FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

April 4, 2007

In Reply Refer To:
New York Independent System Operator, Inc.
Docket Nos. ER04-230-026 ER04-230-028
ER01-3155-017 ER01-3155-018
ER01-1385-026 ER01-1385-027
EL01-45-025 EL01-45-026

New York Independent System Operator, Inc.
Attn: Mollie Lampi, Esq.
Assistant General Counsel
10 Krey Blvd.
Rensselaer, NY 12144

Dear Ms. Lampi:

1. On September 15, 2006, the New York Independent System Operator, Inc. (NYISO) submitted its Eighth Quarterly Report regarding its efforts to efficiently utilize combined cycle units in the NYISO markets. On December 15, 2006, NYISO submitted its Ninth Quarterly Report regarding the same subject matter. The Eighth and Ninth Quarterly Reports are accepted for filing,[1] subject to NYISO submitting in its Eleventh Quarterly Report a comprehensive review of its efforts to improve the modeling of combined cycle units in NYISO markets, including the information described below.

2. In the Eighth Quarterly Report, NYISO described two proposed approaches for adjusting its commitment software to improve the manner in which it commits combined cycle units. The first approach employs a variation of the "pseudo unit" model,[2] and the second approach allows combined cycle owners to offer incremental energy at a cost

[1] The Commission will address NYISO's Tenth Quarterly Report, filed more recently, in a future order.

[2] NYISO states that this model allows a combined cycle plant owner to "directly bid the cost profile for each of the unit's several configurations." NYISO did not pursue this option because plant owners objected to being required to artificially inflate their minimum generation level for each configuration, as called for under this approach. Eighth Quarterly Report at 2.

consistent with their most efficient operating configuration.[3] NYISO states that neither approach is without problems, and it has determined that a major overhaul of its commitment and dispatch software, to add the functionality necessary to better represent combined cycle units, would be, at present, too time consuming and risky to pursue. NYISO thus intends to file a motion with the Commission before the end of 2006 to close the proceeding. NYISO also reiterates that there do not appear to be multi-state model approaches or other existing technologies that are feasible to implement and acceptable to suppliers that could be used to address the combined cycle modeling challenges in an LBMP (locational based marginal price) market environment.

3. NYISO states that it will continue to look for incremental enhancements to its existing system that would benefit combined cycle owners, but reiterates that it intends to file a motion with the Commission before the end of 2006 to close the proceeding.

4. Notice of NYISO's Eighth Quarterly Report was published in the *Federal Register*, with comments, interventions, and protests due on or before October 10, 2006. [4]

5. On October 10, 2006, PSEG Power LLC and PSEG Energy Resources & Trade LLC (PSEG) filed a protest with respect to NYISO's Eighth Quarterly Report. In its protest, PSEG states that NYISO lacks any authority to unilaterally abandon its efforts to implement the combined cycle modeling improvements that were ordered by the Commission. PSEG states that the reasons given by NYISO for its failure to comply – the difficulty of making the necessary software changes – were the precise reasons accepted by the Commission as a reason to delay implementation two years ago.

6. PSEG states that, after more than two years of examining the issue, NYISO has been unable to devise a modeling solution that would enable it to properly model combined cycle units, such as PSEG's 750 MW combined cycle Bethlehem Energy Center (BEC) unit, in either the Day-Ahead Market (DAM) or Real-Time Market (RTM). Regarding the DAM problems, PSEG states that, if NYISO's software permitted PSEG to bid the true costs of the "three-on-one units" in their different potential operating configurations, it would result in lower costs per MW and thus would result in a greater unit commitment of BEC in the DAM.

7. PSEG argues that the same problem is also manifest in the RTM because NYISO lacks the ability to properly model the actual physical status of combined cycle units such

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[3] NYISO reports that this approach would allow combined cycle owners to offer incremental energy at a cost consistent with their most efficient operating configuration if special guarantee payments were provided for in NYISO's tariff. NYISO concluded this approach unfairly advantaged combined cycle owners. Eighth Quarterly Report at 2.

[4] 71 Fed. Reg. 59100 (2006).

as BEC. PSEG concludes that NYISO's RTM market design software is unable to recognize that the RTM's costs of operating will be lower when BEC is operating more than one unit. PSEG argues, therefore, that the unit is thus dispatched as if it were only operating in its most expensive (least efficient) configuration, i.e., with only one unit running.

8. PSEG requests that, until such time as the ordered tariff improvements for combined cycle units are implemented in full, the Commission should direct NYISO to waive over- and under-generation penalties for combined cycle units that operate in the RTM. PSEG asserts that, by exempting combined cycle units from this penalty, BEC would be free to operate in the RTM based on actual unit costs and market conditions. It argues that this would allow the BEC units to be paid for the entirety of their production as price takers and thus would ameliorate the impact of the lack of proper modeling of the units in the RTM. PSEG notes, moreover, that NYISO has utilized this approach to address similar unit commitment issues for wind power, for qualifying facility units, and for the steam units of Consolidated Edison Company of New York. To the extent that concerns exist about the exemptions having material operational impacts, PSEG states that the concerns could be addressed by requiring combined cycle units to provide NYISO with notice of an intention to transition from one configuration to another.

9. On October 27, 2006, NYISO filed a response to PSEG's protest, suggesting that the Commission reject PSEG's erroneous claim, dismiss as unfounded PSEG's assertions, and require PSEG to subject its market design alternative to the rigors of stakeholder and NYISO Board review.

10. NYISO states that, contrary to PSEG's erroneous misrepresentation, NYISO has complied with the Commission's orders to improve the efficiency of combined cycle units in NYISO's markets. According to NYISO, it implemented 15-minute scheduling on October 11, 2005; later that year, and early in 2006, it improved combined cycle modeling by introducing the "pseudo-unit" model and penalty forgiveness during startup and shutdown periods.

11. NYISO states that it now appears that incremental modeling improvements can not be made without an overhaul of NYISO's market rules, a redesign of the optimization software used in the Real-Time and Day-Ahead scheduling, and new bidding requirements for unit owners. It asserts that all potential methodologies carry with them very high technical risk, potentially unacceptable performance impacts, and significant new bidding requirements. NYISO states that its work with its vendor to develop a Concept of Operations reveals that further modeling improvements would be more akin to a research and development effort than to a software enhancement.

12. NYISO states that the market enhancements and modeling modifications it has already made meet the Commission's direction to improve combined cycle modeling in

New York. In support of this conclusion, NYISO states that it will present to the Commission a comprehensive review of its work to date, with an explanation of how its efforts have resolved the issues presented in this case.[5] NYISO also states that it will explain its intention to continue to search for additional market solutions to problems combined cycle owners may identify.

13. NYISO disputes PSEG's contention that the RTM software is unable to accurately reflect the lower operating costs BEC experiences as more of its turbines are started. NYISO also disputes PSEG's contention that the RTM software suffers from the unwarranted application of over- and under-generation penalties. NYISO maintains that the Real-Time Energy offers, made at least 75 minutes before the hour, can reflect cost reductions realized from configuration alternations such as adding an additional unit. Moreover, NYISO states that, through NYISO's start-up/shut-down penalty forgiveness tariff provisions, PSEG is eligible for penalty relief during all configuration changes.

14. NYISO also states that PSEG's request to exempt combined cycle unit owners from all penalties for generating above or below their Real-Time schedules should be denied to avoid undermining NYISO's stakeholder process for approving tariff revisions, and to preclude the unnecessary introduction of unintended, adverse market consequences.

15. NYISO states that it has begun a process to review, with its stakeholders, the practice of imposing penalties to encourage beneficial market behavior. According to the NYISO, this practice, called the Market Rules Assessment Process, involves regular recurring discussions with Market Participants at monthly Market Structures Working Group meetings to identify and prioritize market improvements in areas such as persistent under-generation penalties.

16. On December 15, 2006, NYISO filed its Ninth Quarterly Report to report further on its efforts to improve the efficiency of combined cycle units in NYISO's markets. NYISO states in this report that it: (1) has clarified its operating practices to ensure its pseudo-unit modeling of combined cycle units is appropriately recognized in all NYISO processes; (2) has provided information to combined cycle owners on how to use the bidding system to avoid perceived limits on bidding their available capacity; and (3) will delay filing its motion to close this proceeding. In the meantime, NYISO states that it will discuss more fully with its Market Participants its intention to continue pursuing incremental market improvements and will report any resulting consensus in its Tenth Quarterly Report.

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[5] NYISO offers no date by which it expects to make such a filing. NYISO Answer at 4-5.

17. Notice of NYISO's Ninth Quarterly Report was published in the *Federal Register*, with comments, interventions, and protests due on or before January 8, 2007.[6] None was filed.

18. The Commission will accept NYISO's Eighth and Ninth Quarterly Reports, but make that acceptance subject to NYISO submitting to the Commission a comprehensive review of its work to date in its Eleventh Quarterly Report, with an explanation of how its efforts have attempted to resolve the issues presented in this case, including the issues PSEG presented in its protest.

19. As to PSEG's argument that NYISO is unable to accurately reflect the physical status of combined cycle units such as BEC in the RTM, we find that NYISO adequately addressed this issue by its explanation that Real-Time Energy offers, made at least 75 minutes before the hour, can reflect cost reductions realized from configuration alternations such as adding an additional unit.[7] In this regard, we also note that NYISO has stated that PSEG is eligible for penalty relief during all configuration changes under its start-up/shut-down penalty forgiveness tariff provisions.[8]

20. We also agree with NYISO that PSEG's proposal to currently exempt combined cycle unit owners from all over and under-generation penalties could undermine NYISO's stakeholder process; however, we will require a further report from NYISO on the results of NYISO's Market Rules Assessment process and the reasonableness of exemptions for over and under-generation penalties for combined cycle units, as discussed below.

21. While we are satisfied with NYISO's explanations concerning these specific issues, we agree with PSEG that other aspects of NYISO's efforts to improve the modeling of combined cycle units require further explanation. Thus, we direct NYISO to specifically address the following issues in its forthcoming Eleventh Quarterly Report:

A. NYISO's inability to devise a modeling solution that would enable it to properly model combined cycle units, such as BEC, in either the DAM or RTM without an overhaul of the NYISO market rules, redesign of the optimization software and new bidding requirements.

B. NYISO's inability to develop software that will permit PSEG and other similarly situated generators to know in advance whether more than one

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[6] 71 Fed. Reg. 78421 (2006).

[7] NYISO Answer at 5.

[8] *Id.*

unit will be picked for the DAM, thus requiring the plant to be bid as if only one unit would be selected, to avoid the risk that a combined cycle unit will be unable to recover its costs of operating.

C. The issues discussed and progress made in the Market Rules Assessment process related to the reasonableness of exemptions from over and under-generation penalties for combined cycle units and other similarly situated units, along with a specific proposal and timeframe for implementing any enhancements that result from such discussions.

By direction of the Commission.

Philis J. Posey,
Acting Secretary.