

September 2, 2008

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

Re: *Fifteenth Quarterly Report* by New York Independent System Operator, Inc.
in Docket Nos. ER04-230-000, ER01-3155-006, ER01-1385-015, EL01-45-014
and Docket ER04-230-034

Dear Secretary Bose:

Pursuant to the Commission's directives in its Order on Rehearing in these dockets,¹ and in its May 23, 2008 Order on Tariff Revisions in Docket ER04-230-034 ("May Order"),² the NYISO hereby files its *Fifteenth Quarterly Report*.

In previous Quarterly Reports in these dockets, the NYISO has reported on its efforts to improve the efficient utilization of combined cycle units within the NYISO markets. Most recently, the NYISO reported that it had successfully addressed the issue of penalty exemptions for grouped generating facilities whose output is metered at a single location ("pseudo-units") during Start-up and Shutdown Periods.³ This is the first Quarterly Report in which the NYISO is also reporting on its progress in accommodating batch loads and flywheel energy storage technologies in its ancillary services markets. The NYISO discusses both issues below.

A. Accommodating Batch Loads and Flywheel Energy Storage Technologies in the NYISO's Ancillary Services Markets

In its May Order, the Commission required the NYISO to report on the progress of its work with its stakeholders to accommodate two interveners Nucor Steel Auburn ("Nucor") and Beacon Power Corporation ("Beacon"), and any similarly situated entities, in its Demand Side

¹ 111 FERC 61,468 (2005)

² 123 FERC 61,203 (2008)

³ Pursuant to tariff revisions, approved by the Commission on May 30, 2008 in Docket ER08-818-000, Generators comprised of a group of units that are separately scheduled by the NYISO to provide Energy but for which output is measured at a single point are exempted from "persistent under-generation charges" otherwise applicable to Suppliers, and are eligible for compensation for all actual output, during the Start-Up and Shutdown Period of any of the grouped units. See: May 30, 2008, Letter Order Pursuant to § 375.307 in Docket ER08-818-000.

Ancillary Services Program (“DSASP”). Nucor is a manufacturer with the electrical characteristics of a “batch load.” That is, for periods of time inside an hour, Nucor is unable to respond to a NYISO signal to convert its reserves to load reduction. Beacon is building a 20 MW flywheel energy storage facility with the intention of selling 20 MW in the NYISO-administered market for Regulation Service.

The Commission agreed in its May Order that Nucor is at present precluded by rules promulgated by the New York State Reliability Council (“NYSRC”) from providing Operating Reserves because it cannot reduce load upon receipt of a dispatch instruction over the whole of the bid period (one hour).⁴ The Commission indicated, however, that batch loads can bestow useful benefits on the system and that the NYISO should further consider the development of a regime under which batch loads could be compensated for canceling the re-start of their periodic re-charge cycle during periods when usage was high. The Commission also noted the NYISO’s intention to continue working with the relevant reliability organizations to explore possible future opportunities for loads that cannot meet the one hour sustainability requirement to participate in NYISO’s markets.⁵

In accepting the NYISO’s proposed tariff amendments in its May Order, the Commission rejected the Beacon arguments that revisions in the NYISO’s proposal were necessary to allow Beacon’s flywheel energy storage technology to immediately participate in the NYISO’s DSASP. As the NYISO’s filing letter explained, energy storage technologies like Beacon’s are precluded from participating as Regulation Service providers because they are unable to comply with Section 3.7 of the Northeast Power Coordinating Council (“NPCC”) Rules. This rule requires that Operating Reserves suppliers be sustainable for an hour. Although the NYISO explained that it understood that this requirement also applies to Regulation Service providers, the Commission asked that the NYISO provide more support regarding the applicability of NPCC Rule 3.7 to Regulation Service providers.⁶

At its August 15, 2008 meeting, the NPCC’s Task Force on Coordination of Operation (“TFCO”) agreed to explore the continued need to apply Section 3.7 of NPCC’s A-6, Operating Reserve Criteria, commonly known as the one-hour sustainability rule to both reserves and regulation.⁷ It is possible that TFCO may conclude that separate criteria are needed for each type of service and that a revision to criteria required of Regulation Service providers may assist energy storage technologies by removing one of the existing hurdles to their participation in NYISO’s DSASP.

⁴ *Id.* at P 30 and *NYSRC Reliability Rules* (2007), D-R2

⁵ *Id.* at PP. 32

⁶ *Id.* at PP.33

⁷ TFCO is the working group of the NPCC which has responsibility for reviewing NPCC’s Operating Reserve criteria. See affidavit of James Castle, attached.

Document A-6, Section 3.7 states that:

Operating reserve available to an **Area**, if activated, shall be sustainable for at least one hour from the time of activation.

Section 1 of NPCC's document A-6 describes operating reserves as:

[The] operating capacity [] required to meet forecast demand, including an allowance for error, to provide protection against equipment failure which has a reasonably high probability of occurrence, and to provide adequate regulation of frequency and tie line power flow (emphasis added). The **operating capacity** in excess of that required for actual load is commonly referred to as **operating reserve**.

TFCO's review of the continued applicability of the one-hour sustainability requirement to Regulation Service providers will require dissemination of a new rule, comments by NPCC members and NPCC membership approval vote following a TFCO recommendation.

In addition to moving to address the reliability rules that currently preclude Beacon and other energy storage technologies from becoming ancillary services suppliers, the NYISO has been supporting and advising Beacon on the process of amending the NYISO's tariffs through the stakeholder process. Beacon presented a description of its product technology to the NYISO's Business Issues Committee on May 21, 2008 and to the Operating Committee on May 22, 2008. In those presentations, Beacon indicated its desire to participate in the NYISO's Regulation Service Market. The Chairs of those committees referred further discussion on the technology and the changes necessary to support Beacon's integration into the market to the Market Issues Working Group ("MIWG") and the System Operations Advisory Committee ("SOAS").

On July 1, 2008, the NYISO presented the MIWG with an overview of the market rules that would apply to energy storage technologies, such as Beacon's, participating as Regulation Service providers. On July 29, 2008 the NYISO presented SOAS with both the proposed new market rules and a review of how Beacon's technology supplies Regulation Service. Also at that July 29, 2008 SOAS meeting, Beacon presented an overview of its flywheel technology and its benefits. Software development would be necessary to manage Beacon's technology within the NYISO's market design. The next steps, therefore, include the scheduling of this software upgrade, completion of the reliability rules review by NPCC, and the creation and approval of tariff amendments to address necessary market design changes. These changes would need to be approved by the Management Committee before going to the NYISO Board. These changes would be generically applicable to any energy storage technology with Beacon's characteristics.

The NYISO has also met with a Nucor representative to discuss the design work that would be necessary to accommodate Nucor's participation in the NYISO-administered markets, if the reliability rules were to be amended. Nucor is precluded both by NPCC Rule 3.7 and

NYSRC Rule D-R2 from providing Operating Reserves. The design work necessary to incorporate Nucor is more complicated than is the design work for Beacon and would need to include a mechanism for Nucor to communicate its expected ability to provide reserves for (at a minimum) the upcoming hour to ensure that sufficient alternative resources were scheduled to fill-in when Nucor was unable to deliver the requested service. This market architecture would also need to provide a financial incentive to induce alternative resources to fill in when the batch load's cycle indicated it would be unavailable as a reserves supplier for an upcoming period. The Nucor representative and the NYISO agreed that their technical personnel would continue this dialogue, which may be more productive after NPCC has amended Rule 3.7.

Nucor, and similar batch loads, are eligible to participate in NYISO's Special Case Resource program and provide installed capacity upon their commitment to reduce load when notified day-ahead of the need to reduce load. These resources are also eligible for the NYISO's Day-Ahead Demand Response program to provide load reductions in response to market based prices. In addition, the NYISO is looking at opportunities for Demand Side Resources to offer installed capacity by committing to reduce load with only two hours notice. It appears that Nucor would be eligible for this possible program enhancement as well.

B. Report On Efforts To Improve The Efficient Utilization Of Combined Cycle Units

In its *Eleventh Quarterly Report*, the NYISO provided a comprehensive review of its work to date on improving the efficient utilization of combined cycle units within the NYISO markets. As it reported in the *Eleventh and Thirteenth Quarterly Reports* the NYISO has decided that it can better pursue improved utilization of combined cycle facilities in its markets by enhancing its existing market rules rather than by embarking on a significant and potentially very expensive overhaul of its market software. The NYISO's comprehensive examination of its market rules to identify such potential enhancements began in 2006 and most recently resulted in Commission approval of enhancements to the special market rules available to combined cycle and other grouped units during Start-up and Shut down periods.⁸ This review is being done in conjunction with its Market Participants during regularly scheduled MIWG meetings.⁹

In light of this decision, the NYISO will be seeking the Commission's permission to discontinue reporting on its efforts to improve the efficient utilization of combined cycle units within the NYISO markets. As enhancements to its market rules that would improve combined cycle utilization become apparent, the NYISO will pursue with its stakeholders the efforts necessary to both amend its tariffs and enhance its market design software to include those improvements within its market design.

⁸ Letter Order Pursuant to § 375.307 New York Independent System Operator, Inc. Docket No. ER08-818-000, Issued: 5/30/08

⁹ See scheduled meetings and agendas at: http://www.nyiso.com/public/committees/documents.jsp?com=bic_miwg

The NYISO respectfully requests that the Commission accept this *Fifteenth Quarterly Report*. The NYISO has electronically provided all parties in this docket with a link to the NYISO website where the filing can be viewed.

Respectfully submitted,

s/Mollie Lampi

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon all parties listed on the official service list maintained by the Secretary of the Commission in Docket Numbers ER04-230-006, ER01-3155-006, ER01-1385-015 and EL01-45-014 in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure 18 C.F.R. § 385.2010 (2003).

Dated at Rensselaer, New York this 2nd day of September, 2008.

_s/ _____
John C. Cutting
New York Independent System Operator, Inc.
10 Krey Blvd.
Rensselaer, NY 12144

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

New York Independent System Operator, Inc. Docket No: ER04-230-034

AFFIDAVIT OF JAMES CASTLE

I. Qualifications and Purpose

1. My name is James Castle. I am the Manager, Grid Operations for the New York Independent System Operator. (“NYISO”). My responsibilities include oversight of real time Grid Operations and Operator Training, Vice Chair of the Northeast Power Coordinating Council Task Force on Coordination of Operation (“TFCO”), member of the North American Electric Reliability Corporation Reliability Coordinator Working Group (“RCWG”) and Operating Reliability Subcommittee (“ORS”), and the North American Energy Standards Board Wholesale Electric Quadrant Executive Committee in the Independent Grid Operators sector. I have been with the NYISO since January of 2000 and was employed with the New York State Electric and Gas Corporation for 12.5 years before that.
2. I represent the NYISO at NPCC’s Task Force on Coordination of Operation (“TFCO”) and was present at its August 15, 2008 meeting.
3. The description of the discussion regarding TFCO’s agreement to undertake a review of the continued need to apply Section 3.7 of NPCC’s A-6, Operating Reserve Criteria, commonly known as the one-hour sustainability rule, to both reserves and regulation is accurate.

ATTESTATION

I am the witness identified in the foregoing affidavit of James Castle, dated September 2, 2008 (“Affidavit”). I have read the Affidavit and am familiar with its content. The facts set forth therein are true to the best of my knowledge, information and belief.

_____/s/_____

James Castle
Manager, Grid Operations
New York Independent System Operator, Inc.
September 2, 2008

Subscribed and sworn to before me
this 2nd day of September 2, 2008

_____/s/_____
Notary Public
My Commission expires:_____