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To: John Charlton - NYISO
From: Glenn D. Haake
Date: Monday, June 04, 2007
Re: IPPNY Comments on Demand Curve Proxy Unit

At the March 22, 2007 ICAPWG meeting, Sargent and Lundy (S&L) presented cost information for the New York City (NYC) installation of (i) an LM6000 unit, which was chosen as the NYC proxy unit for the current demand curves; versus (ii) an LMS100 unit, a new unit model. Cost information was also provided for a Frame 7FA and these two unit types for three sub-areas of the Rest-of-State market. At the May 1, ICAPWG meeting, S&L presented updated cost information, and at the May 29 meeting, initial proposed demand curves were presented by NERA. As reflected in the May 29th NERA presentation to the ICAPWG, the technology choice for NYC and Long Island remains to be decided (See NERA Presentation at 2.). In accordance with the NYISO staff request for comments, IPPNY hereby submits this document with recommendations for using the LM6000 as the NYC proxy unit in this reset process for the 2008-2011 demand curves.

The purpose of the demand curve reset process is to establish the proxy cost of a new unit in each of the three locations. Establishing an accurate proxy value is critical in order for adequate generation to be sited. To ensure that this proxy value is as accurate as possible, IPPNY believes that a well established existing unit technology must be used as the new entrant for this process. With one unit currently in operation, the LMS100 represents the next era of generation technology that does not yet have sufficient, substantive operating and cost experience to support it being used as a proxy unit. In contrast, a significant number of LM6000s have been installed and currently are operating across the country, including in NYC. By using the LM6000 as the proxy unit, the demand curve will represent a more common unit with substantial, known and verifiable operating and cost experience that is available to both owners and participants in the NYISO marketplace. Thus, while not reflecting on the LMS100 technology, the use of the LM6000 provides a benchmark that can be evaluated and judged to confirm the appropriateness of the costs and operating experience used by S&L.

Moreover, as the NYISO considers alternative units for the demand curve reset process, it is important that the capacity increment be consistent. S&L has made the point that a two-unit installation is appropriate because of economies of scale. It is more appropriate to compare the two-unit LM6000 installation with a single-unit LMS100 installation. Whether dealing with a smaller site, similar to the NYPA in-City installations, or with portions of existing power plant sites, these two options are equivalent in footprint and in capacity, and may be viewed as similar modules in site layouts.

The LMS100 unit, by virtue of its better turn-down capability and heat rate, is clearly an intermediate, rather than a true peaking unit. Comparisons between two LM6000s and a single LMS100 may well show that at many load points a LM6000 module with two machines reflects the operating efficiency of a peaking unit, as one machine can be operated at a greater fraction of full load in the 0-50MW range and then a second machine can be brought on line for the 50-100 MW range (i.e. a saw-tooth profile) rather than having a single machine turned down. O&M costs for the LM6000 are widely available, and estimates can easily be compared with actual experience. There are many third party O&M options available for the LM6000, which will likely help to contain these costs. The LMS100 reflects new technology that has yet to provide any data base of actual operating experience.

The S&L estimate for the LMS100 unit does not adequately incorporate all costs associated with building a unit in NYC. The LMS100 unit includes a low pressure compressor and intercooler. To address the additional cooling requirements, S&L indicated that its proxy unit included a dry cooling module. Discussions by IPPNY members with GE have confirmed that this configuration should be considered the standard for NYC. Construction estimates provided to IPPNY members, that include a dry cooling module, will bring S&L's LMS100 estimate slightly higher than its estimate for a two-unit LM6000 installation in Zone J as presented at the March 22 ICAPWG meeting, when placed on an equivalent basis (EPC Cost Components less contingency and interconnection). The installation costs and construction time for an LM6000 are readily identifiable and can be benchmarked. However, the comparable period and installation costs for an LMS100 are unknown, because of the newness of the technology, and cannot be easily calculated or compared to the LM6000 units. Construction costs for building units in NYC are by definition an estimate and will not account for all cost contingencies that arise from building within the City. The newness of the LMS100 technology, as compared to known construction costs for a NYC LM6000 unit will reflect an estimate that by experience will be shown to be understated in its construction costs and time to build. Those project costs and operating estimates are the risks that the individual developer may accept, and will absorb if wrong. However, in using a proxy unit to be relied on for the market as a whole, any project costs and operating estimates should be both easily determined and comparable to a known pool of existing units that have been built and actually operated. To do otherwise places a new development project risk on the market as a whole that individual participants, both buyers and sellers of capacity, should not have to pay for or absorb within the NYISO capacity market.