



# Independent Power Producers of New York, Inc.

**Gavin J. Donohue**  
President & CEO

**Independent Power Producers of New York, Inc.**  
19 Dove Street, Suite 302, Albany, NY 12210  
P: 518-436-3749 F: 518-436-0369  
[Glenn@ippny.org](mailto:Glenn@ippny.org) [www.ippny.org](http://www.ippny.org)

To: John Charlton, NYISO  
From: Glenn D. Haake  
Date: Monday, January 08, 2007  
Re: IPPNY Comments on Proposed Demand Curve Reset Assumptions

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## **A. Introduction**

IPPNY offers the following preliminary comments on the proposed modeling assumptions (Proposed Assumptions) to be used in the 2008-2011 demand curve update, as proposed by NERA and Sargent & Lundy (S&L)(NERA and S&L are hereinafter referred to as the "Consultants") at the December 21, 2006 meeting of the installed capacity working group (ICAPWG). Please be advised that these comments have not been reviewed by IPPNY's members and therefore are the position only of IPPNY and not necessarily its members.

## **B. General Policy Issues**

### 1. Financing Assumptions

IPPNY's greatest concern with the Proposed Assumptions centers on the use of a combination of overly optimistic elements that would result in artificially depressed simple-cycle gas turbine ("GT") carrying cost estimates for the three regional demand curves ("DCs"). Viewed in isolation, each of these assumptions alone arguably may be considered reasonable, given a proper context. However, taken together these assumptions are unrealistic.

Specifically, the Consultants assume an aggressive financing structure, notwithstanding the state of financial markets generally, and specifically in the electric industry, as well as the severe regulatory uncertainty that plagues the New York electricity markets. They contemplate a 50% debt/50% equity, on-balance sheet financing structure with debt at 6.5% and equity at 12% (which equates to an after tax weighted average cost of capital of 7.95%) for a 20 year term.

While we have not yet seen what level of net revenues for energy and ancillary services ("Net EA Revenues") the Proposed Assumptions would produce, IPPNY submits that, were this a non-recourse, project financing, a rational lender would be unwilling to finance a GT if its financial pro forma relied significantly upon substantial Net EA Revenues over a 20 year term to meet minimum debt coverage ratio requirements. Likewise, a rational creditworthy corporate entity is unlikely to assume high levels of Net EA Revenues and a 20 year term, at relatively low cost of capital when it contemplates committing its balance sheet to finance a GT in New York. Conversely, if a rational corporate entity were to predicate its investment in the GT in significant part on assumed Net EA Revenues, it would require a risk-adjusted return substantially higher

than the 12% assumed by the Consultants and would expect a payback period substantially shorter than the 20 years contemplated in the Proposed Assumptions.

Concern about the Consultants' proposed term and cost of capital is heightened by the regulatory uncertainty that exists in New York. A significant number of environmental initiatives are scheduled to be implemented in the next few years the costs of which are largely unpredictable. These include NOx and SO2 regulations, mercury rules and, perhaps most problematic, from a cost estimation standpoint, the regional greenhouse gas initiative (RGGI). All of these initiatives are to go into effect during the period for the revised DCs will be in effect. What additions to these initiatives will arise over a 20 year term? The answer would be pure speculation, but the risk of significant additional requirements over the next 20 years is extreme. A rational investor is unlikely to be willing to expose its balance sheet to that sort of risk over a 20 year term.

And the story gets no better when one contemplates the ever-changing landscape of energy regulation and market rules in the New York wholesale markets. In just the past month, we have seen the NYISO file tariff amendments at FERC seeking to impose one-sided, hastily concocted ICAP mitigation for the New York City market, without the benefit of meaningful analysis or evaluation that has been subjected to market participant review and input. The proposed mitigation would substantially reduce clearing prices in the market where capacity is most needed at a time when the NYISO comprehensive reliability planning process (CRPP) indicates an imminent need for additional capacity. The capacity situation that precipitated this filing was the result of capacity additions by load serving entities taking the market significantly beyond equilibrium. The failure to address the potential that large capacity additions would collapse the capacity market and to provide protections to potential new capacity market entrants opens the possibility that much of their expected revenues would evaporate due to regulatory backed subsequent entry.

Thus, given the new initiatives, both energy-related and environmental, already on the horizon, IPPNY submits that investors are likely to require both a shorter term and more robust returns than contemplated in the Proposed Assumptions. Assuming both a long term and low cost of financing is a prescription for ensuring new market-based entry will not occur and that owners of needed existing facilities will not invest in upgrades to comply with new environmental initiatives when needed to maintain system reliability. This is especially true if significant levels of Net EA Revenues are imputed to the GT.

## 2. Reference Price Placement

Although the Proposed Assumptions do not address this issue specifically, IPPNY believes the localized, levelized GT carrying cost (the "Reference Price") must not be located at the point on the DC equal to the applicable statewide or locational minimum ICAP requirement (the "Minimum Requirement"). To do so effectively would mean that in order for an investor to recover the cost of its GT investment, it must receive the full Net EA Revenue (and its full capacity revenue) in each of the 20 years contemplated in the Proposed Assumptions and any periods of capacity surplus must be offset by equal periods of capacity deficiency.

Yet, a rational investor cannot expect that deficient Net EA Revenues and capacity revenues received during periods of surplus will be compensated by excess Net EA Revenues and capacity revenues available during periods of shortage. History has shown that policy makers will not allow the State to fall into a capacity deficient condition and will, instead, enter into out-of-market mechanisms to assure no likelihood of a capacity deficit. In addition to the 11 NYPA gas turbines that were hurriedly sited to avoid a capacity deficiency in the summer of 2000. More recently, we have seen Old Poletti retained in service to address a minor shortfall that would have occurred if it retired, resulting in assuring that the NYC capacity markets remain substantially long and reducing prices at least through 2009.

As a result, the economic capacity equilibrium price must be located at a position on the DC in excess (to the right) of the Minimum Requirement. Otherwise, the new capacity entrant will be unable to fully recover the cost of its investment. Alternatively, this problem could be addressed by crediting only a very conservative level of Net EA Revenues against the GT carrying costs. In this case, the potential for upside on Net EA Revenues could be relied upon to maintain the minimum installed reserve margin. IPPNY would request that the Consultants indicate how they intend to address this issue. In addressing the problem through either of these potential methods, consideration needs to be given to the likely size of capacity additions in the different markets. Recent experience shows that the likely addition is on the order of 500 MW or more.

### 3. Net EA Revenue Considerations

In the inaugural DC reset process, substantial Net EA Revenues were assumed from the commitment of special case resources (“SCRs”). Lest the Consultants repeat this error, IPPNY would like to point out that it is unlikely that the GT that is the subject of this exercise will receive these payments. This is because during periods of expected peak loads, new units like the GT are likely to be committed in the day-ahead market (“DAM”). SCRs are committed and dispatched exclusively in the real-time market (RTM). It is likely that the GT will be running against a DAM commitment and the DAM is unlikely to have prices at the scarcity level of the SCRs. This has been corroborated by a number of Dr. David Patton’s State of the Market Reports. These reports have consistently shown a slight premium for the DAM market as compared to the RTM in general but a significant shortfall on the days with the highest RTM prices.

In addition, while IPPNY applauds the Consultants for including in the base case an assumption that the GT will be dual fuel capable, it is important that the Consultants take into account the Impact of the NYSRC local reliability rules on Long Island and in NYC known as the Minimum Oil Burn rule. When, as now, oil is more costly than natural gas, requiring units to operate on oil during substantial periods of the year will dramatically reduce the Net EA Revenues that would be predicted if the requirements of the Minimum Oil Rule were disregarded.

Another issue that the Consultants should consider is the impact of natural gas curtailment during both the peak summer and winter days when operational flow orders (“OFOs”) may be issued. If the GT receives an OFO after it has been given a DAM commitment and is, as a result, wholly or partially unable to meet its DAM schedule, it will incur potentially severe losses associated with buying out its DAM commitment in the RTM at prices that can be expected to be well in excess of those in the DAM. Such an occurrence can greatly reduce any expected profits from Net EA Revenues that the GT might otherwise receive.

The Proposed Assumptions appear to contemplate that the LM6000 will be allowed “short-term exceedances of applicable emission standards during start-up.” IPPNY would like the Consultants to provide support for the proposition that such exceedances are permissible. If they are not, then either Net EA Revenues assumed to come from payments for 10-minute non-synchronized reserves (“TMNSR”) should be eliminated, or the LM6000’s variable O&M costs will need to be increased, as described below.

Finally, the Consultants must ensure that Net EA Revenues need are estimated in a manner that reflects the potential that the marginal generator runs during periods when it is not economic. Dr. David Patton’s State of the Market Report for each of the past several years has shown that there are a significant number of GT commitments that end up with the GT having costs that exceed the LBMP revenues. Since our market performs the Bid Production Cost Guarantee over an entire day, it is possible that periods when the unit would have had net revenue are offset by other periods in the same day where the unit runs at a loss. Net EA Revenue calculations need to capture both profitable and unprofitable operation so that we do not end up with inflated estimates of the GTs expected revenues.

## **C. Gas Turbine Assumptions**

### **1. Selection of Technology**

IPPNY has not reviewed in detail all of the characteristics of the LM6000 and GE Frame 7EA units proposed by the Consultants. However, IPPNY does support the Consultants' proposal to assume the GT will be dual fuel capable.

IPPNY would like to restate here its position at the December 21 ICAPWG meeting that the DC update should not be based on new technology, lacking a sufficient operating history to ensure that its forecasted costs are representative of reality. For this reason, the LMS100 unit should not be used. In addition, at 160 MW, the Frame 7FA is sufficiently large that its use would exacerbate "lumpiness" concerns with capacity additions. For these reasons, IPPNY supports use of the units contemplated in the base case.

### **2. Capital Costs – Interconnection**

The Proposed Assumptions do not appear to reflect interconnection costs of the type required under Attachment S of the NYISO Services Tariff. The Consultants should provide estimates of both Attachment Facilities and System Upgrade Facilities, as defined in Attachment S. In addition, IPPNY has concerns with the assumption in the base case that the new GT can utilize an existing switchyard, particularly as this assumption relates to the NYC GT. The availability of a switchyard bay at an appropriate location should be verified.

In addition, the NYISO is embarked on developing a deliverability standard, which, if implemented, could result in additional costs to the GT, particularly in NYC and Long Island. One method of avoiding the impact of this issue would be to select locations for these generic units that would minimize the likelihood that they would result in bottled generation. This means that certain areas of NYC and Long Island should be avoided.

### **2. DMNC Calculation**

The Proposed Assumptions call for calculating the GT's expected dependable maximum net capability ("DMNC") at 85 degrees Fahrenheit. IPPNY believes that the correct Summer DMNC temperature is several degrees higher and would request that the Consultants verify with the NYISO what temperatures should be applied in each of the three regions for the purpose of calculating Summer DMNC under the NYISO rules.

### **3. Variable Operating Costs**

#### **a. Gas Transportation, Imbalance Charges and Intraday Gas costs premiums**

IPPNY requests that the Consultants reflect in their analysis of the NYC unit the provisions of Con Edison's S.C. 9 gas transportation service for power generators. This is a public document on the NYPSC website and provides price, terms and conditions followed by Con Edison when developing transportation and balancing services for power generators. The KeySpan tariff is similar. The tariffs apply to NYC GTs. These facilities are unlikely to have viable bypass alternatives in most cases.

This is especially true because GT load factors are likely to be relatively low and unpredictable. Therefore, it is unlikely that they can support the upfront investment needed to build a line to bypass the Con Edison system. At the very least, the GT capital costs assumed by the Consultants would have to include adequate funds for the associated bypass facilities, if bypass is assumed.

Applicable transportation rates, minimum bill provisions, balancing and unauthorized use charges are indicated in each company's tariff. The Proposed Assumptions do not reference these tariffs, which should be the basis for the Consultants' rate assumptions, including the value added charge included in the tariffs.

b. TMNSR Expenses

As mentioned above, the Proposed Assumptions indicate the LM6000 will receive payments for TMNSR. However, it is not clear that the GT O&M and staffing assumptions in the Proposed Assumptions are consistent with the ability of the GT to participate in the TMNSR market. We understand that in order for an LM6000 unit to supply TMNSR, that unit must continually pre-heat the ammonia consumed by the selective catalytic reduction technology ("SCRT"). Otherwise, the GT cannot achieve a 10-minute start-up. It is not clear that the Proposed Assumptions reflect these ammonia pre-heat expenses.

c. Variable O&M Expenses

The Consultants have not provided adequate detail of their assumptions concerning variable O&M expenses. IPPNY believes that at a minimum the following variable costs should be included in the Consultants' study: (1) combustion turbine hot gas path overhaul, (2) combustion turbine major overhaul, (3) SCRT catalyst replacement, (4) borescope inspections, (5) water, (6) chemicals, (7) consumables, (8) spare parts (combustion turbines and other equipment), and (9) balance of plant maintenance.

d. Allowance Costs

As previously mention, RGGI is scheduled to be in place and operative during the period covered by the updated DCs. Accordingly, it is important that the Consultants provide their assumptions concerning the costs of allowances for RGGI as well as for the other required allowances.