STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION DOCKET NO. 4111 DEEPWATER WIND BLOCK ISLAND, LLC RESPONSE TO THE RHODE ISLAND PUBLIC UTILITIES COMMISSION'S DATA REQUESTS SET 4

Comm. 4-1: Please provide a copy of Mr. Nickerson's curriculum vitae/resume.

Response: Please see attached.

David P. Nickerson

Mystic River Energy Group LLC

P.O. Box 9213 Noank, CT 06340 860-572-1660 office 781-910-9736 cell dave@nickersons.org

PROFESSIONAL EXPERIENCE

Mystic River Energy Group LLC Managing Member

formed Feb 2004

- Consulting practice focused on the electric power industry and in particular the acquisition and sale of power plants and the analysis and negotiation of long term power contracts and other agreements for conventional and renewable energy resources.
- MASSPOWER. Led the successful restructuring of the project's three long term power purchase
 agreements with a major utility. Supported litigation of a power contract with a different utility.
 Negotiated an agreement for project's new ISO bidding agent as a merchant facility. Managed
 the successful sale of the facility together with Concentric Energy Advisors.
- An Institutional Energy Investor. Participated in restructuring the long term power purchase agreement for a Massachusetts power plant, negotiated an agreement for the plant's new ISO bidding agent, assisted in merchant bidding and implementation issues, and supported the sale of the facility and related gas contracts. Participated in the commercial evaluation and analysis of several other potential power plant and energy related acquisition and investment opportunities.
- <u>Pittsfield Generating Company, LP</u>. Advised on various aspects of the buyout of a long term power purchase agreement with a major utility and subsequent ongoing merchant plant issues including interconnection and Reliability Must Run agreements.
- <u>Concentric Energy Advisors</u>. As a CEA affiliate and for a cogen power plant client, led the analysis of a proposed financial swap to hedge a power contract and then provided analytical and negotiation support of an innovative restructuring of power and steam off-take agreements between the cogen owners and the host paper mill.
- Gabel Associates. As an affiliate to this New Jersey based energy consulting firm, provided
 expert witness analysis and support to a steam host in an arbitration with a NJ cogen power plant.
 Also advised a NJ paper mill in negotiations for power and steam from an independent cogen
 power plant on site, as well as evaluating other alternatives to reduce mill energy costs.
- <u>Atlantic Power</u>. Performed a study of long term power contract restructuring alternatives for a Florida cogen power plant.
- <u>Arcapita and Fulcrum Power Services</u>. Provided commercial due diligence and analysis support on two efforts to acquire combined cycle power plants in Massachusetts.
- Connecticut Clean Energy Fund. Supported two rounds of solicitations for new renewable power
 plant proposals as part of a CT legislative directive called Project 150. Served as an independent
 evaluator and analyst, advised on RFP design, supported CT DPUC regulatory filings, testimony
 and hearings for contract approval. As a result from Rounds 2 and 3 of Project 150, 16 new
 renewable projects totaling 137 MWs received DPUC approval for long term power contracts
 with the CT distribution utilities. Also have supported CCEF's participation in CT's Integrated
 Resource Planning process.
- <u>CT and NY Commercial Retail Load</u>. For a group of CT commercial loads and one NY entity, provided analysis and advice on retail rates and analysis of competitive electricity supply offers.
- <u>Station Service Load</u>. Advised a group of 3 New England power plants on costs and alternatives from competitive retail suppliers for serving plant electricity loads when off-line.
- New Jersey Landfill Gas Project. Providing analysis and support in the renegotiation of a power purchase agreement with a NJ utility for a new project on the site of an existing, failed project.

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 <u>Sustainable Energy Advantage</u>. Subcontractor to SEA, providing analysis and support of a New York State Energy Research and Development Authority contract to develop long-term fixed price hedge contracts directly between large commercial load and renewable generators.

• <u>Maine Biomass Cogeneration Project</u>. Provided valuation analysis of various project reconfigurations in preparation for possible future merchant power plant operations. Supported renegotiation of existing off-take agreements with the industrial host on-site.

Energy Industry Consulting, sole proprietor

Apr 2003 - Feb 2004

- <u>El Paso Merchant Energy</u>. Provided analysis and advice on negotiations related to ongoing power contract restructurings and also on plant asset management activities.
- <u>Vineland Municipal Electric Utility</u>. Performed a study and advised management on the value of a merchant power plant following the restructuring of its long term power purchase agreement.
- AIG Energy Inc. Part of a due diligence team to evaluate the purchase of power plants with long term power contracts. Performed detailed evaluations of key power purchase and fuel supply contracts for several plants. Also led the due diligence process as needed. Client was the successful bidder on a portfolio of 25 power plants at a price of \$746 million. Participated in efforts to financially restructure and monetize the long term power contracts associated with some of the acquired plants post-closing.

El Paso Merchant Energy, Newton, MA and Houston, TX Senior Vice President, Asset Restructuring Vice President, Asset Restructuring

Jan 2002 –Mar 2003 Sept 2000 – Dec 2001

- Restructured 4 long term PURPA-era Qualifying Facility power contracts totaling over 360 MW.
 Two were structured as contract monetizations and one as a contract buyout with associated bond
 offerings exceeding \$510 million. Fourth transaction was structured and closed as an asset sale.
 Total benefits to the participating utilities and their ratepayers exceeded \$105 million.
 - Led and worked with internal and external teams on key aspects including utility power contract renegotiations, gas and steam contract renegotiations, financial modeling and analysis, regulatory filings and approvals, replacement power supply contracts, and resultant merchant plant operations and power marketing.
 - Supported financing activities including offering circulars, information memorandums, and rating agency and road show presentations.
- Managed and closed the sale of a fully permitted 540 MW development-stage power project in Connecticut. Activities included marketing, bid evaluation, and contract negotiation.
- Supported colleagues in 4 additional power contract restructurings that were all completed.

Vice President, Origination Manager, Power Marketing

Jan 2000 – Aug 2000 Sept 1998 – Dec 1999

- Established El Paso's initial power marketing and origination presence in New England. Closed power transactions that contributed more than \$3 million to earnings.
- Completed several varied origination activities including a \$3.4 million NO_x emissions sale and reverse tolling transactions at 2 plants in PJM valued at \$7 million. Fully negotiated a 20-year tolling agreement for an 800 MW gas-fired merchant plant in the southeastern US.
- Managed for almost a year (until an asset management group was formed) El Paso's equity
 investment and commercial participation in the development and construction of three merchant
 power projects and equity investment in one operating Qualifying Facility, totaling 1,250 owned
 MWs. Accomplishments included a \$28 million settlement of a gas turbine related performance
 issue and one project achieving commercial operation and loan conversion. Continued as lead El
 Paso representative at one plant until March 2003.

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• Developed, with a small team, El Paso's internal commercial asset optimization process for its first merchant power plants.

 Managed El Paso's participation and interests in the NEPOOL committees developing the New England power market rules and procedures.

New England Power Company, Westborough, MA

Principal Engineer, Generation Marketing

1994 - Sept 1998

- Traded wholesale power products for the second largest utility in New England with marketing companies and regulated utilities in New England, New York, and Canada.
- Completed several innovative transactions with NY and Canadian utilities to import power.
- Participated in company's commercial, regulatory and legislative efforts to develop the
 restructured New England wholesale and retail electric markets including the divesture of New
 England Power Company's generation business, the first such sale to be completed in the U.S.
- Represented NEP at the NEPOOL Markets Committee that developed a new bid-based market for energy and ancillary services.
- Calculated marginal production costs for customer billings and regulatory compliance filings.

Senior Engineer, Independent Power Projects

1989 - 1994

- Negotiated and analyzed long term power purchase contracts with Qualifying Facilities and Independent Power Producers including commercial, technical, fuel supply and transport, and legal issues. Completed new or amended contracts with 10 projects representing over 600 MW.
- Monitored and managed utility's QF and IPP contract risk as projects advanced through development, permitting, construction, and commercial operation.
- Conducted two competitive solicitations for long-term power contracts, one of which was solely
 for renewable energy projects. Key participant in structuring offer and bidding procedures, bid
 evaluation, physical plant and site reviews, contract negotiation, regulatory filings, testimony and
 hearings in three states.

Westinghouse Electric Company, Pittsburgh, PA

Senior Consultant, Energy Systems Business Unit

1988-1989

Internal consultant on business and risk analysis studies within a \$1 billion power generation business unit. Managed and performed a study that lead to a \$90 million nuclear plant refurbishment. Analyzed and recommended product commercialization strategies for a fuel cell business.

Senior Engineer, Power Generation Marketing Division

1986-1988

Provided technical and commercial support to major nuclear product litigation settlements. Developed and marketed unique performance-based service contracts to utility customers.

Senior Engineer, Steam Generator Technology Division

1985-1986

Priced and proposed multi-million dollar nuclear steam generator upgrade services. Marketed innovative long-term equipment maintenance program based on risk sharing.

Project Engineer, International Service Operations

1983-1985

Marketed products and services to operating nuclear power plants and nuclear regulatory agencies. Traveled extensively overseas.

Deepwater Wind Attachment to Comm. 4-1

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Assistant Sales Engineer, Power Systems Field Sales

1980-1983

Supported sales of electric transmission and distribution equipment to a major utility. Managed a program to increase electrical product sales by distributors. Completed marketing training program.

EDUCATION

Carnegie Mellon University, Pittsburgh, PA M.S. Industrial Administration (MBA) - 1989

Tufts University, Medford, MA B.S. Electrical Engineering with a minor in Engineering Management - 1980

DEEPWATER WIND BLOCK ISLAND, LLC RESPONSE TO

THE RHODE ISLAND PUBLIC UTILITIES COMMISSION'S DATA REQUESTS SET 4

Comm. 4-2: Referencing Exhibit B to the PPA, please provide the scope of each agency's jurisdiction, the expected timeframe for the permitting process, including the dates upon which Deepwater Wind expects to file or has filed for each permit with each agency.

Response: The following table summarizes Deepwater Wind's understanding of agency jurisdiction(s) as well as Deepwater Wind's expectations regarding the timeframe of the permitting process.

Permitting Agency	Applicable Permit or Approval	Statutory / Regulatory Authorities establishing Scope of Jurisdiction	Expected Timeframe	Expected Application Date(s)
1. Federal Permi	ts and Approvals	Process of the Parket Control of the	The second of th	
U.S. Army Corps of Engineers (USACE)	Section 10 Permit	Rivers and Harbors Act – Section 10; 33 U.S.C. 333(e), 403	Approximately 4 – 6 months from the submission of the joint application.	To be submitted in September, 2010 following the adoption of the SAMP.
U.S. Department of the Interior, Minerals Management Services (MMS)	Outer Continental Shelf Right-of-Way for Submarine Transmission Cable Route	MMS OCS Development Regulations, 30 CFR 250		To be submitted in April, 2010.
NOAA, National Marine Fisheries Service (NOAA & NMFS)	Act, Marine Mammal Protection Act	Endangered Species Act, 16 U.S.C. 660, U.S.C. 1531 et seq.; 50 CFR 402; Marine Mammal Protection Act, 16 U.S.C 1361 et seq.; 50 CFR 216	Approval will occur within the timeframe allotted for USACE permitting and USACE NEPA review.	Consultation to be completed as part of USACE NEPA review, which will commence upon the submission of the USACE application.
(NOAA & NMFS)	NMFS under the Magnuson-Stevens Conservation and	U.S.C. 1801 et seq.; 50	permitting and NEPA review.	Consultation to be completed as part of USACE NEPA review, which will commence upon the submission of the USACE application.

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United States Coast Guard (USCG) Approval for Private Aids to Navigation Aids to Navigation Notice of Proposed Administration (FAA) Federal Aviation Alteration Alteration Alteration Awaiting confirmation (FERC) Approval will occur within the timeframe allotted for USACE permitting and USACE NEPA review. To be submitted concurrently with the timeframe allotted for USACE permitting and USACE NEPA review. Transmission (FERC) Awaiting confirmation (FERC) Awaiting confirmation (FERC advises 45 to 60 days from application. Felcated Energy Regulatory Commission (FERC) Awaiting confirmation FERC advises 45 to 60 days from application. Felcated Energy Regulatory Commission (FERC) Clean Air Act, 42 U.S.C. Approval will occur within the timeframe allotted for USACE approval will occur To be submitted concurrently with the USACE Section from CRAI To be managed by 60 days from application. To be managed by 60 days from application. To be managed by 60 days from application. To be submitted concurrently with the timeframe allotted for USACE permitting and NEPA review.	U.S. Fish and Wildlife Service (USFWS)	Endangered Species Act	Federal Endangered Species Act, 16 U.S.C. 1531; Migratory Bird Treaty Act, 16, U.S. C. 703; Bald and Golden Eagle Protection Act, 16 U.S.C. 668; 50 CFR Parts 13, 17 and 402; 50 CFR Parts 10 and 22	within the timeframe allotted for USACE permitting and NEPA review.	Consultation to be completed as part of USACE NEPA review, which will commence upon the submission of the USACE application.
Administration (FAA) Construction or Alteration Part 77; FAA Form 7460-within the timeframe allotted for USACE permitting and USACE NEPA review. Federal Energy Regulatory Commission (FERC) United States Environmental Protection Agency (EPA) Administration Construction or Alteration Part 77; FAA Form 7460-within the timeframe allotted for USACE permitting and USACE NEPA review. Awaiting confirmation FERC advises 45 to 60 days from application. Clean Air Act, 42 U.S.C Approval will occur within the timeframe allotted for USACE permit within the timeframe allotted for USACE permitting and	Coast Guard		33 CFR Part 66	within the timeframe allotted for USACE permitting and USACE NEPA	concurrently with the USACE Section
Regulatory Commission (FERC) License from CRAI 60 days from application. National Grid National Grid Permit Clean Air Act, 42 U.S.C Approval will occur To be submitted concurrently with the usacce for USACE permitting and Agency (EPA)	Administration	Construction or		within the timeframe allotted for USACE permitting and USACE NEPA	concurrently with the USACE Section
Environmental Permit 7401 et seq.; 40 CFR Part within the timeframe allotted for USACE Section (EPA) for USACE permitting and concurrently with the USACE Section 10 Permit	Regulatory Commission		from CRAI	60 days from	
	Environmental Protection Agency	Permit	7401 et seq.; 40 CFR Part 50 to Part 99	within the timeframe allotted for USACE permitting and	concurrently with the USACE Section

DEEPWATER WIND BLOCK ISLAND, LLC RESPONSE TO

2. Rhode Island State Permits and Approvals				
Rhode Island Coastal Resources Management Council (CRMC)	State Assent	Chapter 279 of the Public Laws of 1971 Amended	Approximately 4 – 6 months from the submission of the joint application.	To be submitted in September, 2010 following the adoption of the SAMP.
Coastal Resources	associated activities	Marine Infrastructure Maintenance Act of 1996 and the Marine Waterways and Boating Facilities Act of 2001, Chapter 46-6.1 of the Rhode Island General Laws	Approximately 4 – 6 months from the submission of the joint application.	To be submitted concurrently with CRMC Assent Application
Rhode Island Coastal Resources Management Council (CRMC)		Legislation, R.I. Gen. Laws §§ 46-23-1 et seq.; CRMC Coastal Resources Management	The application approval would be expected within 4 to 6 months days of receipt of the complete application.	To be submitted concurrently with CRMC Assent Application
Rhode Island Coastal Resources Management Council (CRMC)	Offshore Land	Legislation, R.I. Gen. Laws § 46-23-6(4)(iii) (authorizing CRMC to	Approximately 90 days from the acceptance of the application for lease. (Assumed)	To be submitted concurrently with CRMC Assent Application

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Rhode Island Coastal Resources Management Council (CRMC)	Coastal Wetlands Permit and Freshwater Wetlands Permit	CRMC Coastal Resources Management Program ("CRMP"), CRIR 04-000-010 (2009).; Rules and Regulations Governing the Protection and Management of Freshwater Wetlands in the Vicinity of the Coast, CRIR 04-000-017 (2009).	Up to 90 days following the receipt of an application for a Coastal Wetland Permit. The Freshwater Wetland Permit may take up to 180 days from application.	To be submitted concurrently with CRMC Assent Application
Rhode Island Department of Environmental Management (RIDEM)	Freshwater Wetlands Permit	RI Freshwater Wetlands Act, R.I. Gen. Laws §§ 2- 1-18 through 2-1-24.; Administration and Enforcement of the Freshwater Wetlands Act, CRIR 12-190-025 (2009)	timeframe allotted for CRMC permitting	To be submitted concurrently with CRMC Assent Application
	State Water Quality Certification (Component of the Waterfront Development Permit)	1 et seq.; Water Quality Regulations, CRIR 12- 190-001 (2009)		To be submitted concurrently with CRMC Assent Application
Coastal Resources	Determination of Consistency with WQM Plan	Resources Management Program ("CRMP"), CRIR 04-000-010 (2009).	timeframe allotted	To be submitted concurrently with CRMC Assent Application

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Rhode Island	Consultation under	National Historic	While consultation	To be submitted
Natural History	the National	Preservation Act, 16	on avoidance of	concurrently with
Survey	Historic	U.S.C. 470; Abandoned	potential impacts	CRMC Assent
(SHPO)	Preservation Act,	Shipwreck Act, 43 U.S.C.	may take additional	Application
	Section 106, and	2101 et seq.	time, approval is	
	Consultation and	-	expected to occur	
	determination under		within the	
	the Abandoned		timeframe allotted	
	Shipwreck Act		for CRMC	
	Consultation and		permitting and	
	Determination		CRMC NEPA	
			review.	
}				

3. Municipal Permits and Approvals

Local Permitting Overview

As construction and engineering designs for the onshore portions of the project are finalized, the requirements for local permits and approvals will become clear. Currently, Deepwater Wind expects to require approvals under the applicable Municipal Land Use Laws, and other municipal ordinances. The locations of the various alternative project configurations proposed could require approvals from the Towns of New Shoreham, North Kingstown, and Narragansett, Rhode Island. Local permits and approvals to be required for the final project configuration will be identified after the preferred project configuration is verified. The following permits and approvals are likely to be required by municipal departments and agencies:

Applicable Permit or Approval	Requirements for Approval
Storm Water Pollution Prevention Plan Approval	Plan approval will be required for the management of storm water runoff from construction related activities.
Temporary Dewatering Permit	A permit may be required for dewatering activities to be required during construction of upland project components.
Road Crossing Approvals	Consultation with municipal agencies and/or the Rhode Island Department of Transportation will be required for all road crossings or access to roadways during construction operations.
	Municipal agencies and/or the Rhode Island Department of Transportation will oversee the inspection and restoration of contractor road openings.
Temporary Fencing Approval	Municipal agencies and/or the Rhode Island Department of Transportation will be consulted for approval of the removal of trees and installation of temporary fencing along roads and properties to occur during project construction.
	A detailed site plan is likely to be required for consideration and approval by the involved local municipalities before construction permits are granted.

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Engineering Release	Zoning certificates or variances showing compliances with local zoning laws as approved by the local municipalities. These applications are likely to require final engineering drawings as will engineering releases and construction permits to be obtained from
Construction Fernits	local construction officials, and planning and zoning boards.

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Comm. 4-3: Please indicate whether Deepwater Wind has consulted with CRMC, RIDEM and/or RIDOT regarding technology, permitting processes and general timelines (Deepwater Wind's response can exclude any SAMP related consultations). Please provide any written documentation of same.

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Response: Yes. Deepwater Wind has consulted with CRMC, RIDEM and RIDOT. Consultations with each of these agencies are ongoing and are expected to continue until permit applications are submitted. Deepwater Wind anticipates that documentation memorializing the findings of such consultations will be prepared during the timeframe allotted for USACE permitting and NEPA review.

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Comm. 4-4: Please identify all areas over which Deepwater Wind will need to exercise site control (real property rights) and the status of obtaining such controls/rights.

Response: Deepwater Wind is currently undertaking a comprehensive analysis of sites and will propose final sites prior to the submission of all permit applications. Deepwater Wind will need site control for the following:

- · <u>Wind Turbine Site:</u> Deepwater Wind will need to lease from CRMC the submerged lands on which the wind turbines will be sited. An application for such lease will be submitted to CRMC concurrently with the application for State Assent.
- Submarine Cable Right-of-Way: Deepwater Wind will require a right-of-way grant for the submarine transmission cable from Block Island to the mainland. For that portion of the cable that lies in State waters (i.e. < 3 miles from shore), the CRMC has the authority to issue such right-of-way and an application will be submitted concurrently with the application for State Assent. For that portion of the cable that lies in federal waters (i.e. > 3 miles from shore), the Minerals Management Service of the U.S. Department of the Interior has jurisdiction for issuing such a right-of-way.
- Cable Landing Locations: Deepwater Wind will require temporary site control on Block Island and the mainland for the horizontal directional drilling and installation of a buried vault and junction box which is necessary for the "landing" of the submarine cable connecting Block Island with the mainland. Deepwater Wind has begun preliminary discussions with the State of Rhode Island and the municipalities which may host these cable landing locations.
- · <u>Upland Cable Right-of-Way</u>: On Block Island and the mainland, Deepwater Wind will require a right-of-way grant for the buried cable connecting the junction box at the landing with the substations.
- Substation Locations: Deepwater Wind will require a site for the installation of a substation near the existing distribution system on Block Island and the mainland. On Block Island, this will most likely be located on the property of the Block Island Power Company. On the mainland, it will most likely be located adjacent to either National Grid's feeder 3302 or feeder 3307.
- Staging, Storage and Lay-Down: During the construction of the subject Project, Deepwater Wind will require a site at which to receive shipments

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and mobilize installation vessels. Deepwater Wind has executed a development agreement with the Quonset Development Corporation for such space.

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Comm. 4-5: Please indicate whether the SAMP eliminates the need for an Environmental Impact Statement (EIS) or if an EIS may still be required? If an EIS may still be required, how will such a requirement affect the Project timeline?

Response: The choice of NEPA documentation is the prerogative of the U.S. Army Corps of Engineers (USACE) as the lead NEPA agency. Deepwater Wind is aware of no provision under NEPA providing that a process such as the SAMP pre-empts the need for an EIS, however, upon its review of the data collected from the SAMP as well as Deepwater Wind's baseline environmental monitoring programs, the USACE may, in its discretion, determine that an Environmental Assessment (EA)/Finding of No Significant Impact will satisfy the requirements of NEPA. If an EIS is required, the impact on project timeline will depend on the scope of additional analysis required.

DEEPWATER WIND BLOCK ISLAND, LLC RESPONSE TO

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Comm. 4-6: Please provide visual simulations of the subject Project from the following locations:

- a. Southeast Harbor, Block Island
- b. Old Harbor, Block Island
- c. North Light, Block Island
- d. Watch Hill, RI
- e. Point Judith, RI
- f. Newport, RI (Brenton Point State Park)
- g. Sakonnet Point, RI
- h. Gayhead Martha's Vineyard, MA

Response: Based on this request, Deepwater Wind has commissioned a specialist firm to prepare the renderings referenced above. Deepwater Wind assumes that in bullet "a" above, the Commission intends to reference the Block Island Southeast Lighthouse. All such renderings will be provided to the Commission promptly upon their completion.

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Comm. 4-7: Mr. Moore testifies that Deepwater Wind has established a Regional Development Office in Providence and a supporting office on Block Island. Please indicate the number of employees employed at these sites by FTE and part-time status. Please also indicate the number of employees expected to be permanently employed at each of these offices once the subject project is operational, assuming all regulatory approvals are received.

Response: The Regional Development Office in Providence employs two full time employees. The supporting office on Block Island is staffed on a part-time basis. In addition Deepwater Wind employs various Rhode Island based consultants. The Regional Development Office will maintain its staff, at minimum, until the larger Utility Scale Wind Farm Project is complete, assuming it goes forward. The Block Island office will maintain its staff, at minimum, until the Block Island Wind Farm is complete, and for a period of time afterward that has yet to be determined. Deepwater Wind also incorporates by references its response to Comm. 2-6.

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Comm. 4-8: Please identify all qualified vendors and their addresses, specifically as to the installation of the components of the Project, particularly the undersea cables, the turbines and the substations. Please provide the basis to assume that Deepwater Wind will be contracting with RI-based vendors and/or vendors that will hire from the RI labor

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force.

Response: Deepwater Wind has identified and initiated discussions with a number of prospective vendors regarding the supply of major components for the Block Island Wind Farm Project. Deepwater Wind has engaged Noble Denton to conduct a review of all prospective vendors and to prepare a list of qualified vendors. Based on guidance from Noble Denton, Deepwater Wind is currently soliciting qualifications packages from these prospective vendors. While Deepwater Wind has not yet determined which specific vendors are qualified for the construction of the Block Island Wind Farm, Deepwater Wind anticipates reaching such a decision by the end of April.

It is important to note, however, that there are no undersea cable, offshore wind turbine, or substation vendors based in Rhode Island, or that currently have manufacturing facilities in Rhode Island. Deepwater Wind has entered into a development agreement with the Quonset Development Corporation for land and facilities and currently plans to use such land and facilities as the logistics center for the construction, operations and maintenance of the Block Island Wind Farm, which is one basis for assuming that Deepwater Wind will be contracting with vendors that will hire from the RI labor force. Further, under the terms of the Joint Development Agreement between Deepwater Wind and the State of Rhode Island, Deepwater Wind has made a number of job creation commitments that are detailed in Section VIII of that agreement.

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Comm. 4-9: Please confirm whether or not Deepwater Wind is responsible for the legal and consultant fees associated with the Town of New Shoreham's involvement in the instant docket.

Response: Yes, Deepwater Wind has agreed to take responsibility for the documented legal and consultant fees associated with the Town of New Shoreham's involvement in the instant docket. Deepwater Wind has made this commitment simply to prevent the Block Island Wind Farm Project from having any negative cost impact on the Town's budget, as it was expected that the Town would want to intervene in the Docket to review and evaluate the Project.

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Comm. 4-10: Please provide a copy of any written agreement between Deepwater Wind and the Town of New Shoreham related to cost responsibility for any aspect of the subject project.

Response: No such documentation exists but this understanding has been agreed upon by both parties and discussed at open public meetings by the Town Council.

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Comm. 4-11: With regard to Mr. Moore's testimony that the wind turbine generators have an expected 20-year operating life, please provide the following:

a. Written documentations supporting the operating life

Response: No such written documentation is available. However, this is a generally accepted norm in project finance. The Vindeby Offshore Wind Farm in Denmark, which uses Siemens wind turbines, has been in continuous operation since 1991.

Wind turbine generators do not have a fixed lifespan. The principal components of a wind farm – including the rotor blades, the drive shaft and main bearings, the gearbox and the generator--have a variable life span based on the level and quality of maintenance. It is not unusual for some of these components to be replaced, as part of a preventative maintenance program. As the revenue stream of the PPA is structured on an as-available basis (i.e. Deepwater Wind is only paid for power actually produced), we have a very strong incentive to adopt a maintenance regime that ensures the longevity of the Block Island Wind Farm. In addition, this maintenance plan will be vetted and approved by the Project's lenders, who also have a direct interest in the Project's longevity.

b. Explanation of whether the 20-year operating life includes analysis of the effects of the weather elements to which the wind turbine generators are expected to be exposed.

Response: Yes. Deepwater Wind will acquire offshore wind turbines that have been specifically designed to withstand marine conditions.

c. Whether Deepwater Wind expects to continue operations of the project beyond twenty (20) years and if so, at what additional cost and to whom does Deepwater Wind expect to be responsible for the cost?

Response: Like any generating facility, Deepwater Wind will operate the Block Island Wind Farm for so long as it has lawful authority to do so, and it is economically justifiable to do so. Deepwater Wind will be responsible for all costs of operating the facility.

d. Assuming the Project operates for twenty (20) or more years and is ultimately abandoned, who will be responsible for ensuring removal of all equipment?

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Response: Please see the response to Comm. 4-12, which is incorporated herein by reference.

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Comm. 4-12: At the public hearing conducted on January 5, 2010 at Block Island, Mr. Rich discussed a decommissioning bond. Please provide the following information:

- a. The statutory reference upon which Mr. Rich based his statement.
- b. The amount of the bond.
- c. Who pays for the bond?
- d. Is the bond included in the PPA price?

Response: In reviewing Mr. Rich's response, it appears that he misspoke about the statutory provisions for a decommissioning bond. Mr. Rich meant to communicate that the decommissioning costs have always been part of the overall project costs, and Deepwater Wind has always recognized that it will be responsible for the cost of decommissioning the Block Island Wind Farm. The decommissioning costs will not affect the price of the PPA.

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Comm. 4-13: Please provide any data that analyzes the effects of storm damage, catastrophic failure or saltwater corrosion on wind turbines as related to currently operating offshore wind projects.

Response: Deepwater Wind refers to its responses in 4-11(a) and (b). Deepwater Wind does not have access to the data referenced in this question, however to Deepwater Wind's knowledge, there has been no catastrophic failure of any offshore wind turbine manufactured by any vendor that Deepwater Wind is considering.

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Comm. 4-14: Please explain the basis for Mr. Moore's statement that utility scale offshore wind plants have "all-in costs much less than solar electric, wave/tidal/ocean current or new nuclear", including analysis of any recently developed projects of these types.

Response: Mr. Moore's statement is based on Deepwater Wind's current assessment of cost of offshore wind and independent reports on cost of alternative energy resources. Deepwater Wind estimates the total construction cost of the Block Island Wind Farm to be \$200,478,927 (excluding development and financing costs), equivalent to \$6,961/kW. Deepwater Wind also estimates 20%-25% cost savings for the large wind farm, bringing down the unit cost to \$5,220-\$5,570/kW level.

According to the Lawrence Berkeley National Lab Database, average installed cost of solar photovoltaic capacity in the U.S. was approximately \$7,400/kW in 2008. The National Renewable Energy Lab (NREL) estimates the average capacity factor for solar PV is approximately 20%. The expected capacity factor for the Block Island Wind Farm is 40%. Capacity factor is a measurement of the power output of intermittent power sources like wind and solar. Stated another way, the Block Island wind farm will produce twice as much power for \$6,961/kW as a solar photovoltaic project costing \$7,400/kW.

Concentrated solar thermal and wave/tidal/ocean current are emerging technologies. Cost data for these technologies are scarce and anecdotal. For example, the 10MW Solar Two project (Molten Salt Power Tower technology) located in Barstow, California, cost \$6,920/kW to install and had an average annual capacity factor of 21%. As noted above, the Block Island wind farm has a similar installed cost, but has a much higher production estimate due to the estimated capacity factor of 40%.

According to an article published on December 5, 2008 in the Providence Business News, the then-proposed Grays Harbor tidal project would cost about \$6,000/kW to build with a 25% expected capacity factor. Such a project would cost 15% less than the Block Island wind farm on a per-unit of installed-cost basis. However, because it has a capacity factor of 25% compared to the estimated capacity factor of 40% for the Block Island wind farm, such a project would only generate about 62% of the estimated power output of the Block Island wind farm.

Cost estimates for a newly-built nuclear plant vary significantly. However, there are significant supply constraints for reactor equipment, diminishing expertise within the U.S., higher insurance costs, and uncertain costs associated with nuclear waste storage. On this basis, Deepwater Wind believes that the all-in cost of a nuclear plant would be higher than a large offshore wind project. In any event, Deepwater Wind does not believe

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that there would be community or statewide support for a nuclear powered solution to Rhode Island's energy needs.

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Comm. 4-15: Please indicate the depth of the water in the area in which Deepwater Wind is proposing to construct the subject Project. Please indicate the expected depth of the water in the area in which Deepwater Wind anticipates constructing the utility-scale project.

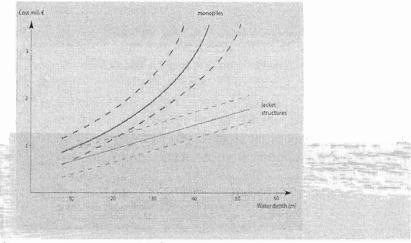
Response: Deepwater Wind is currently evaluating alternative sites for the Block Island wind farm. These sites range in depth from approximately 80 feet to approximately 110 feet. Deepwater Wind has not yet identified the specific sites in which the utility-scale project would be built. However, based on the preliminary areas identified by the SAMP, Deepwater Wind anticipates water depths of approximately 110 feet up to approximately 150 feet.

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Comm. 4-16: Would it be possible to construct the Block Island Project using monopole technology? If so, please indicate the estimated difference in cost between the proposed technology and alternative technologies.

Response: It would be possible to use monopole technology, but monopole technology would afford far fewer opportunities for local economic development than the jacket technology proposed by Deepwater Wind. Monopoles are imported from the vendor in a single piece, rather than being fabricated or assembled locally, as Deepwater Wind plans with the jacket technology. In addition, the vessels and equipment necessary to install monopole foundations in the water depths around Block Island and Rhode Island Sound are highly specialized, creating greater potential risk with respect to project scheduling, which could jeopardize available Federal incentives. The relative cost of monopoles to Deepwater Wind's proposed jacket technology is illustrated in the graph below prepared by OWEC Tower AS, a Deepwater Wind consultant. As shown in the illustration, at water depths of 30 to 40m (90 to 120 feet), monopoles command a cost premium of 50% to 100%. This cost premium associated with monopoles in deeper waters is due to the need for large quantities of steel to stabilize a much taller pole in deeper waters and the associated installation costs. Typically, monopoles have been restricted to waters of no more than 75 feet in depth. Therefore, for reasons related to both economic development and cost, Deepwater Wind proposes the jacket technology as the preferred solution in Block Island and Rhode Island sounds.



Source: OWEC Tower AS

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Comm. 4-17: Please provide the exact location of the subject Project, including coordinates and as shown on a nautical map.

Response: Deepwater Wind provided a map in response to CLF 8. The eight dots on this map represent the locations at which Deepwater Wind has performed detailed geotechnical borings. Deepwater Wind performed additional geotechnical analysis based on the results of those surveys The data collected is still being processed.

The exact location and coordinates of the Block Island Wind Farm will be determined through the State and Federal permitting process, which has not yet been completed. Deepwater Wind is evaluating alternative sites based on data collected by the SAMP as well as Deepwater Wind's own geological, meteorological and biological investigations.

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Comm. 4-18: Please provide the feasibility of connecting the utility-scale project to through a Block Island substation and then to the mainland from Block Island.

Response: Deepwater Wind does not believe it would be possible to construct the Utility Scale Wind Farm Project within the timeframe necessary to qualify for currently existing Federal incentives. In order to qualify for a Department of Energy loan guarantee, a project must commence construction before September 30, 2011. In order to qualify for the Section 48 investment tax credit, a project must be completed before December 31, 2012.

In addition, while connecting the Utility Scale Wind Farm Project to a Block Island substation is technically feasible, doing so would be economically suboptimal for three reasons:

First, it would require considerably more work in the upland environment on both Block Island and the Rhode Island mainland. Specifically, a much larger substation would need to be built on both the Rhode Island mainland and Block Island, and, on the mainland, the cable would need to be run many miles further inland in order to connect to a highervoltage station on the National Grid system.

Second, it would not yield significant savings from a shorter submarine cable for the Utility Scale Wind Farm Project, and instead would add a considerable amount of cost to the Block Island Transmission System. Specifically, the large amount of power generated by the Utility Scale Wind Farm will require multiple conductors, regardless of whether it runs to Block Island or to the Rhode Island mainland directly. The small size of the Block Island Wind Farm allows the Block Island Transmission System to use a single threecore cable. Assuming the Block Island Wind Farm is built first, routing the Utility Scale Wind Farm through Block Island would require one or more additional cables to be laid between Block Island and the mainland. As such, it would not yield savings, but instead would likely add cost to both projects.

Third, given that the Block Island Wind Farm Project and the Utility Scale Wind Farm Project are separate projects with separate time frames, it could cause ratepayers to pay for an asset which would be significantly underutilized. Specifically, if the cable system connecting Block Island to the mainland were sized for the capacity of the Utility Scale Wind Farm Project, the vast majority of that system would remain unused until the Utility Scale Wind Farm Project was built, which would place an unnecessary burden on the ratepayers.

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Comm. 4-19: Please provide the expected transmission line voltage, redundancy, number of circuits, and anticipated interconnection point of the utility-scale project to the mainland.

Response: Deepwater Wind is evaluating two alternative points of interconnection for the utility-scale project: (1) West Kingston and (2) Brayton Point. The technical characteristics of the transmission line for the utility-scale project will be determined based consultations with National Grid and ISO-NE as part of the ISO-NE interconnection request process.

While the final technical specifications of the Block Island Transmission System are, by necessity, subject to review and approval by National Grid and ISO-NE, Deepwater Wind currently anticipates that the cable connecting Block Island with the RI mainland will be a 34.5 kV, non-redundant, single-circuit 3-core cable system which will interconnect with one of either National Grid Feeder 3302 or National Grid Feeder 3307.

For the utility-scale project, Deepwater Wind is evaluating two alternative points of interconnection: (1) West Kingston and (2) Brayton Point. The technical characteristics of the transmission line for the utility-scale project will be determined based on consultations with National Grid and ISO-NE as part of the ISO-NE interconnection request process. Currently, Deepwater Wind is reviewing with National Grid and ISO-NE a design for the transmission system connecting the utility scale project to the mainland consisting of two sets of three 230 kV single-core cables laid in parallel. While this design is not fully redundant, the either set of conductors could carry at approximately 50% of the utility scale project's output, which would allow power to be delivered even if one of the sets of cables failed.

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Comm. 4-20: Please indicate whether there have been any discussions regarding the design, size, and interconnection point of the transmission line to the mainland that is associated with the utility-scale project. If so, with whom have those discussions occurred?

Response: Deepwater Wind has held detailed discussions with ISO-NE, National Grid and Northeast Utilities regarding the possible interconnection of the utility-scale project. ISO-NE, in cooperation with the two utilities, has completed an interconnection feasibility study and is proceeding with a system impact study, in accordance with ISO-NE interconnection procedures.

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CERTIFICATION

I hereby certify that on January 19, 2010, I sent a copy of the within to all parties set forth on the attached Service List by electronic mail and copies to Luly Massaro, Commission Clerk, by electronic mail and regular mail.

Name/Address	E-mail Distribution	Phone/FAX
Thomas R. Teehan, Esq.	Thomas.teehan@us.ngrid.com	401-784-7667
National Grid.		401-784-4321
280 Melrose St.	Joanne.scanlon@us.ngrid.com	
Providence, RI 02907		
Ronald T. Gerwatowski, Esq.	Ronald.gerwatowski@us.ngrid.com	
National Grid	Celia.obrien@us.ngrid.com	-
40 Sylvan Rd.		_
Waltham, MA 02451	Jennifer.brooks@us.ngrid.com	
Alan Mandl, Esq.	amandl@smithduggan.com	617-228-4464
Smith & Duggan LLP		781-259-1112
Lincoln North		
55 Old Bedford Road		
Lincoln, MA 01773		
Jerry Elmer, Esq.	Jelmer@clf.org	401-351-1102
Conservation Law Foundation		401-351-1130
55 Dorrance Street		
Providence, RI 02903		
Katherine A. Merolla, Esq.,	KAMLAW2344@aol.com	401-739-2900
Merolla & Accetturo		401-739-2906
469 Centerville Road Suite 206		
Warwick, RI 02886		
Richard A. Sinapi, Esq.	dicks@sfclaw.com	401-944-9690
Sinapi Formisano & Company, Ltd.		401-943-9040
100 Midway Place, Suite 1		
Cranston, RI 02920-5707		
Alan Shoer, Esq.	Ashoer@apslaw.com	401-274-7200
Adler Pollock & Sheehan		401-751-0604
One Citizens Plaza, 8 th Floor		
Providence, RI 02903-1345		
Joseph J. McGair, Esq.	jjm@petrarcamcgair.com	401-821-1330
Petrarca & McGair, Inc.	mikdelia@biaero.com	401-823-0970
797 Bald Hill Rd.		_
Warwick RI 02886	maggie@biaero.com	
William P Short III	w.shortiii@verizon.net	

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Leo Wold, Esq. Dept. of Attorney General 150 South Main St. Providence, RI 02903	Steve.scialabba@ripuc.state.ri.us Al.contente@ripuc.state.ri.us	401-222-2424 - 401-222-3016
Jon Hagopian, Esq. Dept. of Attorney General 150 South Main St. Providence, RI 02903	jhagopian@riag.ri.gov Dmacrae@riag.ri.gov Mtobin@riag.ri.gov	
Paul Rich, Deepwater Wind	Prich@dwwind.com	401-648-0604
Bill Moore, Deepwater Wind	Wmoore@dwwind.com	401-648-0604
Susan Demacedo, Deepwater Wind	susan@dwwind.com	401-648-0606
David Schwartz, Deepwater Wind	dschwartz@dwwind.com	
David Nickerson from Mystic River Energy Group, LLC	dave@nickersons.org	
Richard LaCapra, LaCapra Associates	Rlacapra@lacapra.com	212-675-8123
Richard Hahn	rhahn@lacapra.com	
Mary Neal Lacapra Associates 1 Washington Mall, 9th floor Boston, MA 02108	mneal@lacapra.com	
Original & nine (9) copies w/:	Lmassaro@puc.state.ri.us	401-780-2017
Luly E. Massaro, Commission Clerk Public Utilities Commission	Cwilson@puc.state.ri.us	401-941-1691
89 Jefferson Blvd. Warwick RI 02889	Nucci@puc.state.ri.us	
warwick R1 02889	Anault@puc.state.ri.us	
	Sccamara@puc.state.ri.us	
Thomas Kogut, DPU	tkogut@ripuc.state.ri.us	
Matt Auten, Office of Lt. Governor	mauten@ltgov.state.ri.us	
Julian Dash, RIEDC	jdash@riedc.com	
Rep. Ehrhardt	rep-ehrhardt@rilin.state.ri.us	

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Joseph A. Keough, Jr., Esquire # 4925

KEOUGH & SWEENEY, LTD.

100 Armistice Boulevard Pawtucket, RI 02860

(401) 724-3600