NYISO Review of Proposal

Preliminary Analysis

Presentation to the ICAP WG

Joint Con Edison – DPS Proposal:

Proposal for In-City Capacity Mitigation

August 2006

Market Monitoring, Analysis and Performance

DRAFT: FOR DISCUSSION PURPOSES ONLY

Our Objectives for Today

1. We will present our preliminary analysis
    1. *What did we review?*
    2. *Our preliminary analysis*
    3. *Recommendations*
2. We will take an inventory of concerns and issues for further investigation
3. We will determine next steps for the working group

What did we review?

We reviewed the August 9 2006 BIC presentation of ConEd/DPS

- "Proposal for In-City Capacity Mitigation"

1. What steps are involved in its implementation?

2. Do we have any concerns regarding specific features of the proposal

**This analysis should not be construed either as an endorsement or a rejection of the proposal*

Our Preliminary Analysis

What steps are involved in its implementation?

Implementing the proposal "as is"

Both the Interim and Long-term Recommendation:

1. Consultation and clarification
   - *Implementation issues and questions, NY & PJM*
2. Enhancement of automated auction software

Additional Steps for the Long-term Recommendation:

3. Prepare default cost analysis
   - *Default avoided cost tables for alternative generation technologies*
4. Develop revenue forecast systems
   - *We are required to subtract net energy and AS revenues from avoided cost estimates*

Our Preliminary Analysis

Do we have any concerns regarding specific features of the proposal?

1. *Reference price proposal (1) –Avoided costs net of energy and AS revenues*
   - The PJM approach is not yet implemented; no field experience
   - Very complex and will require considerable efforts to collect and verify data
     - *To assist MP's PJM are developing default cost and revenue tables for alternative generation technologies; this has been a big project, but NY could leverage from their work.*
   - The need to forecast energy and AS revenues raises considerable difficulty and estimation risk

The avoided cost basis applied by PJM relates to a one-year plant mothball decision. Is this appropriate? Should the measure of avoided costs be a permanent plant shut-down decision?

Our Preliminary Analysis

Do we have any concerns regarding specific features of the proposal?

1. *Reference price proposal (1) –Avoided costs net of energy and AS revenues*
   - For a benchmark new in-city GT, we applied the recommended approach using 2005-06 market actuals and a one-year plant mothball assumption:
     - *We computed a reference price substantially less than the anticipated demand-curve price outcome.*
   - After net revenue estimates are subtracted from the avoided cost estimate, we expect reference prices for most generators to be less than anticipated demand-curve price outcomes.

Our Preliminary Analysis

Do we have any concerns regarding specific features of the proposal?

1. *Reference price proposal (2) –Alternative reference price proposal*
   - No theoretical justification for this approach
   - Uneven in application given that the approach does not factor absolute or relative differences in costs between divested generating units
   - We are presently conducting forward modeling of the ICAP markets to ensure capacity price changes over time do not cause unintended effects on the mitigation measure.
     - *As surpluses diminish, prices are expected to rise in the ROS market.*
     - *Since the alternative approach is based in part on the ROS price, the alternative reference price proposal could result in rapidly rising reference prices, which may render the mitigation measure ineffective.*
   - Applying the alternative approach in the May 2006 auction, we computed a CONE ratio of 1.5 to 2.0 depending on Levitan scenarios. This translates into a reference price of $3.75/KW-month to $5.00/KW-month

Our Preliminary Analysis

Do we have any concerns regarding specific features of the proposal?

2. 3% conduct test

- MMP is of the view that this is potentially too low
- We also feel it should not be defined as a percentage
  - *What is 3% of $0/KWm?*

- The intent of a conduct threshold is too provide an allowance for risk
  - *Reference prices are determined ex-ante*
  - *The market trades capacity ex-ante*
  - *The market is volatile*
  - *MMP has imperfect information and must estimate reference prices using a forecast of market outcomes and behavioral assumptions*

Our Preliminary Analysis

Do we have any concerns regarding specific features of the proposal?

2. 3% conduct test

- There are many techniques and assumptions that can be used to measure risk; each can produce different estimates.
- MMP have estimated this risk using alternative methods and have not yet determined which is appropriate in method or application
  - *Black Scholes option pricing (existing units)*
    - *6 month call option (call option on the right but not the obligation to defer a plant mothball decision 6 months) on a new 96MW in-city GT with a profit-neutral starting point and an assumed 20% energy net revenue volatility using 2005-06 market data and some Levitan assumptions*
    - *~$3.50/KW-month*
  - *Other methods*
    - *We evaluated cost and revenue outcomes under different risk and temporal assumptions and found measures of risk ranging from $1.50/KW-month to $4.00/KW-month*

Our Preliminary Analysis

Do we have any concerns regarding specific features of the proposal?

- 3% impact test
  - *MMP has not finalized an opinion on what the appropriate impact test is.*
  - *5% is a measure in some anti-trust contexts.*

Our Preliminary Analysis

Do we have any concerns regarding specific features of the proposal?

- Maintenance of FERC cap for DGO's
  - *Bid cap*
    - *This is a reducing cap –it does not keep pace with inflation*
    - *If the reference price is a proxy for a competitive offer level (market power adjusted), then this is redundant.*
  - *Revenue cap*
    - *Ditto above*
    - *Prevents DGO's from being able to realize scarcity price signals in excess of caps, therefore constraining fixed cost recovery*
    - *If upside benefits are deemed competitive by the mitigation measures, is it fair to prevent DGO's realizing these scarcity prices while other generating units are allowed to?*

Recommendations

- Equity issues aside, in concept the proposal as a market power mitigation measure is a valid alternative to a reliance on bids caps alone

<u>However</u>

- MMP is of the view that the proposal is not ready for implementation

1. A change of this type requires a full market impact assessment to ensure that implementation will not interact with other market arrangements in way that produces unintended outcomes

    - *MMP wants to evaluate this fully to:*

        1. *Ensure that it does not distort long-run investment signals*
        2. *Understand energy, ancillary services and capacity price impacts across the investment cycle*
        3. *Understand short and long-run impacts on*
            - *Virtual trading*
            - *Seams issues and inter-jurisdictional transactions*
            - *Reliability*
            - *Constraint and scarcity pricing*
        4. *Understand interactions between the proposed approach and the current setting of the demand curve*

Recommendations

- MMP is of the view that the proposal is not ready for implementation

2. We have concern about the level of various parameters
   - *MMP want to conduct analysis to ensure an appropriate setting for the conduct and impact thresholds*

3. The required technical/software modifications are as yet undetermined.