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#### James A. Lahtinen

Vice President 2008 HOV - 7 PM 5: 21

November 7, 2008

Honorable Jaclyn A. Brilling
Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223

Re: Case 07-M-0906 - Generator Energy Deliverability Study Process and Scope

#### Dear Secretary Brilling:

Pursuant to Appendix 3, Paragraph 9 of the Abbreviated Order Authorizing Acquisition Subject to Conditions, issued and effective September 9, 2008, in Case 07-M-0906, New York State Electric & Gas Corporation ("NYSEG") and Rochester Gas and Electric Corporation ("RG&E") hereby file their Generator Energy Deliverability Study Process and Scope.

The enclosed document defines NYSEG's and RG&E's methods for performing economic deliverability studies for interconnecting generators, including but not limited to procedures for generic study methodologies, a process for working with generators in performance of the studies, remedies for potential congestion situations, a generic methodology for evaluating solutions and generic cost allocation procedures for those solutions, and a process for working with each generator regarding individual solutions.

As set forth in the enclosed Generator Energy Deliverability Study Process and Scope, a Developer has the option to perform the deliverability study itself or request that NYSEG or RG&E perform the study. If the Developer elects to have NYSEG or RG&E perform the study, NYSEG or RG&E will issue a Request for Proposal ("RFP") to a bidder's list for performance of the study. The Developer(s) will be responsible for the costs of the study, and shall provide NYSEG or RG&E a cash deposit equal to the expected cost of the study based on the winning bidder's response to the RFP plus an estimate of the costs NYSEG or RG&E will incur related to the deliverability study.

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Case 07-M-0906 - <u>Joint Petition of Iberdrola</u>, S.A., Energy East Corporation, RGS Energy Group, Inc., Green Acquisition Capital, Inc., New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation for Approval of the Acquisition of Energy East Corporation by Iberdorla, S.A., Abbreviated Order Authorizing Acquisition Subject to Conditions (Sept. 9, 2008).

## Honorable Jaclyn A. Brilling November 7, 2008

Please direct any questions to Mr. Hank Masti, Director-Transmission at 607-762-7405.

Respectfully submitted,

James A. Lahtinen

Enclosure

cc: Active Parties

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# BEFORE THE NEW YORK STATE PUBLIC SERVICE COMMISSION

2008 NOV -7 PM 5: 21

Joint Petition of IBERDROLA, S.A.,
Energy East Corporation, RGS Energy Group, Inc.,
Green Acquisition Capital, Inc.,
New York State Electric & Gas Corporation and
Rochester Gas and Electric Corporation for
Approval of the Acquisition of
Energy East Corporation by IBERDROLA, S.A.

Case 07-M-0906

# NEW YORK STATE ELECTRIC & GAS CORPORATION AND ROCHESTER GAS AND ELECTRIC CORPORATION GENERATOR ENERGY DELIVERABILITY STUDY PROCESS AND SCOPE

## New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation Generator Energy Deliverability Study Process and Scope

#### Summary

This Generator Energy Deliverability Study Process and Scope<sup>1</sup> for New York State Electric & Gas Corporation ("NYSEG") and Rochester Electric and Gas Corporation ("RG&E") (each, a "Company" and collectively, the "Companies") addresses the economic deliverability of energy associated with interconnecting generators and includes:

- procedures for generic study methodologies ("Deliverability Study");
- the process for working with interconnecting generators in performance of the studies;
- remedies for potential congestion issues in the applicable Company's service territory;
- the generic methodology for evaluating available solutions in the applicable Company's service territory;
- · generic cost allocation procedures for available solutions; and
- the process for working with each interconnecting generator regarding available solutions.

## Procedure for the Deliverability Study

The procedure for the Deliverability Study, which estimates the impact of an interconnecting generator on other resources as well as the deliverability of energy from such interconnecting generator under varying system conditions, is set forth in Appendix A to this Generator Energy Deliverability Study Process and Scope.

## Process for Working With Developers in Performance of the Deliverability Study

The Companies will undertake the following steps when working with an interconnecting generator developer ("Developer") with respect to a Deliverability Study:<sup>2</sup>

1. The applicable Company will notify the Developer of its option to request the performance of a Deliverability Study, at Developer's cost, during the initial scoping meeting (whether Feasibility, SRIS or Facility) scheduled by the NYISO.

This document was prepared pursuant to Item # 9 of Appendix 3 of the Abbreviated Order Authorizing Acquisition Subject to Conditions in Case 07-M-0906. Case 07-M-0906 - Joint Petition of Iberdrola, S.A., Energy East Corporation, RGS Energy Group, Inc., Green Acquisition Capital, Inc., New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation for Approval of the Acquisition of Energy East Corporation by Iberdrola, S.A., Abbreviated Order Authorizing Acquisition Subject to Conditions (Sept. 9, 2008) ("Abbreviated Order").

The New York Independent System Operator, Inc. (the "NYISO") interconnection process and procedure are likely to address deliverability studies and the allocation of costs through a stakeholder process in the near future. To the extent that the NYISO implements such an interconnection process and procedure that meets the requirements of the Abbreviated Order, the procedures set forth herein will be superseded by the NYISO process and procedure.

2. At the NYISO scoping meeting, the applicable Company will notify the Developer that a copy of this Generator Energy Deliverability Study Process and Scope, including Appendix A is publicly available on the Companies' respective websites:

http://preview.nyseg.com/SuppliersAndPartners/interconnectioninfo.html http://preview.RG&E.com/SuppliersAndPartners/interconnectioninfo.html

- 3. At the NYISO scoping meeting, the applicable Company will inform the Developer that, if it chooses to have the Deliverability Study performed, the Developer has the option to perform the Deliverability Study itself or request that the applicable Company perform the Deliverability Study on behalf of the Developer. If the Developer elects to have the applicable Company perform the study the following procedures will apply:
  - (a) The Deliverability Study will be based on the most recent NYISO Operating Committee-approved five-year Annual Transmission Baseline Assessment ("ATBA"). The ATBA is scheduled to be approved each year at the February NYISO Operating Committee meeting.<sup>3</sup>
  - (b) The applicable Company will issue a Request for Proposal ("RFP") to a list of potential bidders to perform the Deliverability Study and evaluate the effectiveness of potential available solutions in accordance with this Process and Scope, including Appendix A. The RFP will request responses to the RFP within ten business days.
  - (c) The applicable Company will select the winning bidder ("Contractor") within ten business days of receipt of the responses to the RFP. The applicable Company will develop and execute a contract with the Contractor that defines the terms and conditions pursuant to which the Contractor will perform the Deliverability Study.
  - (d) The Developer will be responsible for providing the applicable Company with a cash deposit equal to the expected cost of the Deliverability Study based on the Contractor's response to the RFP plus an estimate of the costs the applicable Company will incur related to the Deliverability Study. The Companies' costs will include but not be limited to: preparing, issuing and completing the RFP, scoping, design, engineering, legal and technical staff review and approval of the Deliverability Study and all costs incurred to develop available solutions to problems identified by the Deliverability Study.
  - (e) A mutually agreeable timeline for the completion of the Deliverability Study and development of available solutions, if applicable, will be developed by the Developer, the Contractor, and the applicable Company.
  - (f) At the applicable Company's option, multiple Developers electing to have a Deliverability Study performed in a similar timeframe may be studied in a cluster.

See NYISO Open Access Transmission Tariff, Attachment S. Available at: http://www.nyiso.com/public/webdocs/documents/tariffs/oatt/att\_s.pdf

Where more than one Developer is responsible for a Deliverability Study, the estimated study costs identified in (d) above will be allocated to each Developer in proportion to the MVA nameplate size of each Developer's project.

# **Remedies for Potential Congestion Issues**

The results of the Deliverability Study will identify congestion issues and the timeframe in which generation may begin being subject to curtailment due to the Developer's new interconnecting project in the applicable Company's service territory. The Deliverability Study will also identify areas of the transmission or distribution system that would need to be modified and/or upgraded such that the new interconnecting project could potentially be operated at full output and at a defined percentage of full output for at least a defined period of time. The defined percentages of output and period of time will be jointly agreed to by the Developer and the applicable Company. The applicable Company will use best efforts to develop potential solutions to address problems identified by the Deliverability Study within thirty days of receiving the Deliverability Study results from the Contractor.

## Generic Methodology for Evaluating Solutions to Congestion Issues

The effectiveness of the potential solutions will be studied by the Contractor. The Contractor will run the Deliverability Study with and without the Developer's project in the aggregate with, if applicable, all the other Developers that have been clustered pursuant to Section 3(f) above in the Process for Working With Developers in Performance of the Deliverability Study section. The Contractor will also run the Deliverability Study with the Developer(s) at full output as modeled in the same zone as used in the NYISO ATBA studies. The effectiveness of a solution will be based on an estimate of the amount of energy that is no longer reduced due to the new interconnecting project(s) located in the applicable Company's service territory.

## Generic Cost Allocation Procedures for the Solutions

In the event that one or more Developers elect to implement the solutions, the following procedures will be used by the Companies in connection with the cost allocation for the solutions:

- 1. The Contractor will run the Deliverability Study with and without the solutions in place assuming the Developer's project is in service for the year being evaluated. If the Developer elects to implement the solutions, the Developer will be responsible for all costs, including but not limited to, those related to the legal review, engineering, procurement, construction and testing of the solution. The applicable Company and the Developer will develop and execute a contract that defines the terms and conditions pursuant to which the applicable Company will engineer, procure, construct, and test the solutions identified in the Deliverability Study.
- 2. In the event that multiple Developers have been clustered pursuant to Section 3(f) above in the Process for Working With Developers in Performance of the Deliverability Study section, the following procedures will apply:

- (a) The Contractor will run the Deliverability Study with and without the solutions in place assuming all of the Developers' projects are in service for the year being evaluated.
- (b) If one or more of the Developers elect to implement the solutions, the output increase due to the solution of each Developer that has elected to implement the solutions will be compared to the net increase of all the projects of the Developers that have elected to implement the solutions.
- (c) The applicable Company and the Developers will develop and execute a contract that defines the terms and conditions pursuant to which the applicable Company will engineer, procure, construct, and test the solutions identified in the Deliverability Study.
- (d) The estimated cost of the solutions will be allocated to each Developer on a pro rata basis as determined by the applicable Company.

### Process for Working With Each Developer Regarding Solutions

Upon completion of the cost allocation described above, the applicable Company will inform the Developer(s) of its cost obligation. If one or more of the Developers elect to implement the solutions based on the cost allocations, the applicable Company will refine the cost estimates based on Developer participation and develop a schedule to complete the solutions. Prior to the commencement of work on implementing the solutions, the Developer(s) will be required to provide a cash deposit to the applicable Company in an amount equal to the estimated cost of the solutions. The applicable Company and/or its contractors will engineer, procure, construct, and test the solutions. All costs related to the solutions, including but not limited to design, engineering, procurement, equipment, legal review, and construction costs, are the responsibility of the Developer(s) and, upon completion of the implementation of the solutions, will be subject to a true-up to reflect the actual cost for implementation of the solutions.

### **Filing**

The applicable Company will file each Deliverability Study with the Secretary to the New York State Public Service Commission ("Secretary") within fifteen days of such Deliverability Study's completion.

#### Disputes

The Companies will notify the Secretary of any disagreement with a Developer relating to the performance of a Deliverability Study that cannot be resolved in good faith. Subject to the dispute resolution provisions set forth in Attachment X of the NYISO Tariff, to the extent the NYISO Tariff is applicable, the applicable Company or the affected Developer may file a request with the New York State Department of Public Service for mediation or arbitration of the dispute.

## New York State Electric & Gas Corporation and Rochester Gas and Electric Corporation Generator Energy Deliverability Study Process and Scope

## Appendix A - Energy Deliverability Test

#### Introduction

This Appendix A defines and develops a test for energy deliverability within the Companies' respective service territories for new interconnecting generators located within such respective service territories.

The energy deliverability test will provide an indication to the new interconnecting generator of how often its energy output may be curtailed due to transmission constraints and/or how often the prevailing price of energy at the generator's location may fall to relatively low values. Through this test, the generator may also obtain information on how extensive a transmission upgrade (if any) would be required to so that the generator's anticipated energy output would generally be deliverable.

### **Definition for Power Energy Deliverability**

"Generator Energy Deliverability" for an interconnecting generator means that energy output from the generator will not be subject to congestion, and thus the majority of the full available energy output of the generator can be delivered to load under most conditions without displacing renewable and/or price-taking generators. Using a newly defined term, an "Energy Delivery Interface" would exist between a generator and load if the generator's energy is deliverable.

Generator Energy Deliverability under this definition: (1) avoids or mitigates curtailment of that generator's energy due to transmission constraints; and (2) avoids or mitigates local congestion if

A price-taking generator is a supplier that either: (1) can not bid into the energy market because it cannot control its output to follow schedules as directed by the System Operator, and does not wish to be curtailed when it is producing energy because it would irreplaceably lose the use of a renewable resource (e.g., intermittent energy sources such as wind or run-of-river hydro); or (2) it bids a very low (or even negative) price for its energy because its may incur a greater expense if it is curtailed (e.g., nuclear which presumably has relatively low variable production costs, but which has significant shut-down/start-up costs). In either case, in order to recover its total fixed and variable costs, a price-taking generator needs to rely on price-setting generators bidding higher prices to set the energy price.

Energy Delivery Interface means a collection of transmission facilities - including interconnection attachment facilities - that: (1) connects upstream renewable and/or price-taking generators to downstream load such that the maximum simultaneous available energy from those generators can be transmitted to and consumed by sufficient load even under minimum load conditions; and (2) provides additional transfer capability to allow a price-setting generator to set the upstream energy price. It therefore avoids energy "congestion by providing an outlet for renewable and/or price-taking generators at price levels that offer the opportunity for them to recover their total costs. It is not necessarily one set of transmission lines. In some cases, only an interconnection attachment facility of sufficient capability is needed for this interface to exist because relatively high load levels are nearby to the generation. In other cases, this interface may need to be relatively long and/or consist of multiple parallel paths because sufficient load is a considerable distance away and/or widely dispersed from the generation.

it will significantly reduce Locational Based Marginal Pricing ("LBMP")<sup>3</sup> paid for energy. By extension, meeting this latter condition would also: (1) avoid or mitigate curtailment of renewables and/or other price-takers in the same area due to transmission constraints; and (2) permit at least one price-setting generator<sup>4</sup> to supply energy on dispatch thereby setting an energy market price for price-takers. For example, a fossil generating unit would be on the margin and act as a price-setting generator.

### **Energy Deliverability Test**

The economic energy deliverability test consists of a test to assure the generator has an adequate connection to load and the energy market.

Given the capability and configuration of the transmission system along with minimum expected load levels in the generator's area, this test models the maximum expected simultaneous<sup>5</sup> energy output in the same location from all wind, other renewable and other price-taking generators; plus the output of potential price-setting generators under applicable criteria (e.g., all-lines-in, single contingency or double contingency). Depending on the system configuration, overloading may occur at peak load or light load, and may not always occur when all generation is on-line. Sensitivities will be run to potentially capture system problems.

A new interconnecting generator in the same zone or geographic area as the load would pass this energy deliverability test if the new interconnecting generator as well as all existing price-taking generators (including existing wind and other renewables) can supply all their available output to load unimpeded by transmission constraints even during light load conditions in the same zone or geographic area.

The new generator would be added at full output and at a defined percentage of full output for at least a defined period of time. All other generators in the same zone or geographic area would be turned on to full output. Load in the same zone or geographic area would be tested at maximum load and minimum load. In addition, sensitivity cases would be run at various levels of generation in the area to ensure that potential constraints are captured. Transfer analysis will also be done to determine the impact on transfers.

Even when capacity is shown to be deliverable, if energy becomes congested within an area, the addition of wind-power facilities into the area may reduce the LBMP within that area. In the extreme, if the only generators dispatched within an area are "price-takers" such as nuclear, hydro and wind plants, the LBMP may drop to zero or even negative values.

A price setting generator is a supplier that bids into the energy market because it can control its output to follow schedules as directed by the System Operator; and therefore – if it is on the margin – it can set the energy price at its location. Price-setting generators generally have significant variable production costs, and are typically fossil fueled.

The assumed simultaneous expected output of wind is particularly important. Because of the relatively low capacity factors (ratio of anticipated average energy output versus maximum capacity rating) of wind-power, the assumed diversity (or lack of diversity) between wind-power facilities becomes an important consideration in determining economic deliverability. Thus, one-hundred 1 MW wind turbines in the same location each with an capacity factor of 20%, but with little or no diversity would have a maximum expected simultaneous output of 100 MW (or close to it).