

Transmission Owners

MARKET ISSUES

TRANSMISSION OWNERS' SECTOR

OCTOBER 17, 2000

TOPICS

- CRITICAL MARKET ISSUES
- CIRCUIT BREAKER CONCEPT
- PRICE SCREEN PROPOSAL

CRITICAL MARKET ISSUES



CRITICAL FLAWS

- MARKETS NOT FUNCTIONING AS INTENDED
- CRITICAL FLAWS / DEFICIENCIES
 - FERC ORDER AND COMPLIANCE FILING
 - RECENT FILINGS TO FERC

FERC ORDER AND COMPLIANCE FILING

EXAMPLES:

- OPERATING RESERVES
 - SELF SUPPLY / WESTERN RESERVES
- BME
 - EXTERNAL ENERGY TRANSACTIONS
 - CONSISTENCY IN CONSTRAINT SETS USED IN MODELS

RECENT FERC FILINGS

EXAMPLES:

- REASSESS MARKET POWER MITIGATION IN CONSTRAINED AREAS
- ELIMINATE RULES THAT PERMIT NON – COMPETITIVE BIDDING
 - ABILITY TO INCREASE BIDS IN REAL TIME FOR THE PORTION OF A UNIT NOT SELECTED IN THE DAM
- NYISO NOX MANAGEMENT
- ONE MONTH RELEASE OF BID INFORMATION

MARKETS MUST FUNCTION WELL

- CONSEQUENCES OF MARKET FAILURES ARE TOO GREAT
 - CONSUMER IMPACTS
 - POLITICAL CONSEQUENCES
- MARKETS MUST BE CORRECTED
- MORATORIUM ON NON-CRITICAL INITIATIVES

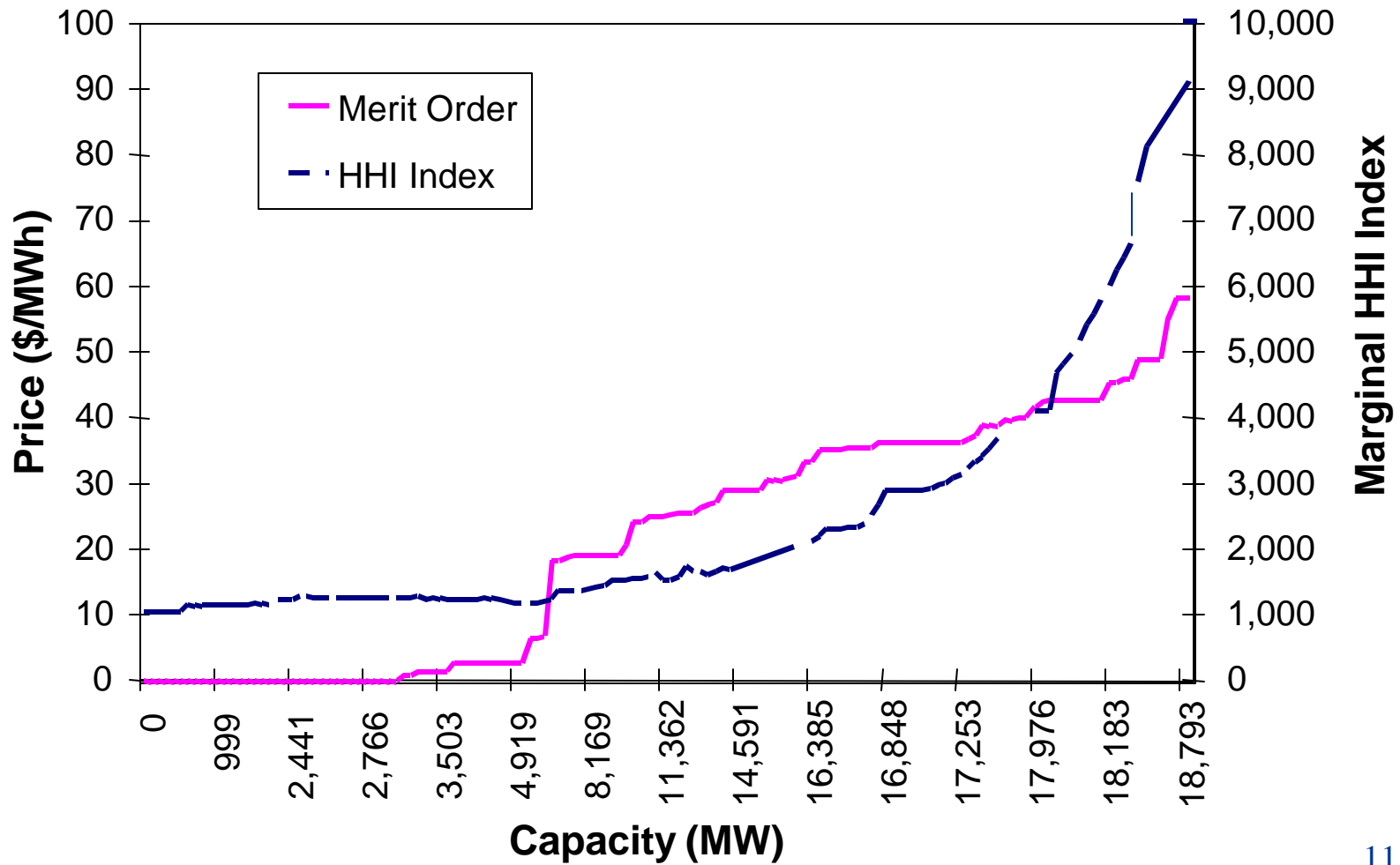
CIRCUIT BREAKER

- MARKETS MAY NOT BE WORKABLY COMPETITIVE AT TIMES
 - LACK OF PRICE SENSITIVE LOAD
 - RESOURCES REQUIRED FOR RELIABILITY
 - LONG LEAD TIME FOR NEW RESOURCES
- CIRCUIT BREAKER IS REQUIRED
- EXISTING MARKET MONITORING HAS LIMITATIONS

CIRCUIT BREAKER CONCEPT

- CIRCUIT BREAKERS SHOULD ADDRESS ALL MARKETS – NOT ONLY ENERGY
- NEED A METHODOLOGY THAT ASSESSES MARKET POWER OF BIDDERS IN AN AREA, e.g.,
 - MARGINAL HHI INDEX
 - PIVOTAL BIDDER ANALYSIS

NYISO East Merit Order and Marginal HHI Index for Residual Supply



HOW THE CIRCUIT BREAKER MIGHT WORK

- COMPUTE INDEX IN DAM AND RTM FOR EACH CONSTRAINED AREA OF NYCA
- INDEX BASED ON RESIDUAL SUPPLIERS WITH BIDS ABOVE THE CLEARING PRICE

HOW THE CIRCUIT BREAKER MIGHT WORK

(CONTD.)

- IF THE INDEX INDICATES A NON-COMPETITIVE MARKET FOR A PARTICULAR HOUR , A DEFAULT OR A REFERENCE PRICE WOULD BE USED

INTERIM

\$250 /MWH PRICE SCREEN

- CORRECTIONS WILL NOT BE IN PLACE FOR THE WINTER NOR WILL THE CIRCUIT BREAKER
- CONSUMERS REQUIRE ASSURANCES THAT THE ENERGY MARKETS ARE FUNCTIONING COMPETITIVELY
- IMPLEMENTATION OF A \$250 / MWHR PRICE SCREEN WOULD PROVIDE ADDITIONAL ASSURANCE

IMPLEMENTATION

- NO AUTOMATIC MITIGATION WHEN PRICES EXCEED \$250/MWh
- MMU WILL EXAMINE THE BIDS IN THE MARKET AND REPORT ON FINDINGS
- MMU WILL LOOK FOR PHYSICAL OR ECONOMIC WITHHOLDING
- IF ABUSE IS DETECTED, NYISO HAS AUTHORITY TO IMPOSE DEFAULT BIDS

SUMMARY

- ESSENTIAL THAT NYISO CORRECT ALL CRITICAL MARKET ISSUES – “NOW”
- WORK ON A CIRCUIT BREAKER MECHANISM SHOULD BEGIN IMMEDIATELY
- NYISO SHOULD IMPLEMENT \$250 PRICE SCREEN AS INTERIM MEASURE

\$250 SCREEN GREATLY EXCEEDS DISPATCH COSTS

Dispatch Costs of Least Efficient Generators

Fuel	Unit Type	Heat Rate of Least Efficient Unit (Btu/kW)	VOM (\$/MWh)	Recent NY Fuel Price (\$/mmBtu)	Dispatch Cost (\$/MWh)
Natl Gas	Downstate GT	16476	1	5.56	92.6
FO1	Downstate GT	16976	1	7.94	135.8
FO2	Downstate GT	19000	1	6.86	131.3

9/28/00

SUMMER 2001 PREPAREDNESS

Overview

Reliable electric power system performance depends on continuously balancing the supply side (generation) and demand side (load) in real time, with sufficient transmission and distribution capacity to continuously permit the required energy to move from the generation sources to the loads. The time to certify and construct major new (Article X) generation and (Article VII) transmission facilities is such that significant additions to either will not happen between now and next summer. Load growth continues, and a return to normal, let alone extreme weather conditions gives rise to concerns about reliable system performance over the next one to two years.

Accordingly, an attempt has been made to develop comprehensive lists of transmission and demand side measures that can affect overall system reliability and for which it is judged that there is still time for action prior to next summer. The items are listed in no particular order, i.e., they have not been prioritized. Nor has particular consideration been given to identifying which ones may already be in progress and which ones may be new. However, items that are considered to be unrealistic to achieve prior to summer 2001 have not been included.

In order to help assure reliable performance of the electric power system in New York State, it is recommended that the following goals be established for the NYISO. An initial status report should be prepared by the NYISO by December 31, 2000 and monthly updates to the Management Committee each month thereafter.

GOALS
Supply Side B Generation

1. Coordinate planned maintenance of generators with an eye to levelizing risk of Loss of Load Probability.
2. Review NERC GADS data being provided by generators for accuracy.
3. Test and audit the claimed MW and MVAR capacity of generators.
4. Identify any capacity currently derated or mothballed that could be returned to service by next summer and what actions are necessary, and by whom, to make this happen (e.g., regulatory, environmental, economics, etc.).
5. Identify any opportunities to add new (non-Article X) capacity by next summer, perhaps temporarily, in regions where it may be needed (e.g., rental combustion turbines or diesel generators) and what actions are necessary, when and by whom, to make this happen.
6. Identify all existing customer-owner emergency generation, and how much could be made available to the grid or to serve isolated customer load and what actions are necessary, when and by whom, to make this happen.
7. Discuss with the DEC the need for additional flexibility in granting special dispensation from air emission standards during periods of tight supply. This additional flexibility would include providing the TOs the authority to declare emergencies and/or moving the declaration point up in the emergency procedure hierarchy.
8. Determine what can be done to maximize the contribution of the Blenheim-Gilboa plant for synchronized and non-synchronized reserve while in the generation and pumping modes.
9. Put in place modifications that allow combustion turbines to submit multi-part bids for both base and peak mode operations.
10. Reduce the number of occurrences of Reserve Pick-Up, Alert State and Major Emergency.
11. Modify Balancing Market Evaluation (BME) such that it is an accurate predictor of real time markets.
12. Modify Security Constrained Unit commitment (SCUC), BME, and Security Constrained Dispatch so that the results of these models correlate better.
13. Review emergency assistance plans with neighboring Control Areas.

14. Expedite the Reactive Resource Adequacy Study currently being performed by TPAS.
15. Request generators to review their plant auxiliary systems and make necessary adjustments so that maximum MVAR capability is available.

GOALS
Transmission

1. Identify existing facilities currently out-of-service that can be returned to service to maximize transfer capacities and who needs to take what actions so that this happens.
 - c Transformers
 - c Phase Angle Regulators
 - c Capacitors
 - c SVCs

2. Identify new facilities that could be brought on-line on an accelerated schedule in order to increase transfer capacities and who needs to take what actions so that this happens.
 - c STATCOM
 - c Capacitors
 - c Transformers
 - c Phase Angle Regulators

3. Coordinate planned maintenance schedules in a fashion so as to maximize transmission transfer capacities during heavy load periods. Coordinate planned maintenance of generators with planned maintenance of transmission facilities.

4. Conduct testing on the actual system to confirm the existing voltage limits and the extent to which limits can be improved. This could consist of a series of tests where (1) generators across the State make a coordinated change in excitation levels, (2) where transmission owners make a coordinated movement on transformer load tap changers, and (3) combinations of (1) and (2).

5. Review adequacy of current Solar Magnetic Disturbance Emergency Operating Procedure.

6. Determine if there are any additional measures that should be taken in dealing with neighboring Control Areas to maximize transfer capacity for reliability purposes.

7. Identify any elements such as wave traps, current transformers, switches, bus connections or even short runs of conductors that limit transfers and which might be replaced quickly and at low cost.

8. Investigate whether there are any possible applications of automatic generator tripping or special protection systems that could be added temporarily or permanently to increase transfer capability.
9. Determine if there are any modifications that could be made to Emergency Operating Procedures, such as changes in the sequence of steps, or earlier notification of capacity shortages and public appeals to shut off load, that would improve reliability.

GOALS

Demand Side B Load

1. Review for accuracy past forecasts of daily load and implement improvements to methodology as appropriate.
2. Identify opportunities to further encourage customers to reduce loads in a planned and/or requested manner.
3. Identify opportunities to further encourage energy conservation by customers.
4. Determine if there any load control programs that could be economic for LSEs to implement that could benefit customers when compared to the alternative of buying capacity and energy at market prices.
5. Develop a program to educate, inform and gain the support of the public on energy supply and demand matters.
6. Review and conduct drills of the Emergency Operating Procedures relating to load shedding and system restoration.
7. Develop a process that would provide the opportunity for loads to bid into the Installed Capacity Market.
8. Expedite Price Sensitive Load study.