STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET No. 4185
The Rhode Island Attorney General Patrick C. Lynch
Response to National Grid's First Set of Data Requests

Set 1

1-1 Please provide electronic copies of all documents (whether electronic or hard copy) that were relied upon by Mr. Short for any of the opinions offered in his testimony.

The documents cited in Mr. Short's testimony, some of which were provided as website links, will be attached to, or will be forwarded in conjunction with, the email version of this set of responses. Moreover, for your convenience, they are listed here with pertinent links:

1. Great Lakes Wind Energy Center -- Final Feasibility Study.
http://development.cuyahogacounty.us/pdf_development/en-US/GLWEC_Final%20Feasibility%20Report_4-28-09.pdf

2. Power Purchase Agreement between Delmarva Power & Light Company ("Buyer") and Bluewater Wind Delaware LLC ("Seller").
http://www.ceoe.udel.edu/windpower/DE-Qs/Delmarva-Bluewater-PPA-10-December-07.pdf

3. (Delaware) Senate Energy and Transit Committee's Comprehensive Report on Affordable, Environmentally Friendly Energy with a Detailed Analysis of the Proposed Bluewater Power Purchase Agreement.
http://www.ceoe.udel.edu/windpower/DE-Qs/senatemajorityrpt042308.pdf

4. King Juan Carlos University's Study of the Effects on Employment of Public Aid to Renewable Energy Sources.
http://www.juandemariana.org/pdf/090327-employment-public-aid-renewable.pdf

5. The Economic Impacts of Vermont Feed in Tariffs by (the Vermont) Division of Energy Planning.
http://publicservice.vermont.gov/planning/DPS White Paper Feed in Tariff.pdf

6. Air Emissions Due To Wind and Solar Power by Warren Katzenstein and Jay Apt.
http://pubs.acs.org/doi/pdfplus/10.1021/es801437t.

7. How Less Became More … Wind, Power and Unintended Consequences in the Colorado Energy Market by BENTEK Energy, LLC.
http://www.bentekenergy.com/documents/bentek_how_less_became_more_100420-319.pdf

8. US EPA's Greenhouse Gas Equivalencies Calculator.
http://www.epa.gov/cleanrgy/energy-resources/calculator.html

9. ISO New England's "2009 Annual Markets Report".
http://www.iso-ne.com/markets/mktmonmit/rpts/other/amr09_final_051810.pdf

10. ISO New England's "2007 New England Marginal Emission Rate Analysis".
http://www.iso-ne.com/genrtion_resrcs/reports/emission/2007_mea_report.pdf

11. ISO New England's "Draft 2008 New England Marginal Emission Rate Analysis".
http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/eag/mtrls/2010/jul232010/draft_2008_emissions.doc

12. ISO New England's 2010 CELT Report 2010-2019 Forecast Report of Capacity, Energy, Loads, and Transmission.
http://www.iso-ne.com/trans/celt/report/2010/2010_celt_report.xls

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July 30, 2010

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1-2 Please provide electronic copies of all of Mr. Short's workpapers utilized in the development of his testimony, including without limitation any spreadsheets used to perform any calculations.

The following analyses that were used in Mr. Short's testimony will be attached to, or will be forwarded in conjunction with, the email version of this set of responses:

1. Deepwater Wind All Equity Investment Analysis.
2. Deepwater Wind Leveraged Investment Analysis.
3. Short Observations All Equity Investment Analysis.
4. Short Observations Leveraged Investment Analysis.
5. Cost of Short Observations Analysis versus Deepwater Wind Analysis.
6. Cost Savings from Old Deepwater Wind Contract (Docket # 4111) versus New Deepwater Wind Contract (Docket # 4185).
7. Generation from Various Fossil Fuels in NEPOOL (2002-2009)

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1-3 Please identify any studies performed by Mr. Short or anyone working under Mr. Short's supervision that were relied upon by Mr. Short in forming his opinions expressed in his testimony.

Mr. Short did not perform any studies or have anyone working under his supervision that were relied upon by Mr. Short in forming his opinions expressed in his testimony.

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1-4 Referring to page 8 of Mr. Short's testimony, and the discussion of the Bluewater project, does Mr. Short know the status of the Bluewater project (i.e., whether it is likely to be constructed, timelines, and whether regulatory approvals need to be obtained, etc.)? If so, please explain the status and provide documentation for this status.

Mr. Short is only aware that a contract has been executed between Delmarva Power and the owner of the Bluewater Wind project but that the current contract is being revised since the project cannot be completed by the contract's in-service date. Other than those points, Mr. Short has no knowledge when, or if, the project will be constructed or what regulatory approvals have been or must be received.

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1-5 As used in Mr. Short's testimony, please define the term "unleveraged return."

An "unleveraged return" may be defined as an all equity return on invested capital in an investment financed solely with equity.

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1-6 Did Mr. Short have an understanding of what unleveraged and leveraged rate of returns that Ridgewood Power Management Corporation would have required before it would consider developing a renewable generation project when he was employed by that company? If so, please state Mr. Short's understanding.

Mr. Short has no knowledge of what unleveraged and leveraged rate of returns that Ridgewood Power Management Corporation would have required before it would consider developing a renewable generation project when Mr. Short was employed by that company.

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1-7 Does Mr. Short have an understanding of what unleveraged and leveraged rate of returns that typical renewable developers require before they would consider developing a renewable generation project today? If so, please state Mr. Short's understanding. Please provide documentation and an explanation of how Mr. Short developed this understanding.

Yes.

There are many variables that influence the unleveraged and leveraged rate of returns to typical renewable energy projects; however, the only project at issue here is the Deepwater Wind project. Given the particulars of this project, reasonable unleveraged and leveraged after-tax rate of returns are what Mr. Short stated in his testimony, 7.2% and 9%, respectively.

Financial analysts can make the returns on the same project look bad, good or excellent by just moving a few assumptions around. What has happen here is the developer has painted a bleak picture for operating expenses, construction cost, residual value, cost of capital, etc. while seeking the maximum initial contract price and escalation rate. What will be shown to the Project's debt and equity investors, once the power purchase agreement has been approved by all regulatory authorities, could well be a vastly different set of numbers with a vastly different set of higher returns.

This is no different than what occurs in a typical rate case when a utility pads its operating expenses, defers its revenues, puffs up its rate base, hikes its costs of capital and pleads poverty, seeking an above-market return on its equity.

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1-8 If Mr. Short knows, please explain his understanding of the difference between (i) a leveraged and levered after-tax rate of return for an unregulated project and (ii) a return on equity that is determined for regulated utilities through rate cases (commonly referred to a utility's "allowed return on equity").

"Leveraged" and "levered" after-tax rates of return for an unregulated project constitute the same term and could be defined to be the yield on an investment to either capital or equity after the payment of (or provision for) income taxes.

"Return on equity" for a regulated utility is an administratively derived return on the equity component of a utility's cost of capital. "Allowed return on equity" is a subjective number.

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1-9 Referring to page 9 of Mr. Short's testimony, lines 232 through 235, is Mr. Short offering an opinion that renewable generation developers today are generally willing to develop a renewable generation project that is forecasted to earn a return on equity of 9%? If so, please explain the basis for this belief and provide any documentation relied upon for this belief.

Yes.

As I stated in 1-7, there are many variables which influence the unleveraged and leveraged rates of return to typical renewable energy projects; however, the only project at issue here is the Deepwater Wind project. Given the particulars of this project, reasonable unleveraged and leveraged after-tax rates of return are what Mr. Short stated in his testimony, 7.2% and 9%, respectively.

Financial analysts can make the returns on the same project look bad, good or excellent by just moving a few assumptions around. What has happen here is that the developer has painted a bleak picture for operating expenses, construction cost, residual value, cost of capital, etc. while seeking the maximum initial contract price and escalation rate. What will be shown to the Project's debt and equity investors, once the power purchase agreement has been approved by all regulatory authorities, could well be a vastly different set of numbers with a vastly different set of higher returns.

This is no different than what occurs in a typical rate case when a utility pads its operating expenses, defers its revenues, puffs up its rate base, hikes its costs of capital and pleads poverty, seeking an above-market return on its equity.

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1-10 Referring to page 8 of Mr. Short's testimony, lines 190 through 195, please provide the detailed calculations and assumptions used to adjust the Cleveland project to the size of the Deepwater Wind project.

The cost-to-construct figures for a project with twelve 2.5 MW wind turbines was $138 million, with $51.0 million for balance of plant, $2.5 million for on-shore facilities and $84.5 million for the turbines.

The cost-to-construct figures for a project with six 5.0 MW wind turbines was $159 million, with $39.5 million for balance of plant, $2.5 million for on-shore facilities and $117.0 million for the turbines.