

Energy Market Operations Update Summer 2006

Scheduling & Pricing Working Group
July 31, 2006

Week of July 17, 2006 Operational Events

✓ July 17:

- *Record Summer Peak Load: 32,624MW*
- *UPNY-Con Ed (Zone G-Zone H) transfers limited for low Hudson Valley area 345kV voltages from HB13 to HB20*
- *NYISO-PJM TTC reduced from normal 2500MW limit from HB13 to HB22 for Hudson Valley area 345kV voltages*

✓ July 18:

- *Peak Load: 32,060MW*
- *EDRP and SCR resources were activated in Zones H-K from HB13 to HB22 for Hudson Valley 345kV area voltages*
 - ✧ *Estimated 657MW (139MW EDRP, 518MW SCR)*
- *UPNY-ConEd (Zone G-Zone H) transfers limited for low Hudson Valley area 345kV voltages from HB12 to HB17*
- *NYISO-PJM TTC reduced from normal 2500MW limit from HB12 to HB21 for Hudson Valley area 345kV voltage*

✓ July 19:

- *EDRP and SCR resources were activated in Zone J from approximately HB11 to HB19 in response to the local Transmission Owner request in NYC Zone*
 - ✧ *Estimated 414 MW (81 MW EDRP, 333 MW SCR)*

Draft for Discussion

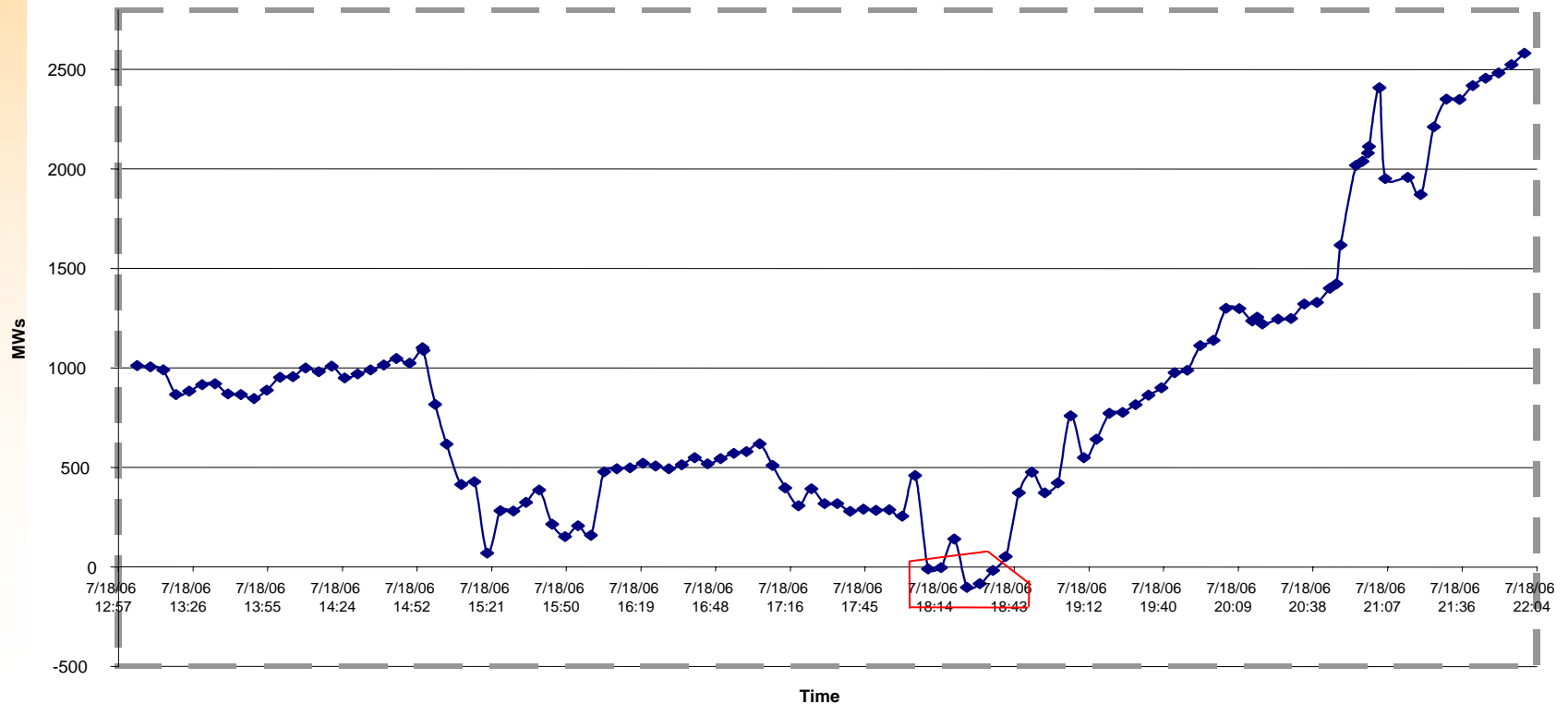
EDRP/SCR Scarcity Pricing Impact



July 18:

- RTD prices were set by EDRP/SCR scarcity pricing rules
 - ✧ RTD intervals; 18:10, 18:15, 18:25, 18:30 and 18:35
- Verified that the correct scarcity pricing rules were applied
 - ✧ Available Reserves were less than Eastern reserve requirement

Available Reserves Less East Reserve Requirement



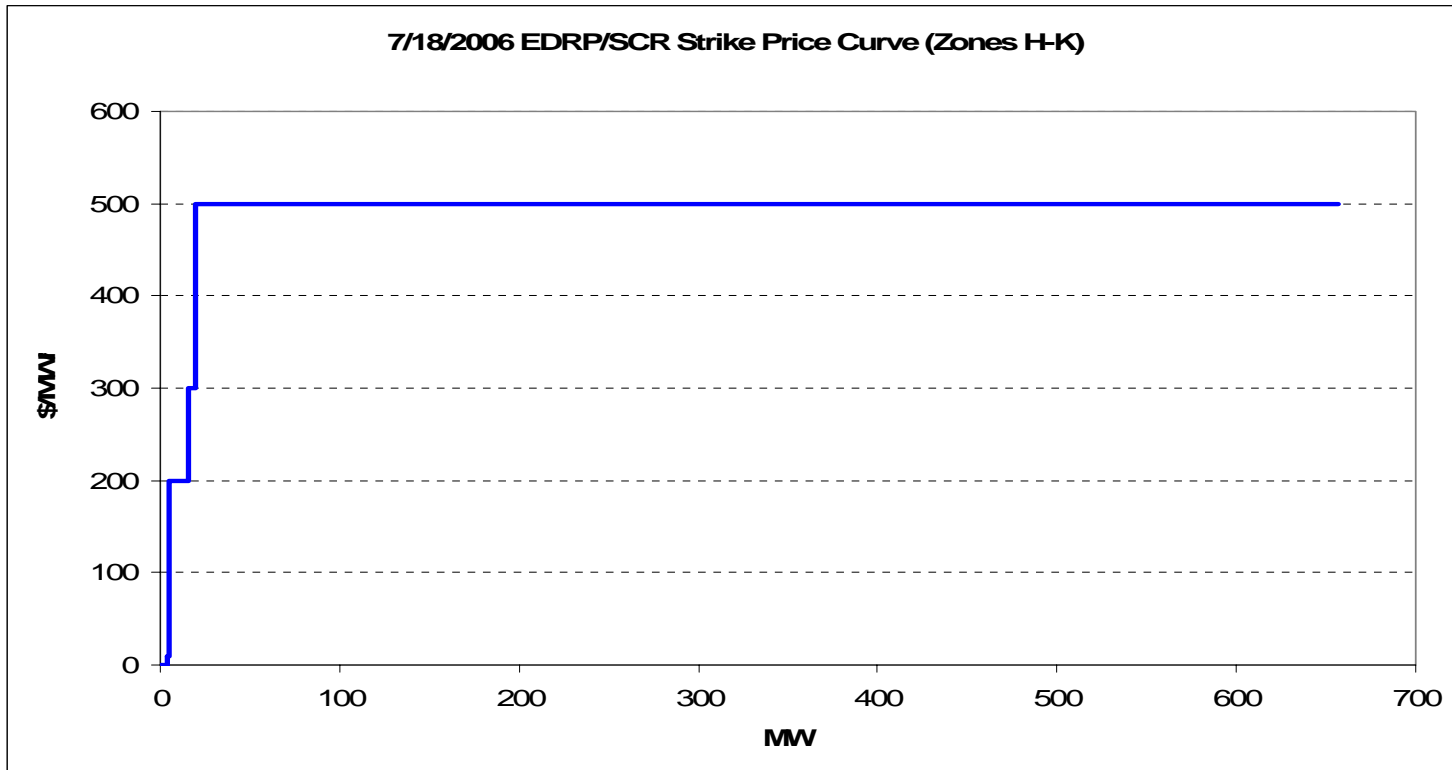
Draft for Discussion

EDRP/SCR Scarcity Pricing Impact



July 18:

- *Verified that the correct EDRP/SCR scarcity pricing rules were applied*
 - ✎ RTD prices were set in accordance with Scarcity Pricing Rule “B” when EDRP/SCR East has been Called and Needed



Draft for Discussion

NYC Load Pocket Operation

- ✓ **Detailed NYC transmission constraint modeling**
 - *Implemented May 1, 2006*
 - ✧ Allow for more efficient NYC zone congestion management
 - ✧ Expectation of lower balancing market congestion costs as a result of more consistent Day-Ahead and Real-Time Market models
 - ✧ Expectation of improved Day-Ahead and Real-Time Market price convergence within the NYC load pockets

- ✓ **RTD Detailed Constraint Model vs. Operator use of Load Pocket Proxies**
 - ✧ **All NYC Zone constraints**
 - 71.6% vs. 28.4% of all constrained intervals
 - ✧ **345kV Load Pocket constraints**
 - 99.7% vs. 0.3% of all 345kV constrained intervals
 - ✧ **138kV Load Pockets constraints**
 - 65.7% vs. 34.3% of all 138kV constrained intervals

- ✓ **Initial Observations/Actions**
 - ✧ NYC Zone export limitations in 345kV and 138kV pockets during Thunderstorm Alerts
 - ✧ Allowed limited PAR optimization to help prevent unnecessary GT starts in Greenwood/Staten Island load pocket
 - ✧ Actions taken in Day-Ahead Market model to increase consistency with Real-Time Market operation

Draft for Discussion

Scarcity Pricing - Gas Turbine Treatment

✓ Implemented May 30, 2006

- *The ISO modified its RTS software so that there is a consistent treatment of energy provided by 10-minute and 30-minute Gas Turbines in the physical and pricing passes of RTD and RTC*
- *Specifically, the ISO modified the RTD and RTC pricing passes to automatically account for a GTs actual metered output when this value is less than the GTs bid Upper Operating Limit*
- *This automatic adjustment is allowed when a GTs actual output has reached 70% of its bid Upper Operating Limit (UOL), the same as the assumption for the physical scheduling pass*
- *The ISO reviewed RTD operation under the July 17 peak load conditions and confirmed correct operation of the automatic adjustment for gas turbine actual metered output*
 - ✧ **Review of 16:30 RTD interval for July 17 indicated that the metered output of 98 GTs were less than their bid UOLs, contributing to a total of a 270MW adjustment**

Draft for Discussion