NYISO Market Enhancements

Summary of Market Advisor Recommendations 1999-2002

Business Issues Committee
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NYISO Markets at Startup (12/1/99)

- Energy Markets
- Two-settlement system
- Locational marginal pricing
- Bid-based markets
- Nodal price-capped load bidding
- Ancillary Services
- Market-based (Regulation, Spin- & Non-spin), co-optimized w/energy markets
- Locational reserve requirements
- Cost-based (Sched. & Control, Voltage, Black Start)

NYISO Markets at Startup (12/1/99)

- **Congestion Hedges**
  - ✓ *TCC auctions (semi-annual), monthly reconfiguration auctions*
  - ✓ *Settled in DAM*

- **Capacity Adequacy Market**
  - ✓ *LSE ICAP requirement based on annual peak load – locational (NYC, LI, rest of state)*
  - ✓ *Deficiency charges if requirements not met*

- **Transmission service**
  - ✓ *Firm (willing to pay congestion) and non-firm service available*

Assessment of the Markets

Market Issue	Improvements made to address the issue
Seams issues with neighbors need to be given a high priority	BME changes to improve export scheduling in peak hours; emergency transfer agreements set up with neighboring control areas; multi-hour block transactions implemented
Need for improved BME/SCD price convergence	Virtual trading introduced; changed reserve treatment in BME; RTS/SMD 2.0
Lack of investment signals	Reserve shortage pricing rules established; demand response programs allowed to set energy prices; rule and procedure changes to reduce out-of-merit dispatch of gas turbines

Assessment of the Markets

Market Issue	Improvements made to address the issue
Concerns about Ancillary Services offer levels, supply	Bidding restrictions placed on 10-min non-spinning reserves; mandatory offer requirement and bid cap; rule changes to incent greater participation; set up reserve-sharing arrangements with New England; locational reserve pricing
Automated mitigation procedures needed to avoid delay in mitigating DAM	2001 - AMP for day-ahead market; 2002 - AMP II (spatial and temporal selectivity); 2002 - automated real-time mitigation software

Assessment of the Markets

Market Issue	Improvements made to address the issue
Demand-side response needs to be encouraged	2001 - Developed Emergency Demand Response Program for reliability-based demand response, Day-Ahead Demand Response Program (DADRP) for economic response; 2003 - provide energy payments to ICAP Special Case Resources assisting in load reduction; opened DADRP to third-party providers
ICAP results in NYC not competitive	UCAP approach to determining capacity obligations; ICAP demand curve
Inaccurate locational pricing	Real-time and day-ahead load pocket modeling in NYC