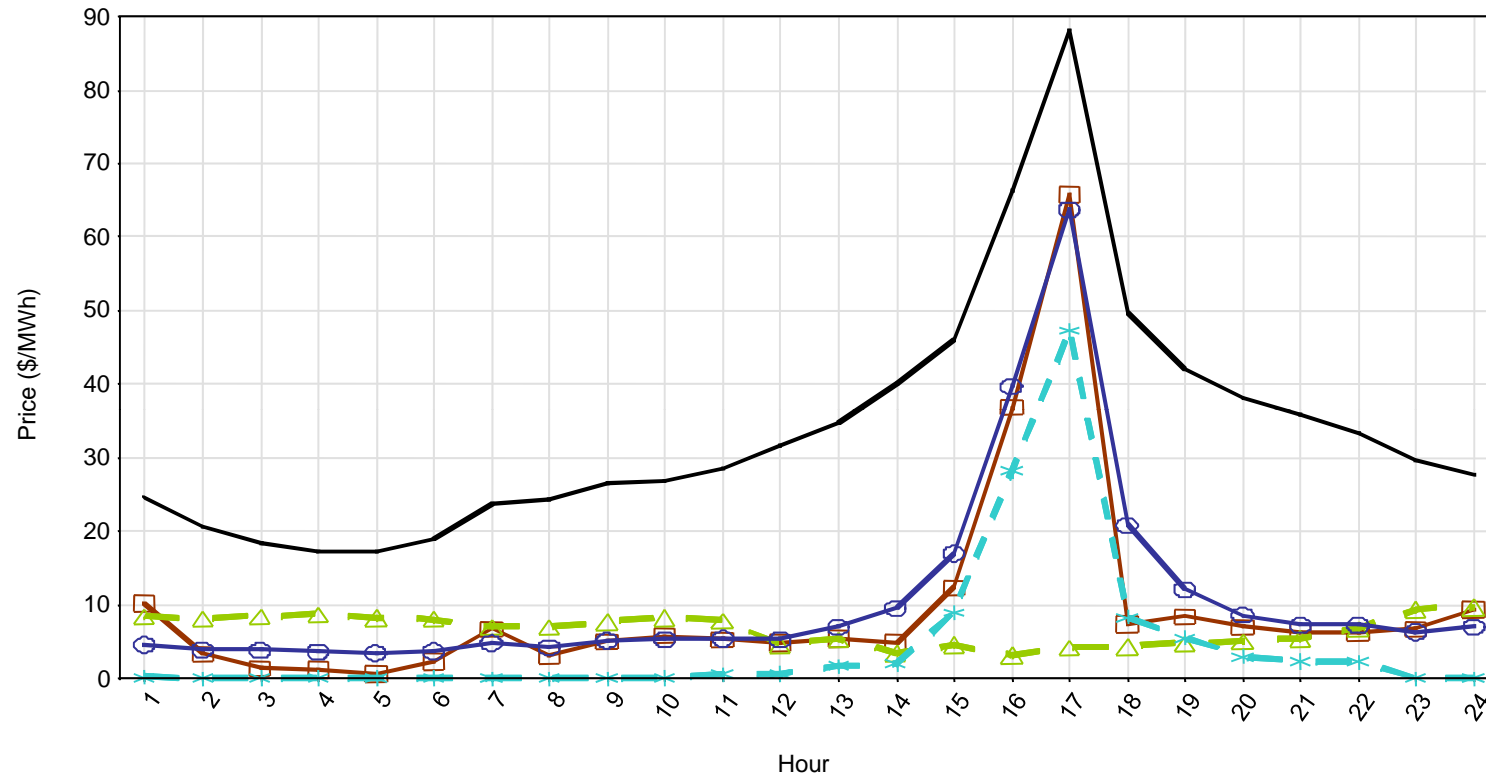


Average DAM Schedule

01SEP2011-30SEP2011

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



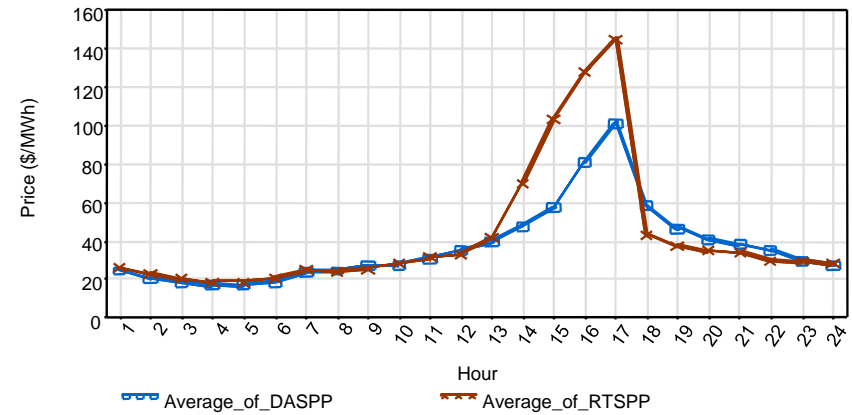
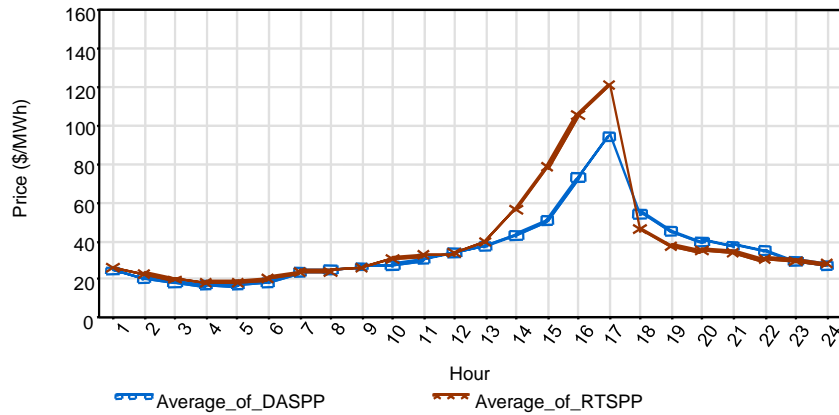
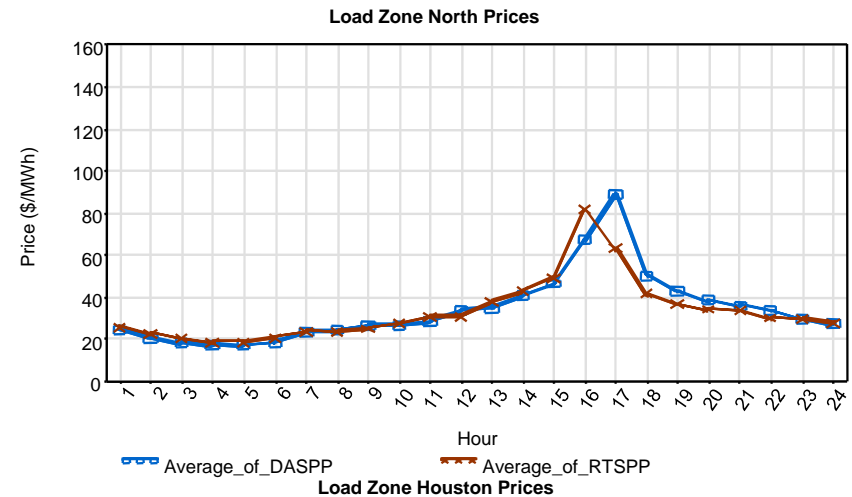
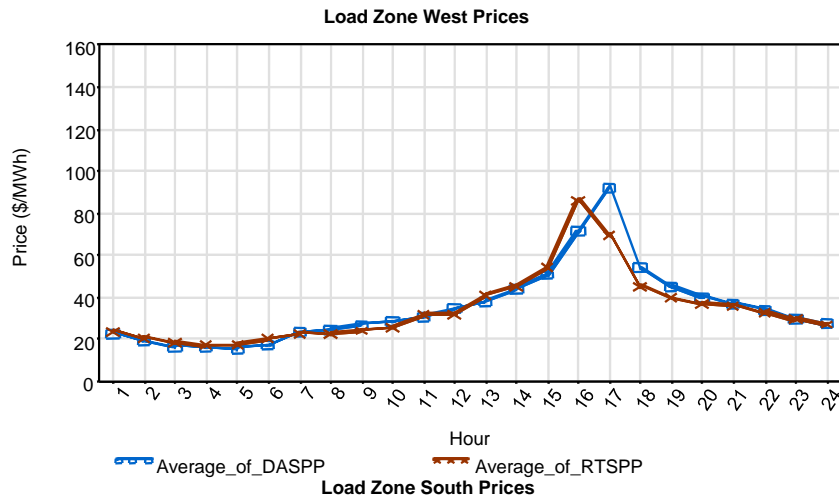
PLOT — System_lambda —●— Responsive_Reserve —□— Reg_Up —*— Non_Spin —△— Reg_Down

Day-Ahead Electricity and Ancillary Service Hourly Average Prices

01SEP2011-30SEP2011

- Both Energy and AS prices followed the trend of load profile on average.
- In some hours, Responsive Reserve prices were higher than Regulation Up prices.

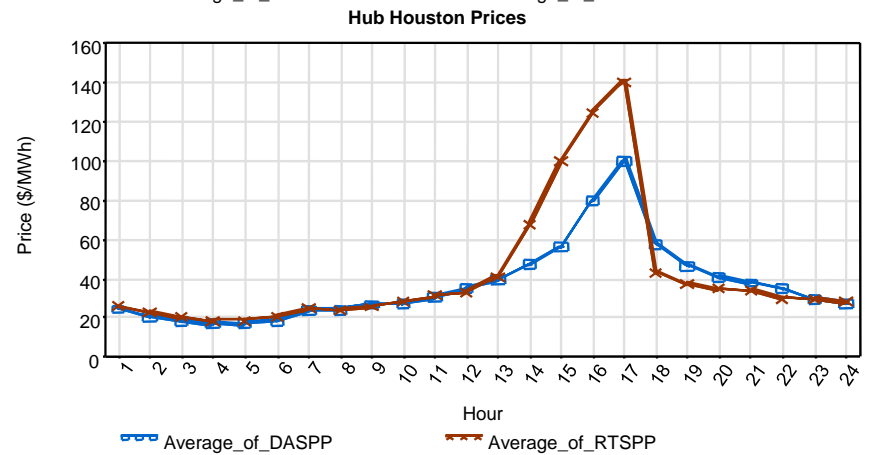
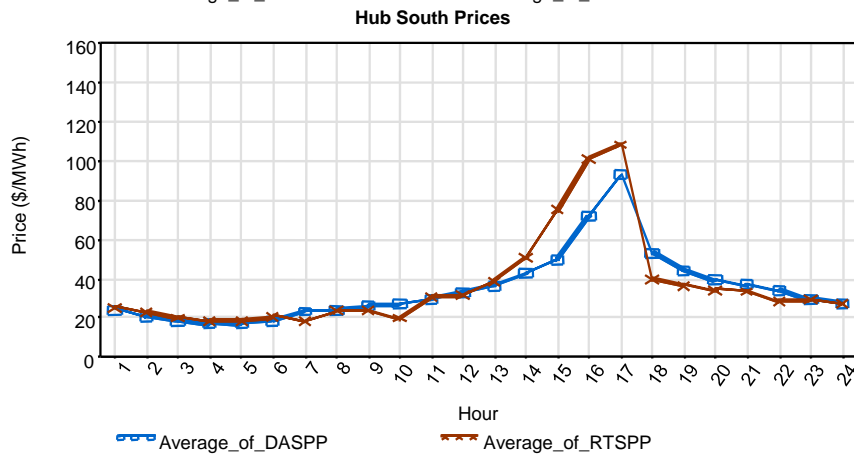
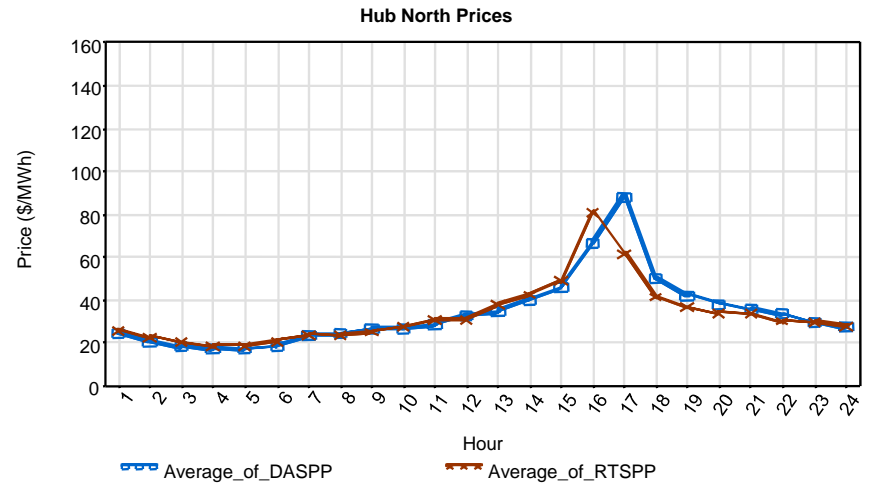
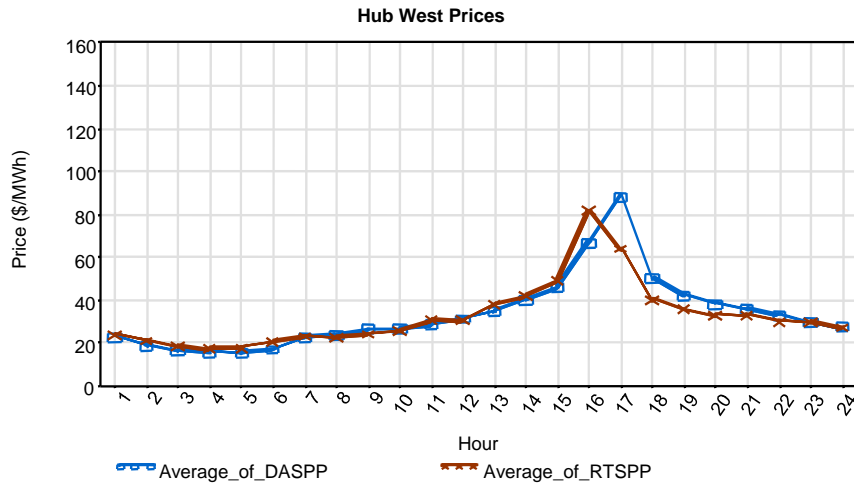
Day-Ahead Vs Real-Time Load Zone SPP (Hourly Average)



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

01SEP2011-30SEP2011

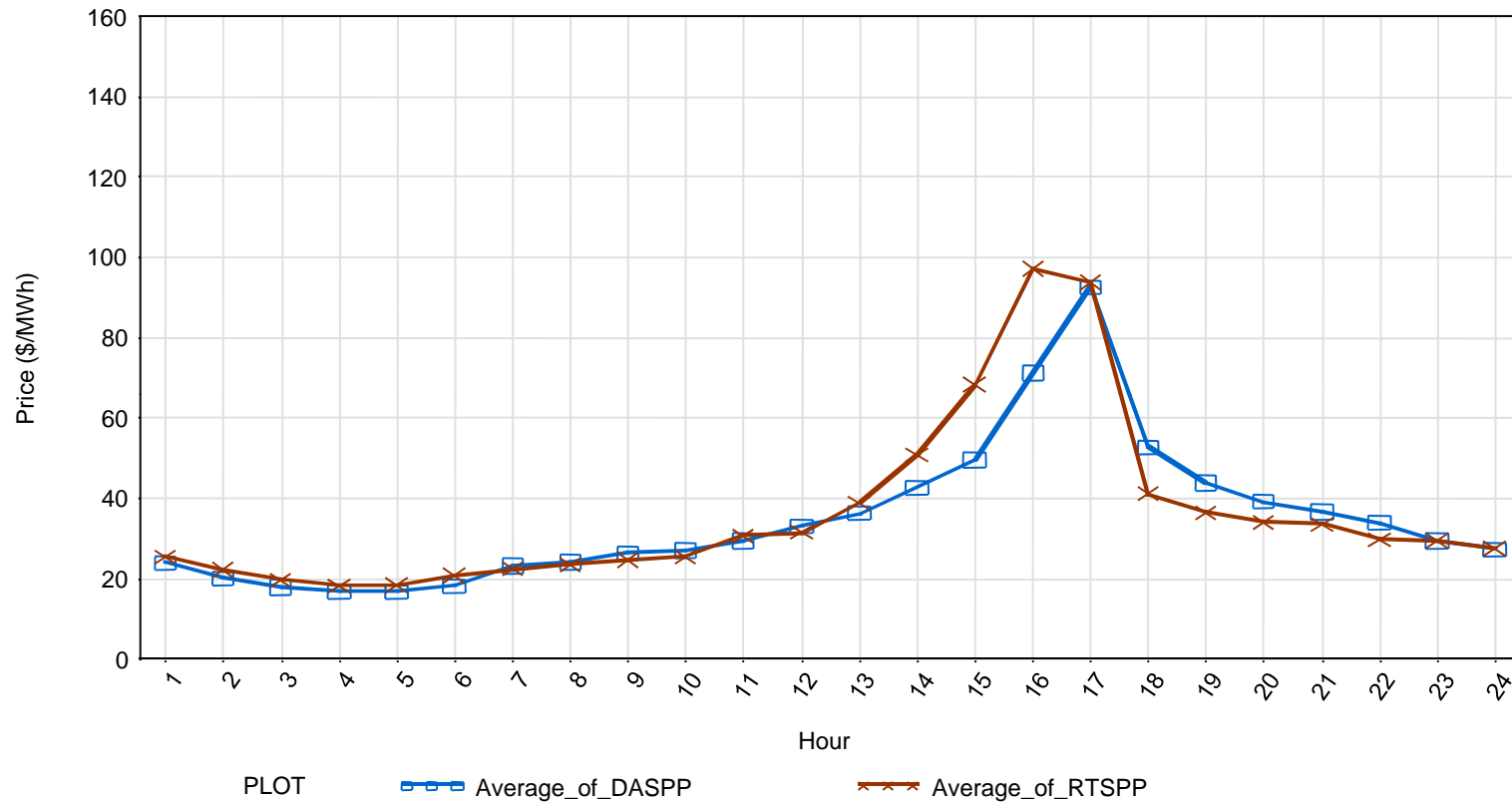
Day-Ahead vs Real-Time HUB SPP (Hourly Average)



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

01SEP2011-30SEP2011

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

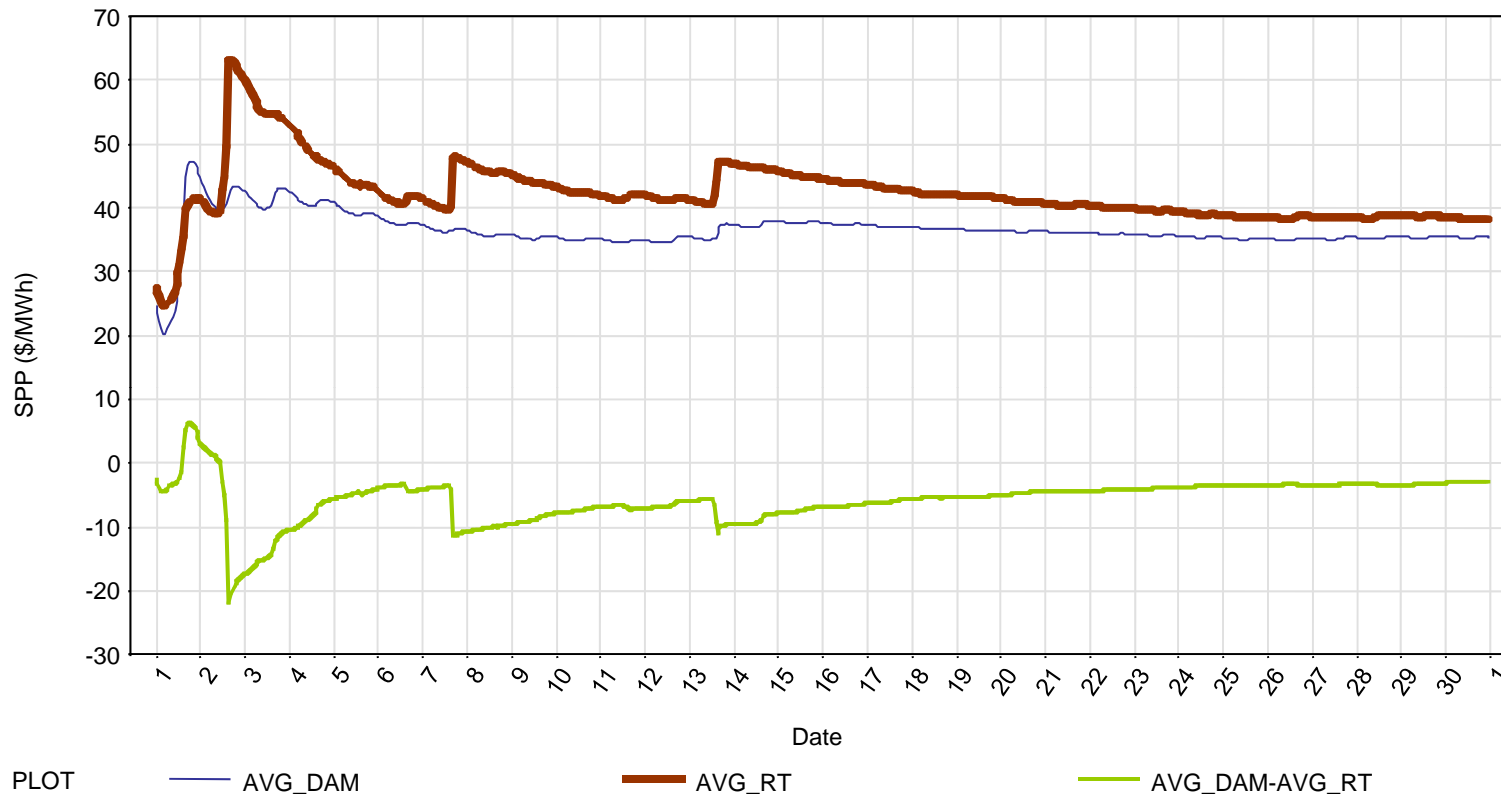


Day-Ahead Vs Real-Time Hourly Average SPP of Hub Hub-Average Prices

01SEP2011-30SEP2011

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

Day-Ahead Vs Real-Time Cumulative Average SPP

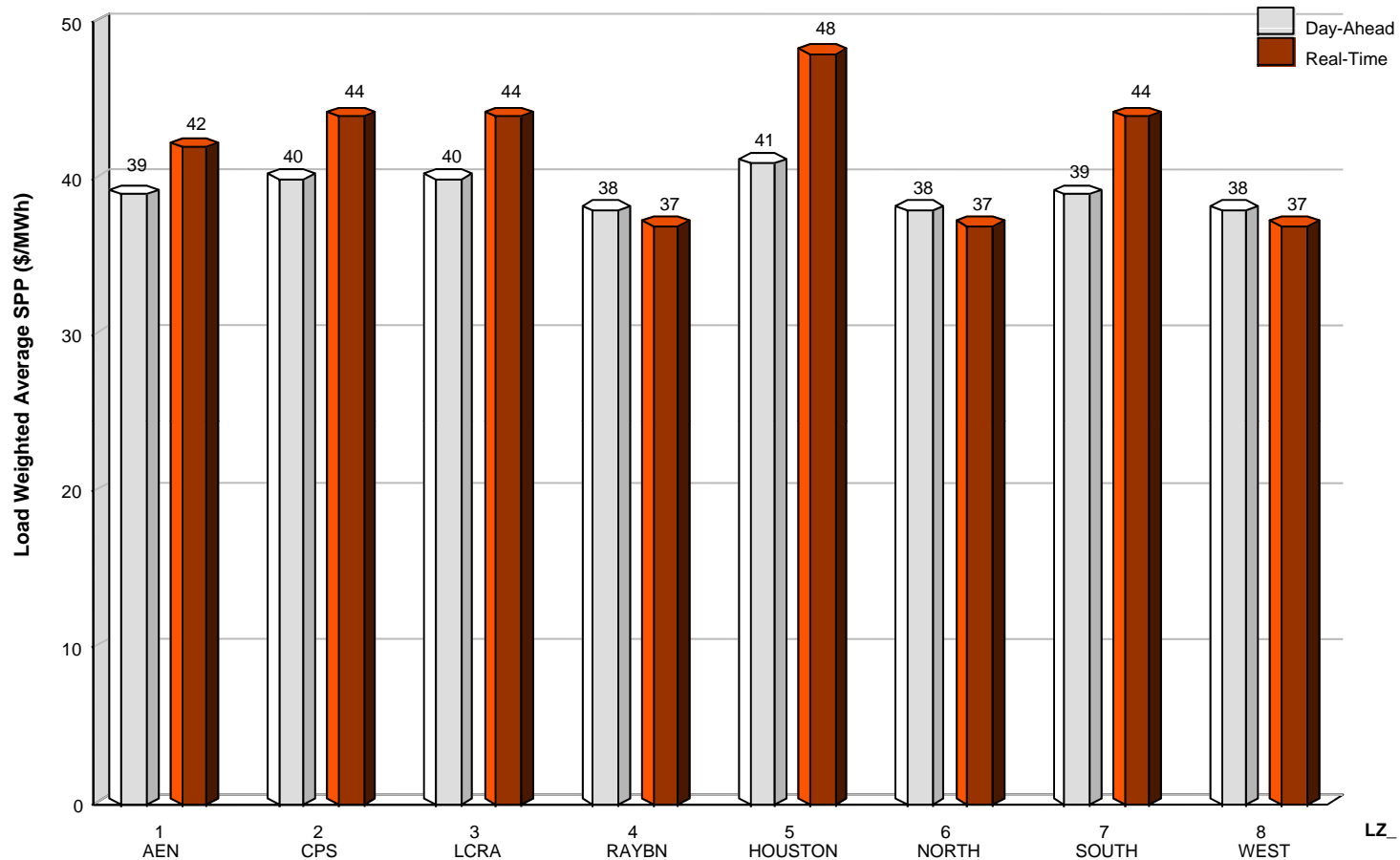


Day-Ahead Vs Real-Time Cumulative Average SPP for Simple Average Prices

01SEP2011-30SEP2011

- The cumulative Real Time prices were typically higher than the Day-Ahead prices in September but the difference was decreasing over the month

Load Weighted Average SPP



Load Weighted Average SPP for Each Zone

01SEP2011-30SEP2011

- The load weighted average RT SPPs were slightly higher than the load weighted average DAM SPPs in 5 load zones and lower in the other 3 load zones.

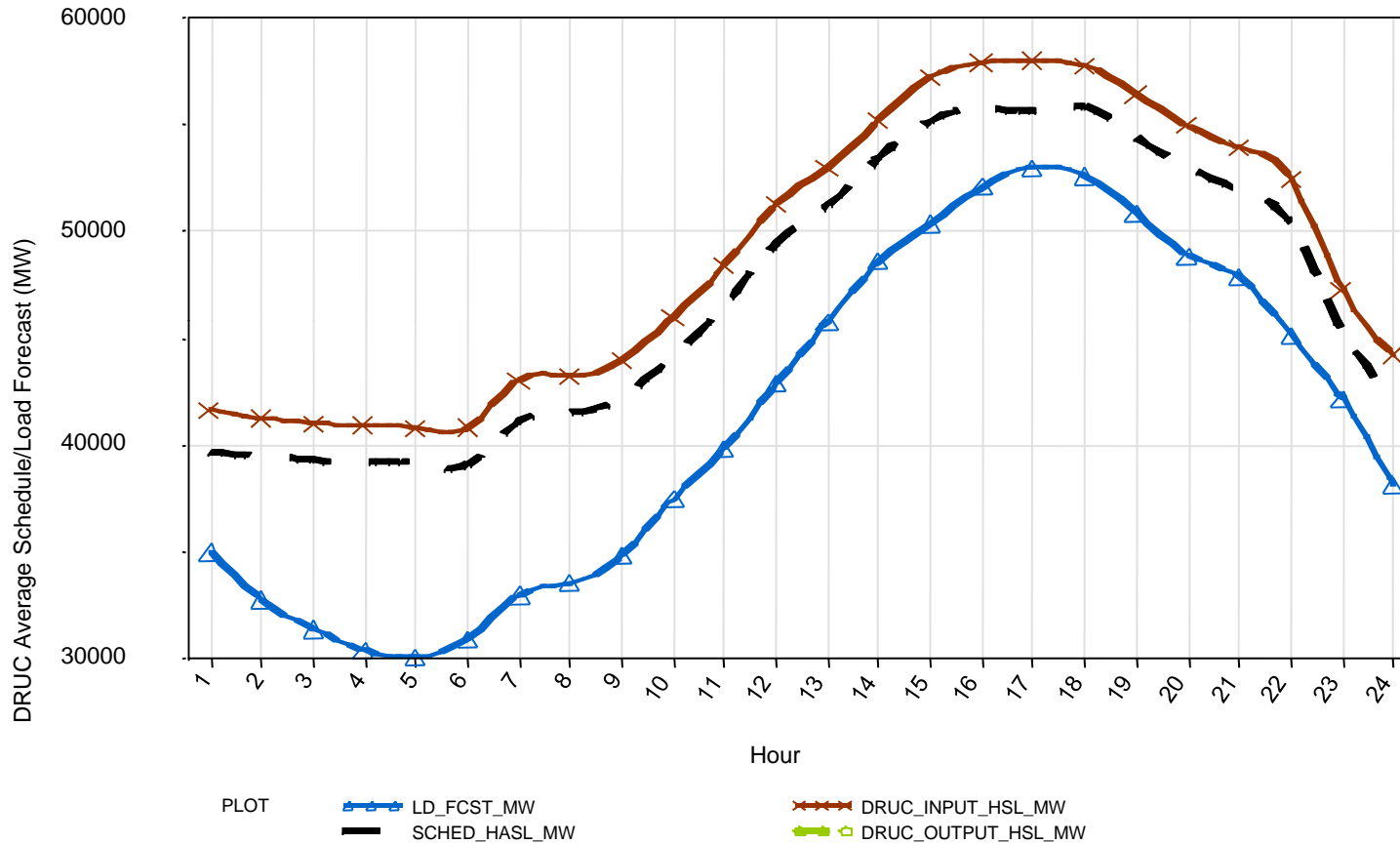
DRUC Monthly Summary

30 Execution (0 Missed)

3 Published after 1600, 0 Published after 1800

10.9-Min Average Execution Time

0 MWh Committed (0 Resources for 0 Hours)



DRUC Average QSE Scheduled Capacity/Load Forecast

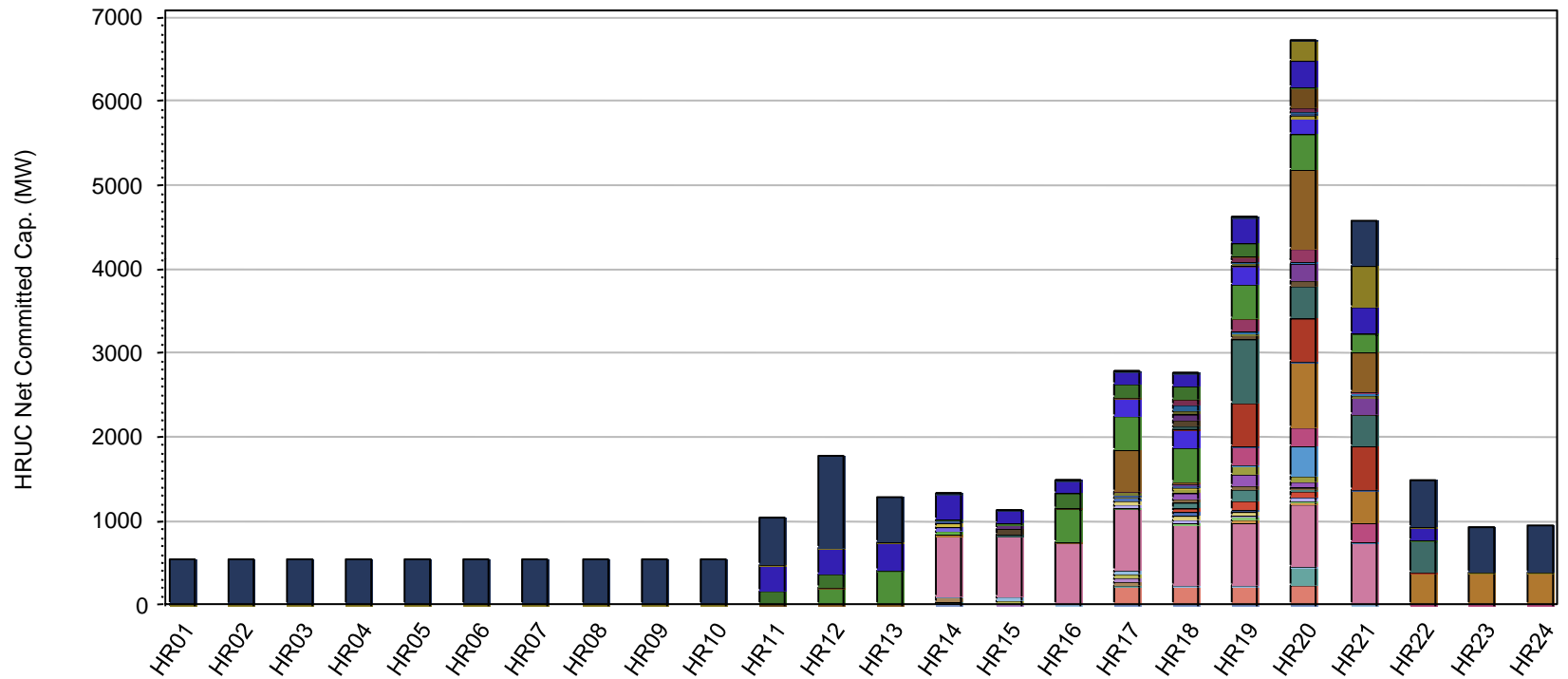
01SEP2011-30SEP2011

DRUC didn't commit any Resource and hence input and output HSL MW is the same



HRUC Monthly Summary

720 Executions (0 Missed)
 12.2-Min Average Execution Time
 Note: Colors Indicate Individual Resources

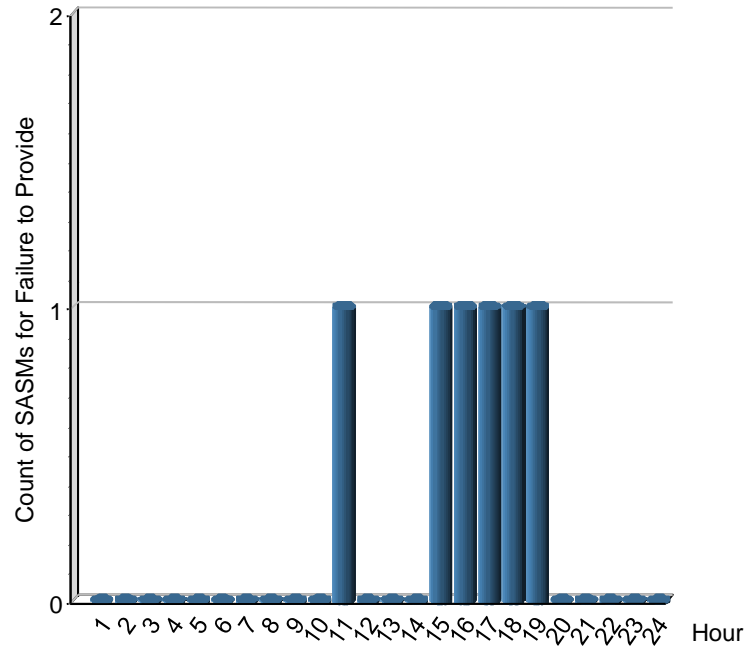


Net Committed Capacity in HRUC

01SEP2011-30SEP2011

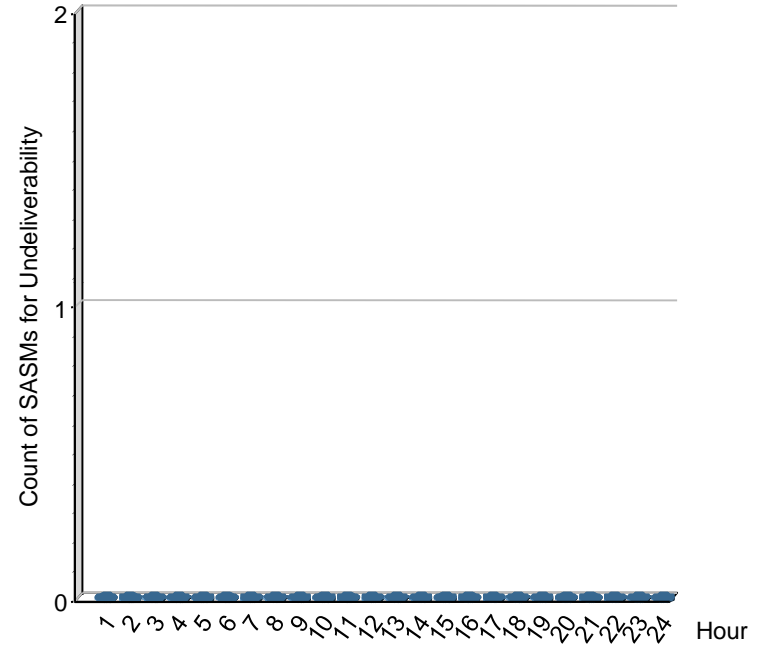
Supplemental Ancillary Service Market (SASM) Summary

**2 SASMs in 01SEP2011-30SEP2011
For AS Failure to Provide**



Count of SASMs for Failure to Provide by Hour

**0 SASMs in 01SEP2011-30SEP2011
For AS Undeliverability**

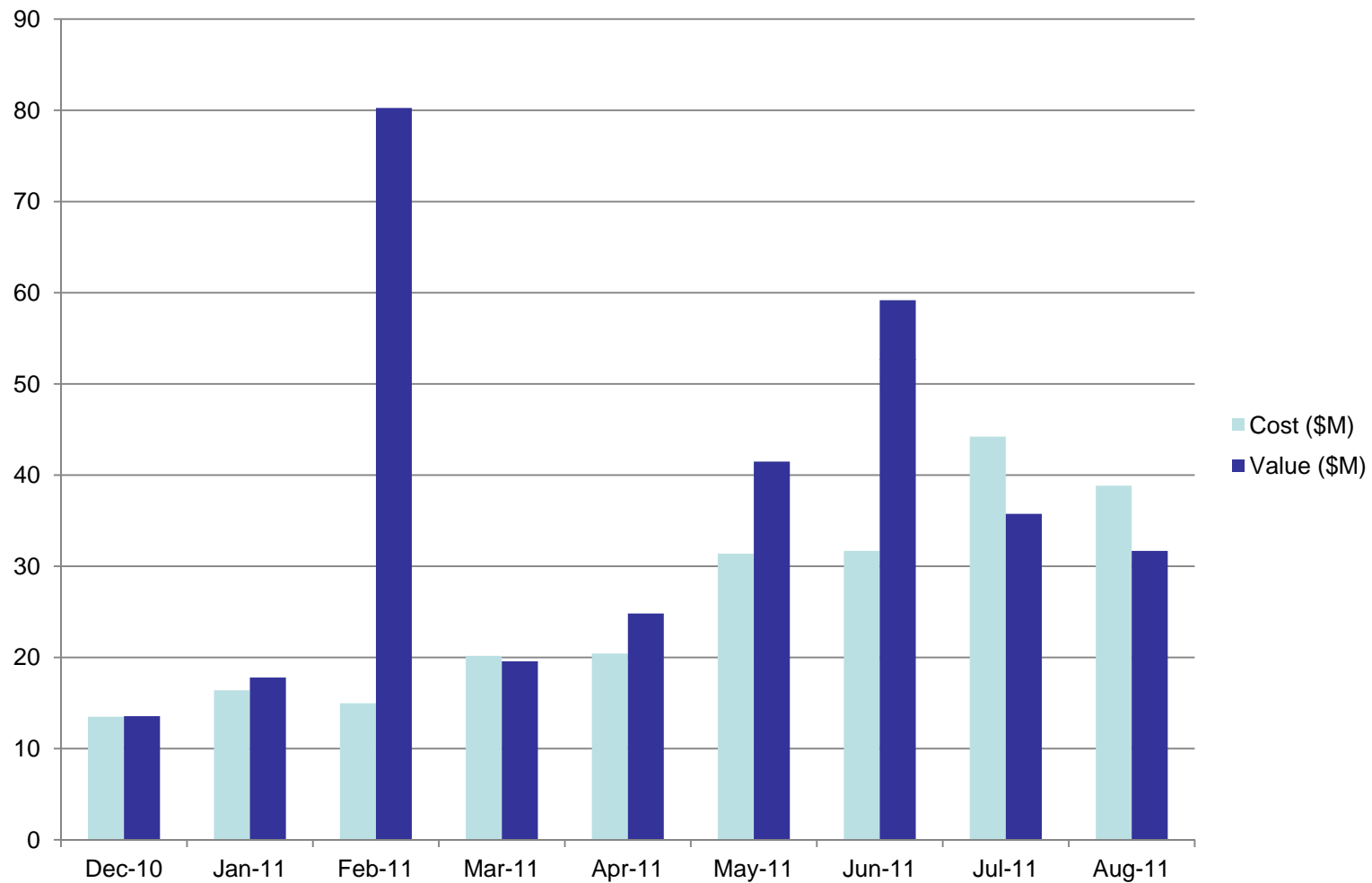


Count of SASMs for Undeliverability by Hour

CRR Auction for Operating Month October 2011

- **137,672 Bids/Offers**
- **11,298 Auction Awards**
 - **135,767.6 MW**
 - **49,501.2 Peak WD**
 - **44,129.2 Peak WE**
 - **42,137.2 Off-peak**
- **Total Auction/Allocation Revenue = \$ 10.995 M**

CRR Price Convergence*



*Cost calculation uses a new method of splitting costs between months in multi-month auctions. Previous months used the same algorithm as the CRR Auction Revenue Distribution.

Market Enhancements Under Consideration

- **Evaluating Non-Spinning Reserve Pricing Proposals**
 - ERCOT performed a back-cast analysis of the stakeholder pricing proposals
 - ERCOT will continue to work with the IMM and stakeholders to evaluate the impacts of the proposals
- **Look-Ahead SCED functions framed for market consideration**
 - ERCOT is working with stakeholders/IMM/PUC Staff in laying out a phased implementation of Look-Ahead SCED and ironing out the details for developing the initial phase by next summer.
 - Non-binding Real Time Dispatch running in parallel to current SCED to publish advisory LMPs and BP up to 1 hr into the future
 - Evaluating feasibility of implementing Loads in SCED Pilot
- **EILS Proposed Rule Enhancements**
 - Option to renew contract after deployment obligations are met early in a contract period
 - Enhancements to encourage additional participation
- **Evaluating feasibility of implementing Energy Storage Pilot**
- **Working with stakeholders to ensure efficient market performance while narrowing the gap between reliability planning and operations**
- **Evaluating market operational changes to minimize the impact of RMR on the market**