The Mysterious New York Market

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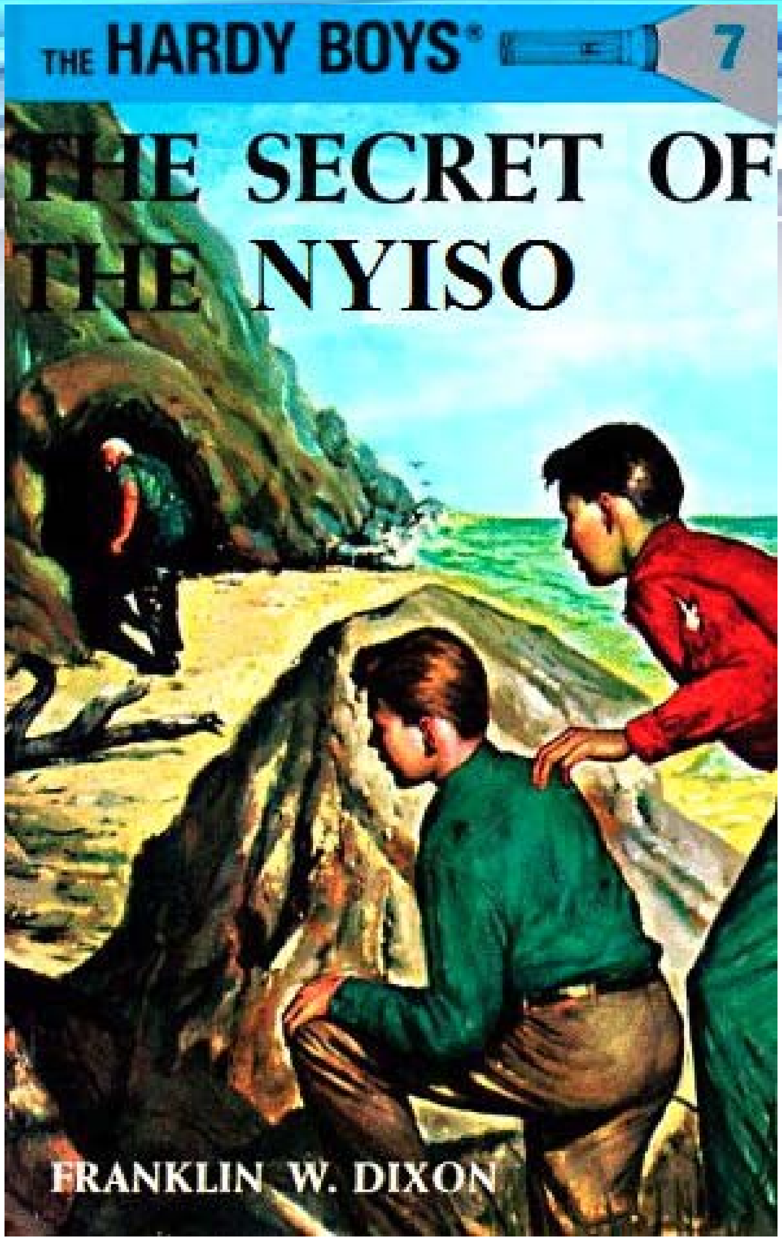
Market Behavior at the New York ISO

- Of the U.S. administered markets, the New York ISO represents the market with the most distorted bids on a daily basis
- Distorted bids occur in both day ahead and hour ahead markets
- A large number of bidders and generators are involved with as much as 10% of total supply involved



Hockey Stick Bids

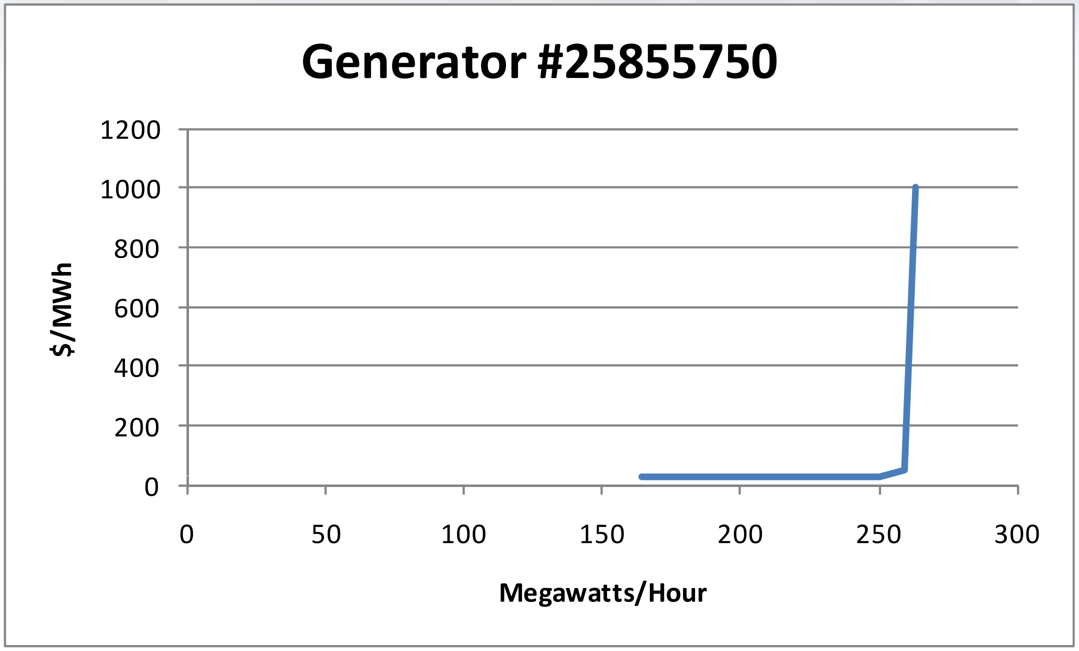
- Any bid whose higher segments represent unrealistic prices
- Generally reflect price setting in markets where the highest bid is returned by the LP as the price when all supply bids are exhausted

Hockey Stick Bids

- Also used for economic withholding
- May reflect computational problems – ERCOT's algorithm tends to "time out"
- Specifically prohibited by FERC

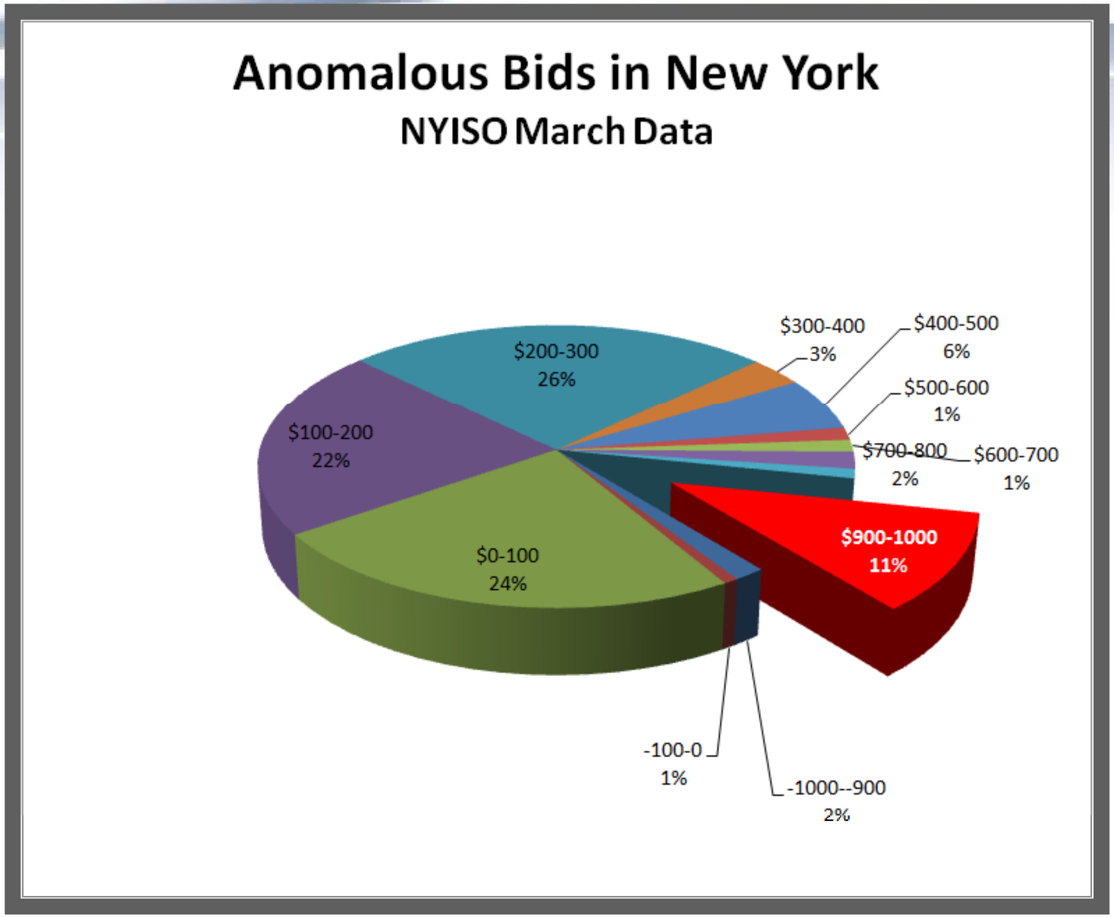
One of hundreds of Hockey Stick Bids per hour

- Generator #25855750 adds a small increment to its bid curve at $999/MWh
- Obviously, the odds that $999/MWh actually represents cost is very, very low
- The small increment is a loss to this generator since it seldom dispatches



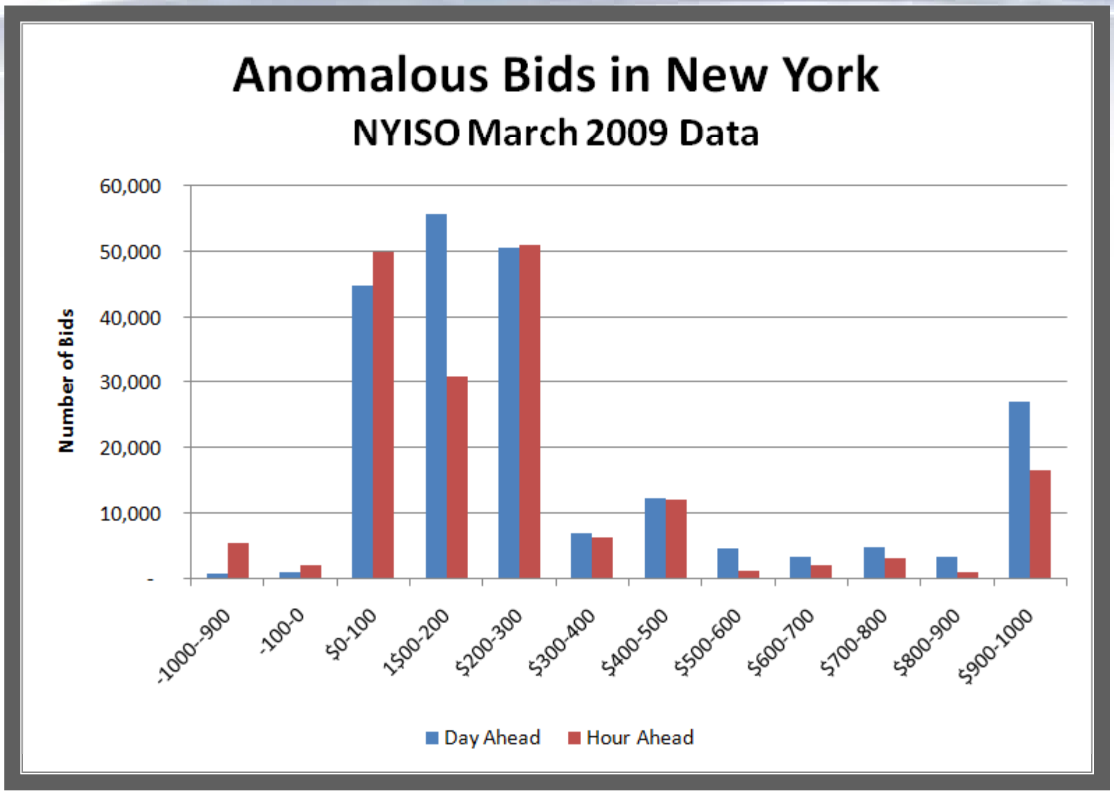
The New York ISO Receives Approximately 2,000 Similar Bids A Day

- So far in March we have seen 43,000 bids with segments priced above $900/MWh
- These correspond to 55 different bidders, submitting bids from many different units
- This implies that it is unlikely that the bids just represent New York City



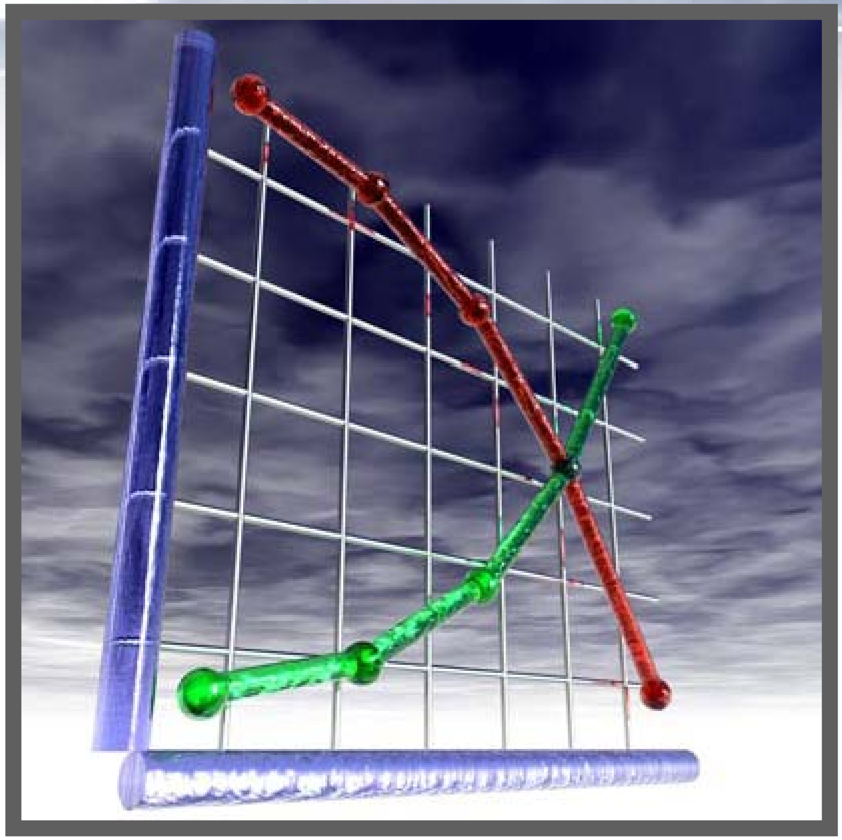
The distribution of bids includes many bids at specific – arbitrary -- prices

- $999/MWh is the second most common maximum bid, following only $0/MWh in popularity



Economic theory assures us that all of these bidders are making a serious mistake

- In the presence of perfect competition, no bidder should believe that his bidding strategy can affect prices
- If he systematically bids above his marginal cost, he will not be dispatched during many periods when the plant would be profitable
- If he bids below marginal cost, he may be dispatched at a loss
- Logically, all bidders bid at marginal cost



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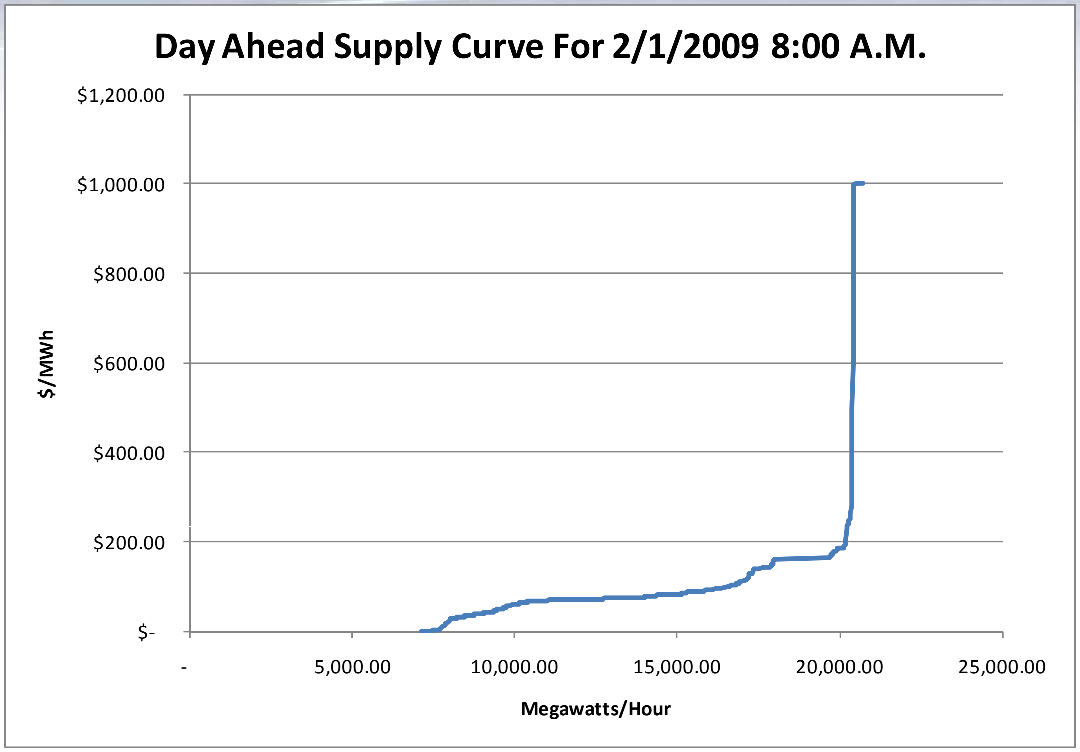
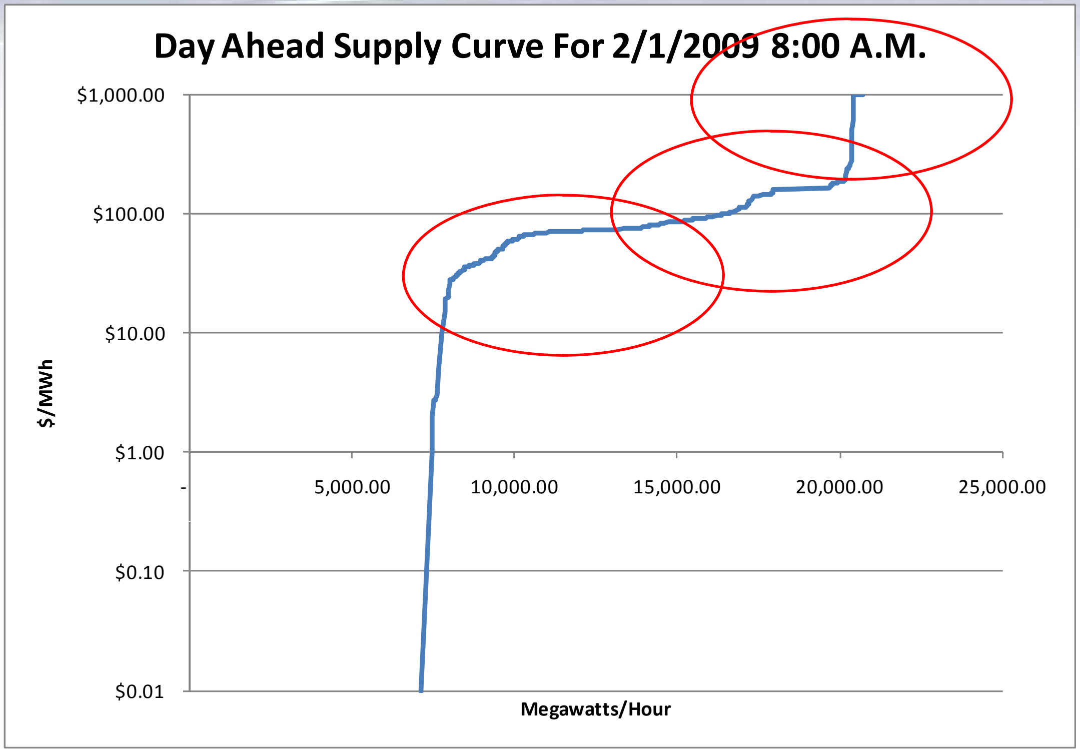
- The significant amount of megawatts committed only above $300 – ranging from 1,000 to 3,000 – implies that a lot of bidders are making a lot of mistakes



Economic theory assures us that all of these bidders are making a serious mistake

- Here is the same chart using logs
- You can see the two clusters – reasonable bids below $100/MWh, doubtful bids in the $200-$300MWh range, and improbable bids above $300/MWh



What about mitigation?

From the current NYISO state of the market report:

In certain constrained areas, most of which are in the New York City area, some suppliers have local market power because their resources are needed to manage congestion or satisfy local reliability requirements. In these cases, however, the market power mitigation measures effectively limit their ability to exercise market power.

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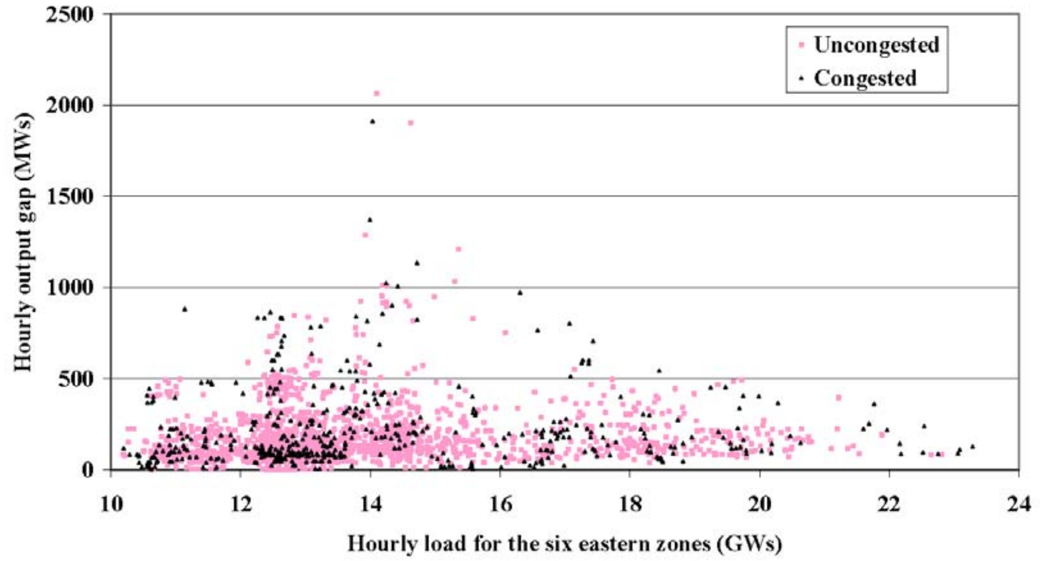
Figure 20: Real-Time Output Gap at Mitigation Threshold vs. Actual Load East New York -- Peak Hours in 2008*



Mitigation Mechanics

When a transmission constraint is binding, one or more suppliers may be in the position to exercise market power due to the lack of competitive alternatives in the constrained area. For this reason, more restrictive conduct and impact thresholds are used for import-constrained load pockets in New York City. The in-city load pocket conduct and impact thresholds are determined by a formula that is based on the number of congested hours experienced over the preceding twelve-month period. This approach permits the in-city conduct and impact thresholds to increase as the frequency of congestion decreases, whether due to additional generation or increases in transmission capability. An in-city offer fails the conduct test if it exceeds the reference level by the threshold or more. In-city offers that fail conduct are tested for price impact by the market software, and if their price impact exceeds the threshold, they are mitigated.

2008 State of the Market, page 59

Is this working?

- The answer appears to be “no”
- Since noneconomic bids are so pervasive, it is unlikely that the rules described by the ISO are mitigating 10% or more of total bids
- Reading between the lines, it appears that application of the mitigation rules appears to be largely directed at New York City
- In September, the ISO filed an emergency motion attempting to tighten up mitigation rules in NYC, citing non-economic bids

If we are so smart why don’t we understand these bids?