

# STATE OF NEW YORK DEPARTMENT OF PUBLIC SERVICE

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March 2, 2005

Honorable Magalie R. Salas, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Room 1-A209  
Washington, D.C. 20426

Re: Docket No. RM05-4-000 - Interconnection For Wind  
Energy and Other Alternative Technologies

Dear Secretary Salas:

For filing, please find the Notice of Intervention and Comments of the New York State Public Service Commission in the above-entitled proceedings. Should you have any questions, please feel free to contact me at (518) 474-6513.

Very truly yours,

Kimberly A. Harriman  
Assistant Counsel

Attachment

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

Interconnection For Wind Energy       ) Docket No. RM05-4-000  
And Other Alternative Technologies    )

**NOTICE OF INTERVENTION AND COMMENTS OF THE  
PUBLIC SERVICE COMMISSION OF THE STATE OF NEW YORK**

**INTRODUCTION**

On January 24, 2005, the Federal Energy Regulatory Commission (FERC or Commission) issued a proposal to amend its regulations to require public utilities to include specific technical requirements for the interconnection of large wind plants in their Open Access Transmission Tariffs. A Notice of the Proposed Rulemaking (NOPR) was published in the Federal Register on January 31, 2005, with comments due 30 days later.

The New York State Public Service Commission (NYPSC) submits its Notice of Intervention and Comments pursuant to the January 31, 2005 NOPR, and Rule 214 of the Commission's Rules of Practice and Procedure. Copies of all correspondence and pleadings should be addressed to:

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## DISCUSSION AND CONCLUSION

In Orders Nos. 2003 and 2003-A,<sup>1</sup> FERC adopted and subsequently clarified procedures for the interconnection of traditional synchronous generating facilities having a capacity of more than 20 megawatts (MW). FERC reserved judgment on the applicability of these standards to non-synchronous technologies, such as wind plants.

In this NOPR the Commission seeks input on its proposed standards for the interconnection of large wind generating plants having an output rating of 20 MW or higher.<sup>2</sup> These comments address low voltage ride-through, supervisory control and data acquisition (SCADA) capability, power factor requirements, self-study, and the identification of other non-synchronous technologies.

New York is engaged in a State-wide study, contracted for by the New York Independent System Operator, Inc. and the New York State Energy Research and Development Authority, to examine the reliability impacts of integrating large quantities of wind generation with the New York electric grid. The study is expected to be completed by the first quarter of 2005 and may

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<sup>1</sup> Standardization of Generator Interconnection Agreements and Procedures, Order No. 2003, 68 Fed. Reg. 49,845 (August 19, 2003), FERC Sttats. & Regs., Regulations Preambles ¶ 31,146 (2003) (Order No. 2003), *order on reh'g*, Order No. 2003-A, 106 FERC ¶ 61,220 (2004) (Order No. 2003-A).

<sup>2</sup> See Appendix G.

address some of the issues raised in this rulemaking.

Therefore, once the study is completed we may need to provide additional information.

1. Specific Level of Low Voltage Ride-Through Capability Should Be Required On A Case-By-Case Basis.

FERC proposes to require large wind plants to have low voltage ride-through capability down to 15 percent of the rated line voltage for 0.625 seconds, and capability to continuously operate at 90 percent of the rated line voltage (Appendix G.A.i). In general we agree that large wind plants should possess low voltage ride-through capability. However, we believe that the requirements in Appendix G.A.i are too prescriptive.

The characteristics of the transmission system in different locations may require more or less stringent response times in emergency low voltage situations. Therefore, a one size fits all approach is not appropriate. Instead, specific requirements for low voltage ride-through capability should be determined on a case-by-case basis to reflect the system needs identified by the facilities studies performed by the transmission owner and the Independent System Operator (ISO).

2. All Interconnecting Generators Must Possess SCADA Capability.

FERC recognizes that large wind plants should possess SCADA capability<sup>3</sup> if interconnecting to the transmission system and seeks comments on the imposition of basic SCADA capability requirements.

The NYPSC supports applying the same SCADA capability requirements for all generating units, including large wind plants. Typically, these requirements are determined by the transmission owner based upon the characteristics of the system at the location of the interconnection. Thus, it is unnecessary for the Commission to impose any basic requirements, but rather it should leave the requirements to the transmission owner to establish.

3. The Proposed Power Factor Design Criteria (Reactive Power) Should Be Amended.

FERC proposes to maintain adequate system voltage control capability by establishing a power factor for large wind plants within the range of 0.95 leading (industry standard) to 0.95 lagging (below industry standard), which will be measured at the high voltage side of the substation transformer. Large wind

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<sup>3</sup> SCADA capability, at a minimum, allows the transmission owner to acquire wind plant data and transmit necessary instructions to the plant.

plants, just as synchronous generating units, need to have dynamic capabilities. These plants should be able to maintain previously designated voltage levels by automatically adjusting their reactive power output. The level of dynamic capability should be governed by the results of the interconnection studies performed by the transmission owners.

We agree that the minimum power factor should be the industry standard of 0.95 leading. A power factor of 0.95 lagging for a large wind plant may not provide sufficient reactive power capability to adequately support the transmission system voltage under certain conditions for which the system must be designed. Transmission owners should have the ability to require the industry standard power factor of 0.90 lagging, in those instances where the studies indicate that such factor is required for system reliability.

4. Self-Study of Feasibility Should Not Be Permitted.

FERC seeks input on how to balance the needs of wind developers to self-study prior to a developer's filing a complete Interconnection Request with the needs of ISOs or transmission owners to protect critical energy infrastructure information and commercially sensitive data from disclosure.

It is neither necessary nor appropriate to provide wind developers base case data prior to filing their completed Interconnection Requests. An interconnection study should be

performed by the transmission owner who understands its own system, its dynamics, limitations, and other critical inputs necessary to perform an accurate study.

Simply providing wind developers with load flow, stability, and fault current cases is insufficient for the developer to fully understand all the needs of the system and the impacts on the system from its interconnection. Further, there is no basis for treating wind generators differently from other synchronous generators who do not have the privilege of conducting their own studies prior to filing their completed Interconnection Requests.

5. No Additional Generating Technologies Have Been Identified

FERC questions whether there are other non-synchronous generating technologies that should be included in the application of Appendix G.

At this time, the NYPSC has not identified any other generating technologies that should be required to comply with the requirements of Appendix G. We note, however, that should other technologies be identified, those technologies should be

subject to similar requirements as we propose here for large  
wind plants.

Respectfully submitted,

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Dated: March 2, 2005  
Albany, New York

