



Briefing on ISO Markets

Steve Berberich,
Vice President of Corporate Services, Interim Chief
Financial Officer and Treasurer

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We are pleased with the performance of the new market so far.

- The participant partnerships developed during simulation have served us well
- The post go live processes have worked well and some will endure
- Systems have been stable and performed much better in production than in simulation
- Pricing has generally been stable and modest
- System stability (frequency) has performed very well

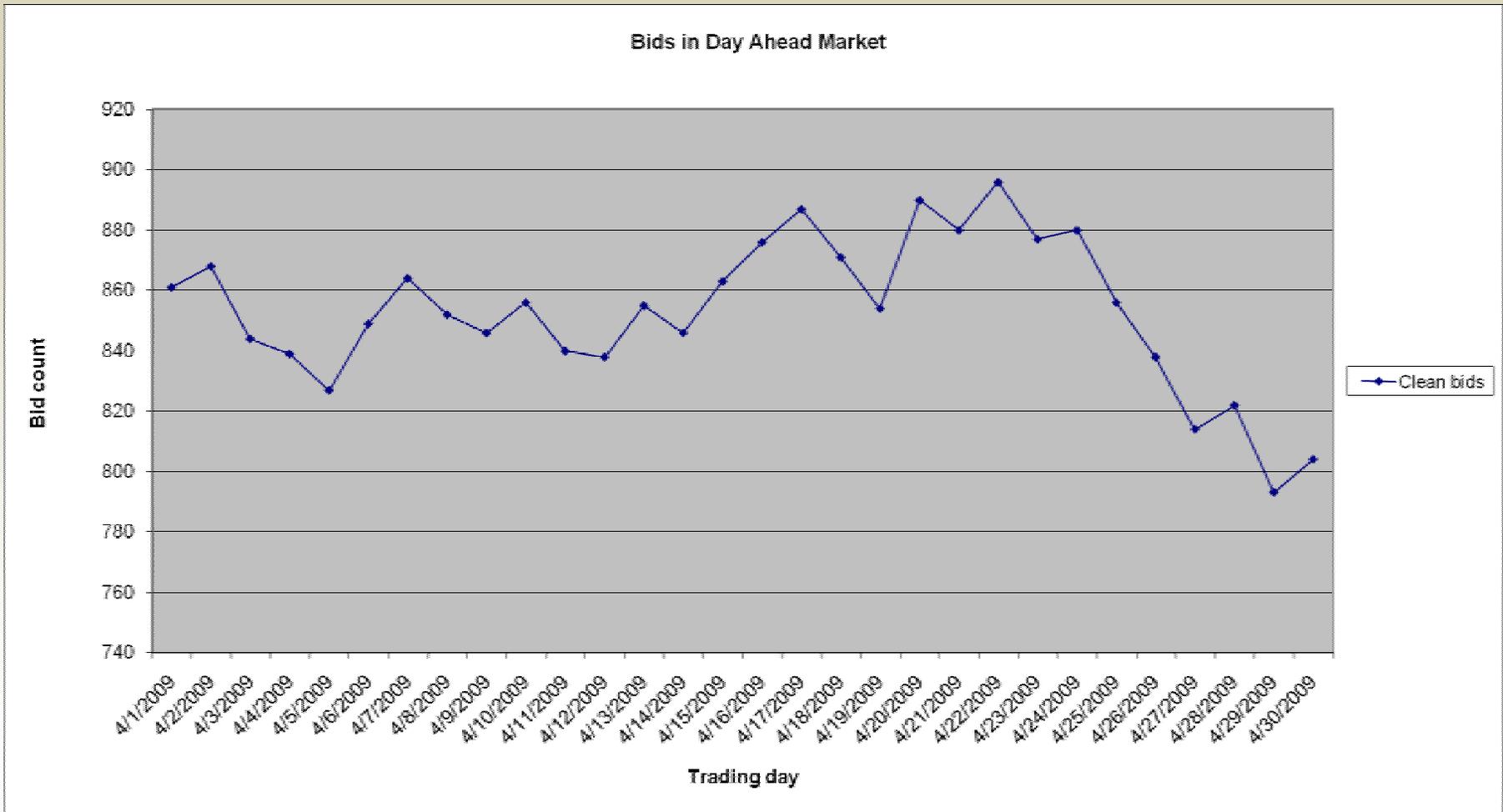
As expected with such a dramatic market cutover, some issues have been observed.

- Real-time price volatility
- Day-ahead and hourly price convergence
- Price blocking
- Exceptional dispatch
- CRR revenue adequacy

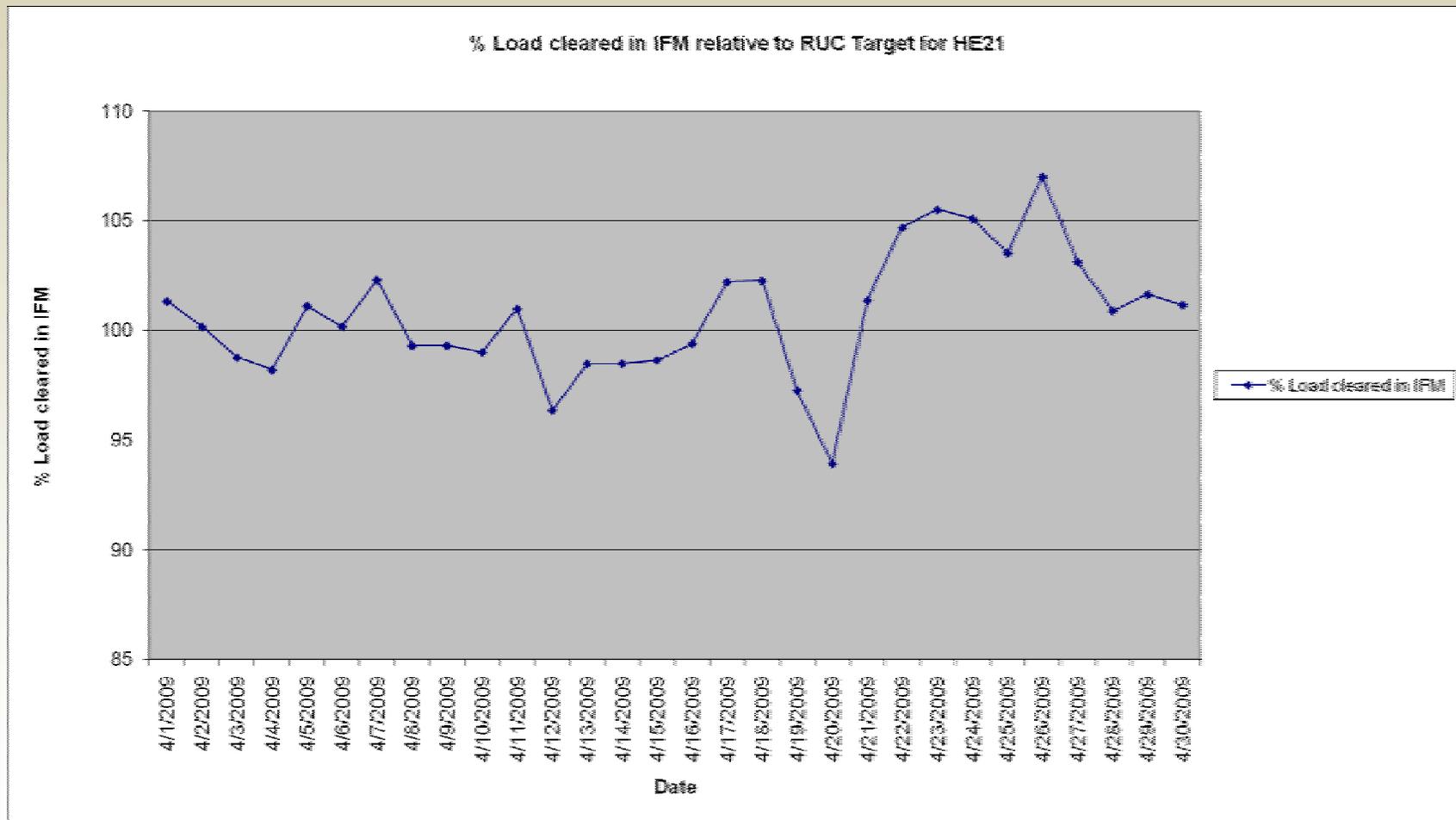
Systems are performing better much better than in simulation.

- Day-Ahead market has been very stable
 - 24 days by 1 p.m.; for remaining 6 days, latest was published at 1:19 p.m.
- HASP (Hour Ahead) market successfully solved - 97.5% in April
 - 18 of 721 failed HASP intervals
 - Of the 18 failed – 3 of those are MPM failures only
- Real-Time pre-dispatch successfully solved in April
 - 97.01 %
 - 97.88 %
- Real-time dispatch successfully solved – 98.85% in April
- We had three instances in April when RTD failed for more than five intervals

The day-ahead market has been quite liquid with robust bidding numbers

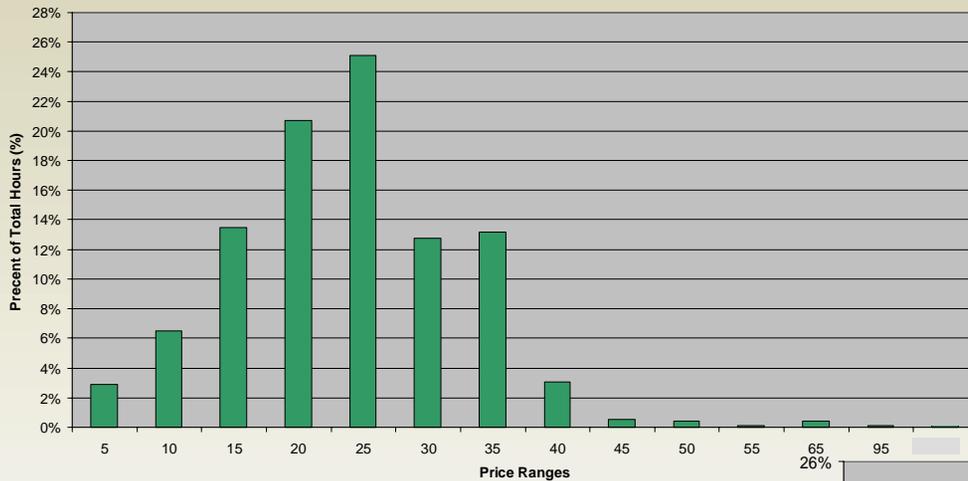


Peak hour requirements have been generally met by Integrated Forward Market (Day-Ahead).

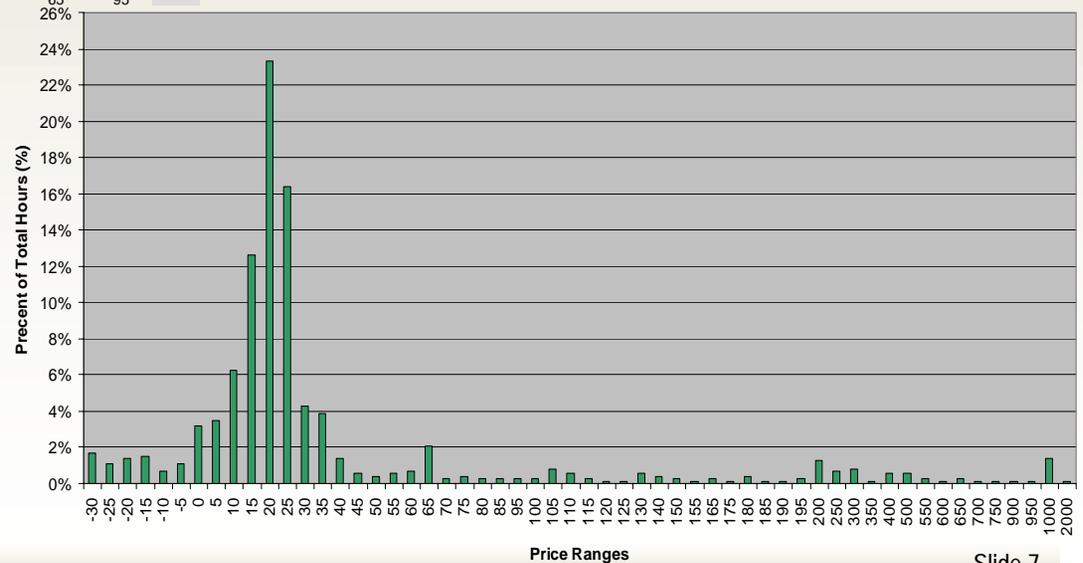


Real Time prices are generally moderate but have shown a tendency to spike under constrained conditions.

Hourly LAP Price Frequency
(SDG&E DAM April)

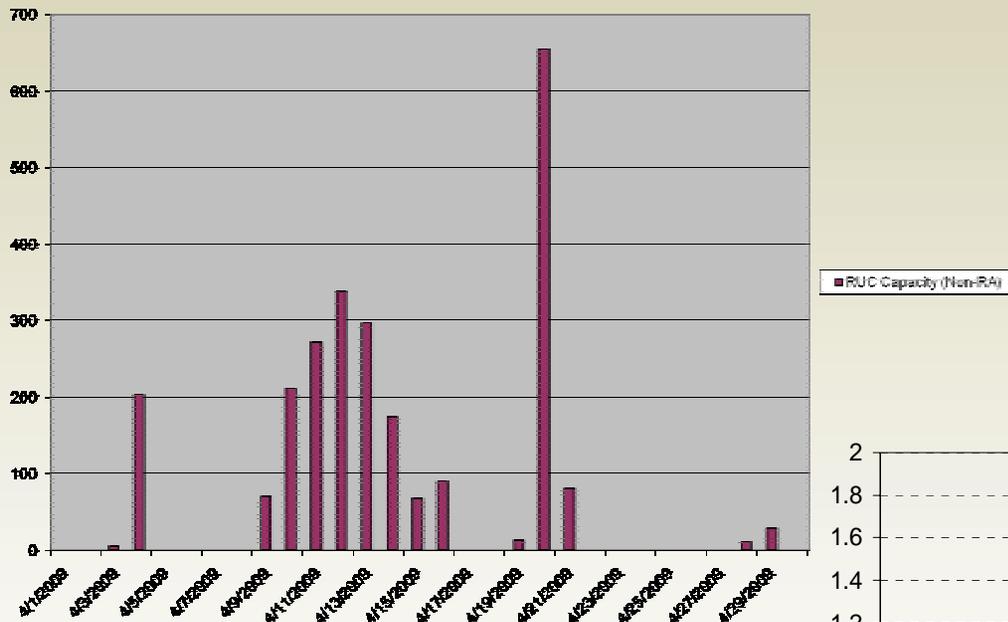


Hourly LAP Price Frequency
(SDG&E Real-Time April)

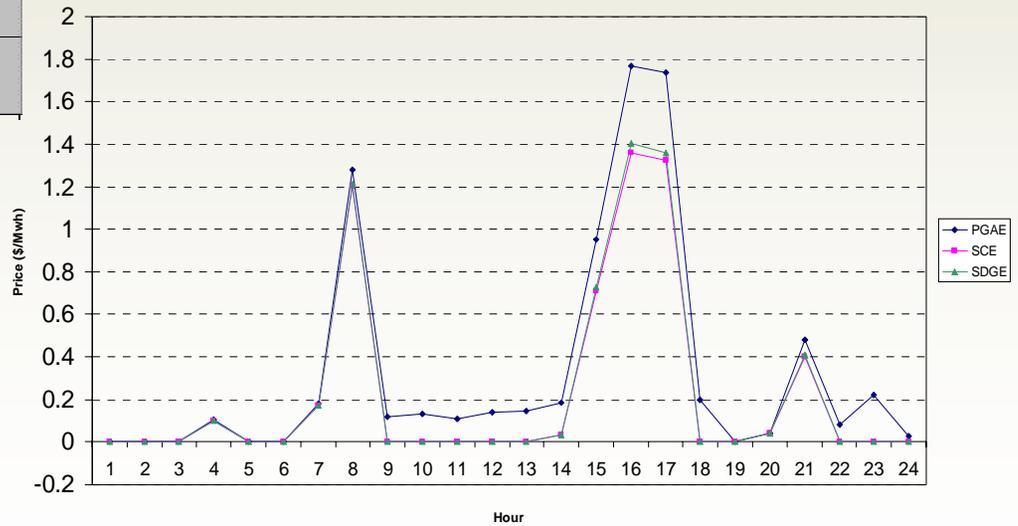


Use of Residual Unit Commitment has been limited and at modest prices.

RUC Capacity (Non-RA)

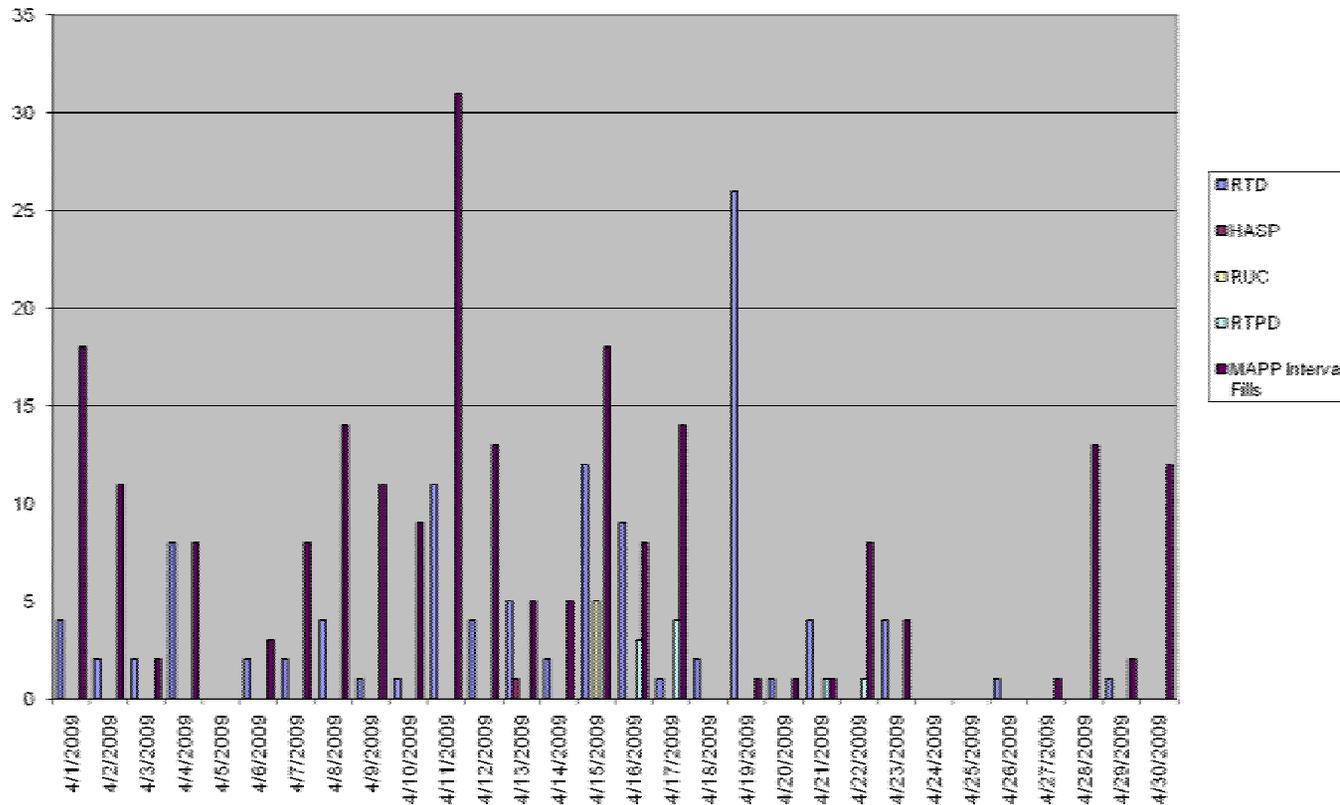


Average RUC Costs (April)

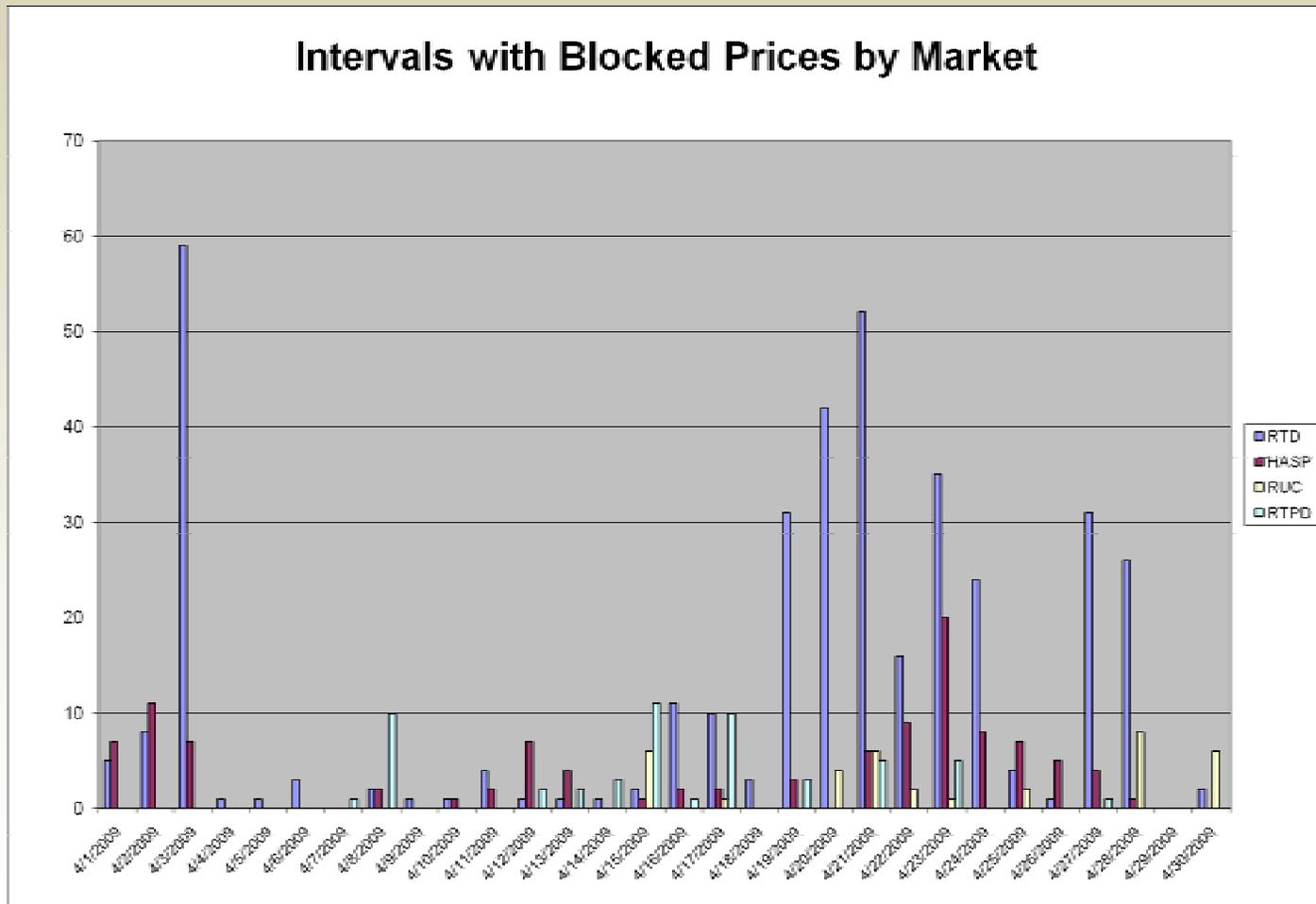


Price corrections were needed several times but diminished as we closed out the month.

Corrected Intervals by Market and MAPP Interval Fills



Price blocking has been tuned to reduce the number of incidences.



Settlements has been tracked closely and credit statements have been produced on a timely basis.

- We have “shadowed” settlements and frequently compared the results with participants
- Participants started receiving credit statements on April 10, seven business days after the trade date. These are advisory.
- Credit statements will be changed to trade day + 9 business days to coincide with price correction timeline
- First daily settlements statements publish May 26
- First invoice is published June 24 and is due July 1

The proactive monitoring process has been effective in identifying potential participant issues.

- Shadow settlement reviews at T+3, and credit statement reviews
 - 10 parameters monitored in T+1 and T+2 timeframe
 - Over 90 contacts have been made thus far
- High self-schedules where prices are expected to be negative
 - Unscheduled ETCs in DA and RT
 - RA not bidding in IFM and RUC
 - RT Market Liquidity
 - Market Procurement of A/S
 - Imports during over-generation
 - Tagging RT Interchange Awards

Still, there are many things to be learned and addressed.

- Real-Time pricing issues need to be addressed
- System failures, particularly HASP, have been few but need to be virtually non-existent
- The “bedding in” process will continue for some time
 - System parameters will be monitored and tuned
 - Constraints on the system will be modeled and reviewed for accuracy
 - Operations collaboration must continue
- The first settlement statements go out at the end of May and we will monitor that process closely