NEW YORK INDEPENDENT SYSTEM OPERATOR

Building the Energy Markets of Tomorrow . . . Today

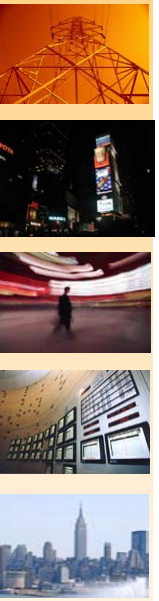
Scarcity Pricing under Initial SMD2 Operation

Market Structures Working Group
April 13, 2006

NYISO Energy Market Operations
Draft – For Discussion Only

Scarcity Pricing under SMD2 Operation

Background



- In the Six-Month Assessment of SMD2 Operation, it was found that physical shortages of Eastern NY 10-minute reserves had occurred without corresponding scarcity pricing under Summer 2005 Real Time Market operation
- It was found that while 240 RTD intervals had physical reserve shortages that resulted in scarcity pricing, there were 267 RTD intervals with physical shortages did not trigger the $500/MWh demand curve for Eastern NY 10-minute reserves
- In response to the Independent Market Advisor findings, as well as Market Participant concerns, the ISO initiated an investigation of the identified scarcity pricing issue

Scarcity Pricing under SMD2 Operation

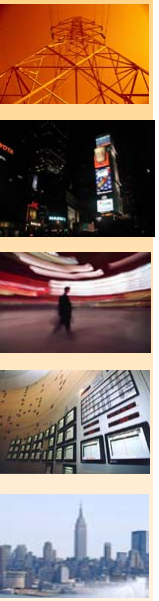




Issue Description

- A detailed analysis of the July 26, 2005 RTD physical shortage intervals was performed using the current Real-Time Scheduling (RTC/RTD) software
- This analysis was expected to be useful because, during Summer 2005 SMD2 operation, a number of software problems were corrected that affected the physical scheduling pass only and did not affect the pricing pass of RTD
- Although improvements were observed under the current software, it was found that significant differences existed due to the inconsistent treatment of 10-minute and 30-minute Gas Turbines in the physical and pricing passes of RTD and RTC

Scarcity Pricing under SMD2 Operation

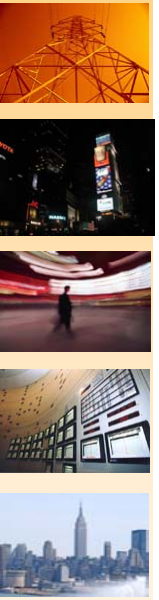


Issue Description

- Under SMD2, the physical scheduling passes of RTD and RTC employ an automated mechanism to account for a GTs actual metered output when the actual unit output is less than the GTs bid Upper Operating Limit
- The automated [derate] adjustment is allowed once a GTs actual output has reached 70% of its bid Upper Operating Limit
- The pricing passes of RTD and RTC continue to use only the Gas Turbine units' bid Upper Operating Limit
- This GT scheduling treatment inconsistency was the result of legacy limitations associated with the BME and SCD software

Scarcity Pricing under SMD2 Operation

Issue Description



- The analysis of July 26, 2005 indicated that the inconsistent treatment of energy provided by GTs between the physical scheduling and pricing passes of RTD resulted in differences of over 250MW of Eastern NY capability

- This additional 250MW of assumed GT capability was sufficient to meet the Eastern NY 10-minute reserve requirement and not trigger the reserve shortage demand curve

- Several other Summer 2005 days were reviewed and it was concluded that the inconsistent treatment of energy provided by 10-minute and 30-minute Gas Turbines in the physical and pricing passes of RTD and RTC was contributing to the scarcity pricing issue

Scarcity Pricing under SMD2 Operation





Proposed Action

- ✓ Based on this investigation by the ISO and the Independent Market Advisor, the ISO intends to modify the 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 intends to modify 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 will be 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