NRG Energy, Inc.
211 Carnegie Center
Princeton, NJ 08540

Phone: 609.524.4500
Fax: 609.524.4501

December 7, 2007

Via Email and Hand Delivery

Ms. Karen Antion
Chair, NYISO Board of Directors
c/o Mr. Mark S. Lynch
President and CEO
New York Independent System Operator, Inc.
10 Krey Boulevard
Rensselaer, NY 12144

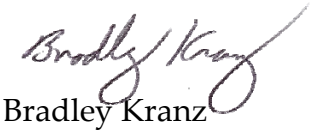
RE: Notice of appeal of Management Committee's October 24, 2007 rejection of Motion #7 regarding the Lost Opportunity Cost Proposal for the Astoria West Station Fault Current Mitigation Operating Protocol

Dear Ms. Antion:

Pursuant to the Procedural Rules for Appeals to the ISO Board, please find enclosed three originals of NRG Energy, Inc.'s ("NRG") Notice of Appeal of Management Committee's October 24, 2007 rejection of Motion #7 regarding the Lost Opportunity Cost Proposal for the Astoria West Station Fault Current Mitigation Operating Protocol and Request for Oral Argument. A copy of the enclosed Notice of Appeal has been delivered today to Ray Stalter, of the NYISO staff, for circulation to all members of the Management Committee via electronic mail.

Respectfully yours,

NRG Energy, Inc.



Bradley Kranz
Director, Regulatory & Market Affairs

Enclosures

cc: Robert E. Fernandez, Esq. (via e-mail)
Ray Stalter (via e-mail)
Christopher C. O'Hara, NRG Assistant General Counsel – Regulatory

NOTICE OF APPEAL OF MANAGEMENT COMMITTEE'S OCTOBER 24, 2007 REJECTION OF MOTION #7 REGARDING THE LOST OPPORTUNITY COST PROPOSAL FOR THE ASTORIA WEST STATION FAULT CURRENT MITIGATION OPERATING PROTOCOL

I. Executive Summary

On August 9, 2007, the Operating Committee ("OC") approved an Interim Operating Protocol that adversely impacts NRG's Astoria GT units 10-13 and improperly interferes with their grandfathered interconnection rights in contravention of the NYISO Tariff and FERC policy (hereinafter "Interim Protocol").[1] Specifically, this Interim Protocol imposes a transmission derate on NRG's Astoria GT units interconnected at the Astoria West 138 kV Substation when load conditions exceed 11,800 MW. This Interim Protocol was developed by the New York Independent System Operator ("NYISO") and Con Ed in an attempt to mitigate overdutied circuit breaker issues which were apparently caused by the addition of a significant amount of new generation at both the Astoria East 138 kV Substation and at the Astoria West 138 kV Substation. These additions were made by US Power Generating ("USPG") in 2001, New York Power Authority ("NYPA") in 2006, and Astoria SCS in 2006. These generator additions, in combination with a revised interconnection configuration for the existing Astoria steam units as a result of these new generation interconnections, have resulted in certain circuit breakers at Consolidated Edison Company of New York, Inc.'s ("Con Ed") Astoria West substation being overdutied.[2]

No action from NRG caused this overdutied breaker situation. Upon information and belief, the overdutied breaker situation was created by the generation additions identified above; however, NRG is being forced to bear 100% of the impact through the Interim Protocol and the cost of the failure to remedy the situation through lost revenues. Furthermore, the Interim Protocol compromises NRG's existing interconnection rights, without fair compensation. In short, this Interim Protocol not only contravenes Federal Energy Regulatory Commission's ("FERC") principles of cost causation, it contravenes FERC's interconnection requirements, and results in a taking of value from NRG without compensation.

---

[1] *See* OC Motion #5, Summer 2007 Fault Current Assessment & Astoria Interim Fault Current Operating Protocol (August 9, 2007). This resolution recognized that the OC lacked jurisdiction to provide NRG with compensation and referred the compensation issue to the NYISO Business Issues Committee (BIC).

[2] *See* NYISO 2007 Fault Current Assessment dated May 25, 2007 and approved by the Operating Committee on August 9, 2007.

NRG's principal objective is for this problem to be physically remedied promptly. The Lost Opportunity Cost (LOC) proposal that is the subject of this appeal was proposed by NRG to address the financial impacts incurred during the period that the Interim Protocol is in effect, until such time as a permanent physical solution to address the overdutied breakers is implemented and the derates eliminated.[3]

Without such a compensation mechanism, NRG will have no choice but to file a complaint against NYISO alleging NYISO's interference with NRG's interconnection rights and failure to properly administer its tariff. The use of the Interim Protocol violates the interconnection rights of NRG's existing Astoria GT units unless accompanied by the payment of NRG's lost opportunity costs to mitigate the financial consequences until the underlying physical system limitations have been resolved and the Interim Protocol eliminated.

II. Background

The situation at Astoria is not a deliverability issue; it is an issue of interconnection rights. In order to appreciate the basis of this dispute, it first must be understood that the safe and reliable operation of generation in a synchronous mode with the alternating current transmission system entails satisfying three system performance criteria:

1. short circuit;
2. stability; and
3. thermal.

The first two criteria (short circuit and stability) are elements and entitlements of interconnection service, addressed at the time of the interconnection of new generation as minimum requirements of a safe and reliable interconnection. Addressing these two components at the time of interconnection has always been good utility practice, and has been codified as such in NYISO's tariff, interconnection procedures and practices, and in FERC's regulations. The third criteria (thermal) is a deliverability issue, generally addressed as a component of transmission service, or as a component of an enhanced interconnection service.[4] All three are analyzed through the use of system models and load flow studies.

---

[3] *See* Motion #7, NRG's Lost Opportunity Cost Proposal for the Astoria West Station Fault Current Mitigation Operating Protocol (October 24, 2007) ("NRG LOC Proposal").

[4] *See* NYISO and New York Transmission Owner's recent joint filing of consensus deliverability plan (October 5, 2007).

This appeal involves short-circuit issues. Short-circuit capability is critical to the safe and reliable operation of a transmission system -- it is literally the ability to short (*i.e.*, break) a circuit. Overdutied breakers are breakers that, under an assumed set of fault conditions, would become overwhelmed and would not be able to open up to break the circuit. In other words, the current would be too great and the force too intense for the breakers to open, or there would be a flash-over, and the electricity would continue flowing. The likelihood of such a failure (*i.e.*, a fault) is directly related to the amount and proximity of generation.

Once a generator has been interconnected, the transmission operator and owner have the obligation to maintain the generator's ability to put power on the system at the point of interconnection without a short-circuit (or stability) issue.

III. Argument

a. The Interim Protocol is a violation of NRG's Astoria GT10-13 existing interconnection rights.

NRG's Astoria Gas Turbine Units 10-13 (GT 10-13) have had a continuous and unaltered interconnection at the Astoria West substation since 1971 when the units were constructed by Con Ed. New generator interconnections at both Astoria West and Astoria East that have occurred since 2001 have altered the short-circuit conditions. These generator interconnections, which were part of the Class Year 2001 cost allocation, include:

- USPG's 180MW Astoria Unit 2 Restart on 1/5/01 at Astoria East;
- NYPA's 500MW Combined Cycle ("CC") on 1/1/06 at Astoria West; and
- Astoria SCS's 500MW CC on 1/4/06 at Astoria East.

As an additional complicating factor, USPG's existing Astoria 3, 4, and 5 steam units are "switchable" and may be connected to either the Astoria East or Astoria West substation busses. Historically, the normal operation of the USPG steam units places Unit 3 at the Astoria West 138 kV substation and Units 4 and 5 both at the Astoria East 138 kV substation. However, with the addition of the NYPA and the Astoria SCS combined cycle plants, the configuration was revised such that normally, Units 3 and either 4 or 5 are on the West substation, and either

Unit 4 or 5 is on the East substation[5], with an additional requirement that two units must be on the West substation at load levels above 11,800 MW as identified in the Interim Protocol.[6]

A contributing factor to the current situation is related to a late stage change in the proposed interconnection configuration for the new NYPA 500 MW combined cycle ("new NYPA CC"). This revised interconnection changed the interconnection point of the entire new NYPA CC to the West bus, so that all three units (two GTs and one ST), are now interconnected to Astoria West, contrary to the configuration in the Class Year 2001 study. Further, NYISO apparently assumed that the existing USPG Unit 4 would be configured on the East bus, with only Unit 3 of the existing Astoria Steam units connecting to the West bus, also contrary to the assumption in the Class Year 2001 Study[7]. The NYISO accepted NYPA's proposed change in the interconnection point for the new NYPA CC as a non-material change.

The NYISO's reversion to the historic configuration of the Astoria steam units in this analysis was made to address fault current limitations identified at Astoria West with the revised interconnection for the new NYPA CC. This move would seem to have the effect of causing this configuration to become an operational requirement to avoid the occurrence of Astoria West fault current limitations going forward. However, in 2005 and 2006 the NYISO's annual fault current studies, which modeled the addition of the NYPA unit in 2005 and then the Astoria SCS unit in 2006, began showing short-circuit problems (*i.e.*, increasing fault current levels) at Astoria East. In order to solve the short-circuit problems at Astoria East, the NYISO then again revised the configuration of the USPG steam units such that for normal operation Unit 4 is once again interconnected to the West substation (or optionally Unit 5), thereby increasing fault current levels at Astoria West to the point that it has become a limiting condition for 2007. What is apparent from review of the Class Year 2001 and related interconnection

[5] NYISO 2007 Fault Current Assessment dated May 25, 2007 and approved by the Operating Committee on August 9, 2007.

[6] Interim Operating Protocol for Astoria West Station Fault Current Mitigation approved by the Operating Committee on August 9, 2007.

[7] System Reliability Impact Study for NYPA 500MW Combined Cycle Generation Project at Poletti - Alternative Interconnection to Astoria West (April 8, 2002) prepared by Con Ed and presented to the Transmission Planning Advisory Subcommittee on March 26, 2003 and NYISO Cost Allocation of New Interconnection Facilities to the New York State Transmission System for the Class Year 2001 (May 15, 2002)

studies is that there was very little short-circuit "headroom" at Astoria East and Astoria West. The short-circuit conditions were very sensitive to the actual interconnection of the new units and the assumed configuration of the Astoria steam units. Unfortunately, the end result is that the Class Year 2001 study assumptions on which the system upgrade facilities were based are inconsistent with the as-built configuration and the resulting operating configuration that has subsequently been required for the Astoria steam units.

The NYISO tariff and interconnection procedures require that short circuit issues be addressed at the time of interconnection and they were clearly not adequately addressed. A short circuit problem cannot be solved by moving generation, as was done in the interconnection studies for the Class Year 2001 units, to the detriment of another generator. The very existence of this ongoing fault-current problem is actionable at FERC. While this sequence of events demonstrates that the issues that led to the current short-circuit conditions is complex, the fact remains that the interconnection of the NRG units has not changed. Nor does the existing problem provide justification to implement an Interim Protocol that interferes with NRG's ability to put power onto the grid at its point of interconnect without providing for appropriate compensation. Simply put, NRG's interconnection rights have been compromised by a situation that it did not cause.

b. The interim protocol that has been implemented to mitigate the over-duty condition is fundamentally flawed and cannot be sustained.

On August 9, 2007, the Operating Committee approved the Interim Protocol to address the immediate short-circuit problems. At load levels above 11,800 MW on the Con Ed system, the Interim Protocol is used to alleviate an overdutied breaker condition when all Astoria West generation is online or scheduled to be online, and effectively limits the amount of generation that can operate at Astoria.

The Interim Protocol, as originally proposed by the NYISO's System Operations Advisory Subcommittee ("SOAS"), was blatantly discriminatory.[8] Following objections from NRG,[9] the Interim Protocol, as ultimately approved by the SOAS on July 24, 2007 and approved by the Operating Committee on August 9, 2007,

[8] June 16, 2007 Draft SOAS "Operating Protocol for Astoria West."
[9] Letter dated July 11, 2007 from Jon Sepich of NRG to Rick Gonzales of NYISO.

was revised to make the discriminatory impact more obscure.[10] NRG continued to object to this discriminatory protocol and interference with its interconnection rights.[11] However, in an effort to work with the stakeholder process, NRG supported the immediate system reliability needs at the OC with the inclusion of language in the motion and the expectation that the financial compensation issue would be satisfactorily addressed by the BIC.

Under the Interim Protocol, at the 11,800 + MW load level, two USPG Astoria steam units are required to remain on the West bus for second contingency reliability and as such, the NYISO, upon Con Ed's request, will de-commit or derate the needed amount of generation. Instead of simply identifying NRG's units, the Interim Protocol purports to apply an economic test and will derate either the new NYPA 500 MW CC or the NRG Astoria GT 10-13. This unit selection is based on economics, which for all practical purposes will always result in the derating of NRG's units. Between an efficient brand-new combined cycle and NRG's 36-year-old peakers, there really is no contest.[12] As a result, the very hours when NRG's peaking units would run -- during high load and scarcity conditions -- they are not permitted to run due to an interconnection limitation that should not have been permitted to occur.

We do not debate that a short-circuit limitation exists and that the NYISO may take actions to mitigate the problem until a permanent solution can be implemented. However, it is inappropriate to apply an economic dispatch test to solve a reliability issue that arose out of an interconnection deficiency, particularly when it harms a generator that did not and was not in any way responsible for or contribute to the problem. The Interim Protocol, as it is currently implemented is discriminatory, inconsistent with basic principles of cost-causation, and violates the NRG units' interconnection rights.

First, the Interim Protocol is unduly discriminatory and inequitable, as well as contrary to FERC precedent because it does not allocate the "derate" to all units on the Astoria West substation equally. The economic standard cannot be used to disguise the fact that the derate is targeted, and indeed solely impacts, NRG.

Second, the Interim Protocol is inequitable because it is necessitated by a condition largely caused by the interconnection of new generators since 2001, yet

[10] July 24, 2007 Final SOAS "Operating Protocol for Astoria West."
[11] Letter dated August 2, 2007 from Lee Davis of NRG to John McAvoy of Con Ed.
[12] It is unclear why only these two facilities are considered for the derate.

effectively allocates the burden solely to NRG's existing units which did not cause the overdutied condition. This situation is in direct violation of an existing generator's interconnection rights and of FERC's standards that require such short circuit issues to be addressed at the time of interconnection, and that afford an existing generator an inalienable right to deliver power to the point of interconnection. Simply put, the Interim Protocol is necessitated because the Con Ed transmission system has not been upgraded in accordance with good utility practice and FERC's requirements for safely and reliably interconnecting new generation. The NYISO's 2007 Fault Current Assessment confirms that the circuit breakers are overdutied and that there is a reliability issue that must be addressed. As such, the pursuit of a physical solution to eliminate this operating condition before the next critical summer capability period should be given a high priority, consistent with good utility practice for resolving a known reliability issue.

Finally, not only is the short-circuit problem itself a violation of NRG's interconnection rights, but the Interim Protocol is also contrary to the NYISO tariff and FERC's policy regarding safe and reliable interconnection.

This interference with NRG's interconnection rights and the NYISO's failure to properly administer its tariff will not be sustained at FERC. The underlying problem must be promptly resolved and during the interim period when the protocol and derate are in effect, NYISO must provide appropriate compensation under its tariff.

IV. The NYISO Board should require the NYISO staff to address the economic consequences of the Interim Protocol through tariff changes that provide for just compensation and should direct the NYISO staff to implement corrective measures by the May 1, 2008 deadline.

The Interim Protocol applies an economic evaluation in selecting the units to derate. Fundamentally, it is not appropriate to apply such an economic qualification to a short-circuit reliability problem. Any short-circuit limitation should have been addressed under FERC interconnection rules at the time of a new unit interconnection, or should be addressed through special operating procedures that apply solely to the new unit(s). In addition, the actual result of the economic qualification is that it interferes with NRG's units and our ability to operate these units during peak load periods. The Astoria GTs are flexible, quick-start peaking units and are being precluded from operating under the very conditions in which they are intended to be available to

support the overall reliability of the grid and more specifically to meet peak load demands on the system.

Issuing a protocol is not a substitute for taking the necessary action to remedy the reliability problem. Due to NRG's efforts, the OC motion that approved the Interim Protocol was revised to include a recommendation from the OC to the NYISO to investigate and provide a plan for a permanent solution by November 30, 2007, and further that the plan would have as its objective the elimination of the derate by May 1, 2008. While NRG understands that the NYISO has been working on this task, the November 30th deadline has come and gone without a proposed solution, and ultimately the motion language provides no guarantee that a solution will be in place by the May 1, 2008 deadline.

The Interim Protocol results in a taking of value from NRG without compensation. While the Interim Protocol provides protection for day-ahead margin to units with a day-ahead schedule, no such compensation is provided to a unit operating only in the real-time. This is the most likely scenario for quick start peaking units such as NRG's GT 10-13. Clearly, if the units are economic in real-time and would have been scheduled to run but for the short-circuit limitation, they are forfeiting revenues and incurring a lost opportunity. The NRG LOC Proposal was put forward by NRG to address the financial impacts caused by the application of the Interim Protocol until such time as a permanent solution to address the over-duty breaker limitations can be put in place and the derate eliminated. Furthermore, the implementation of the NRG LOC Proposal would provide the correct economic incentive for the NYISO and Con Ed to correct the situation as soon as possible and before the summer of 2008.

Compliance with FERC interconnection standards should have precluded this situation from occurring. A failure to adequately address such limitations and the resulting cost of mitigating the consequences of such a failure should not be borne by an innocent third-party. If the system configuration had been modeled correctly and the short-circuit limitations identified at the time of interconnection of the new units, the cost of solving the limitation would have been attributed to the interconnecting generator and/or the Transmission Owner (and its customers) as a system upgrade, but certainly not NRG. As such, any derate imposed on the NRG units that results from the failure of the interconnection process undeniably results in costs (lost revenue) that NRG should not be required to bear. Without the addition of the compensatory measures proposed by NRG, the Interim Protocol is unjust and unreasonable. The payment of NRG's lost opportunity costs is a justified and appropriate method to mitigate the financial

consequences until the underlying system limitations have been resolved and the Interim Protocol eliminated.

V. Conclusion

For the reasons stated above, NRG respectfully requests the NYISO Board to direct the NYISO staff to take the following actions:

a. File tariff revisions consistent with the NRG LOC Proposal to provide for just and reasonable compensation for as long as the Interim Protocol is in effect.

b. Develop and implement a solution to eliminate the short-circuit problem by the start of the summer 2008 capability period as called for in the OC resolution adopting the Interim Protocol.