

December 30, 2009

VIA HAND DELIVERY & ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities
89 Jefferson Boulevard
Warwick, RI 02888

**RE: Docket 4111 – Review of Proposed Town of New Shoreham Project
Pursuant to RI General Laws § 39-26.1-7
Responses to Division Data Requests – Set 1**

Dear Ms. Massaro:

Enclosed please find ten (10) copies of the National Grid's¹ responses to the Division of Public Utilities and Carriers' (the "Division") First Set of Data Requests issued on December 22, 2009, in the above-captioned proceeding.

In this transmittal, National Grid is providing responses to the following Division Data Requests: DIV 1-1; DIV 1-2; DIV 1-12; DIV 1-13; DIV 1-14; DIV 1-15; DIV 1-16; DIV 1-17 and DIV 1-18. The Company's responses to the Division's remaining Data Requests will be forthcoming.

Please be advised that the Company is seeking protective treatment of a confidential attachment, identified as Attachment DIV 1-16, as permitted by Commission Rule 1.2(g) and by R.I.G.L. § 38-2-2(4)(i)(B). The Company has submitted a Motion for Protective Treatment along with a copy of confidential Attachment DIV 1-16 on CD-ROM to the Commission and the Division pending a determination on the Company's Motion.

Thank you for your attention to this transmittal. If you have any questions, please feel free to contact me at (781) 907-2121.

Very truly yours,



Jennifer Brooks Hutchinson

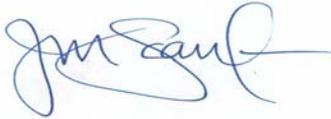
Enclosures

cc: Docket 4111 Service List
Leo Wold, Esq.

¹ Submitted on behalf of The Narragansett Electric Company d/b/a National Grid ("Company").

Certificate of Service

I hereby certify that a copy of the cover letter and / or any materials accompanying this certificate has been electronically transmitted, sent via U.S. mail or hand-delivered to the individuals listed below.



Joanne M. Scanlon

December 30, 2009
Date

**National Grid – Review of Proposed Town of New Shoreham Project
Docket No. 4111 - Service List Updated 12/29/2009**

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STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
RHODE ISLAND PUBLIC UTILITIES COMMISSION

**Review of Proposed Town of
New Shoreham Project
Pursuant to R.I.G.L. § 39-26.1-7**

Docket No. 4111

**NATIONAL GRID'S REQUEST
FOR PROTECTIVE TREATMENT OF CONFIDENTIAL INFORMATION**

National Grid¹ hereby requests that the Rhode Island Public Utilities Commission (“Commission”) provide confidential treatment and grant protection from public disclosure of certain confidential, competitively sensitive, and proprietary information submitted in this proceeding, as permitted by Commission Rule 1.2(g) and R.I.G.L. § 38-2-2(4)(i)(B). National Grid also hereby requests that, pending entry of that finding, the Commission preliminarily grant National Grid’s request for confidential treatment pursuant to Rule 1.2 (g)(2).

I. BACKGROUND

On December 30, 2009, National Grid is filing with the Commission certain responses to the Division of Public Utilities and Carriers (the “Division”) First Set of Data Requests. Specifically, National Grid is filing its response to the Division’s Data Request 1-16. In support of its response to Data Request 1-16, National Grid is attaching redacted and un-redacted versions of an excel workbook, identified as Attachment DIV

¹ The Narragansett Electric Company d/b/a National Grid (“National Grid” or the “Company”).

1-16. This workbook incorporates all of the analyses referenced in the direct testimony of one of National Grid's witnesses, Mr. Madison N. Milhous, Jr., and contains, among other things, a summary of the existing pricing schedule as well as the pricing schedule for a 6, 7 and 8 turbine project over a contract term of fifteen (15) and twenty (20) years. The un-redacted version of Attachment DIV 1-16 also contains the annual 7x24 forecast and monthly peak/off-peak forecasts, as well as the long-term price projections for capacity, energy and renewable energy certificates ("RECs"), which information is set forth in a confidential report prepared by Energy Security Analysis, Inc. ("ESAI"). This ESAI forecast is also contained in Exhibit 5 to Mr. Milhous' testimony, filed with the Commission on December 9, 2009, for which National Grid simultaneously filed a Motion for Protective Treatment. National Grid subsequently filed a Motion for Protective Treatment on December 17, 2009, with respect to an attachment to National Grid's Response to the Commission's Data Request 2-1 that also contained information derived from the same ESAI forecast.

As set forth in National Grid's December 9, 2009 Motion for Protective Treatment and its December 17, 2009 Motion for Protective Treatment, ESAI prepared the above-referenced report acting as consultant to National Grid and at National Grid's request. Under National Grid's arrangement with ESAI, the energy, capacity and REC forecasts are considered proprietary. Therefore, National Grid requests that the Commission give the un-redacted version of Attachment DIV 1-16, which contains information identical to that which is contained in the ESAI report, confidential treatment.

II. LEGAL STANDARD

The Commission's Rule 1.2(g) provides that access to public records shall be granted in accordance with the Access to Public Records Act ("APRA"), R.I.G.L. §38-2-1, *et seq.* Under APRA, all documents and materials submitted in connection with the transaction of official business by an agency is deemed to be a "public record," unless the information contained in such documents and materials falls within one of the exceptions specifically identified in R.I.G.L. §38-2-2(4). Therefore, to the extent that information provided to the Commission falls within one of the designated exceptions to the public records law, the Commission has the authority under the terms of APRA to deem such information to be confidential and to protect that information from public disclosure.

In that regard, R.I.G.L. §38-2-2(4)(i)(B) provides that the following types of records shall not be deemed public:

Trade secrets and commercial or financial information obtained from a person, firm, or corporation which is of a privileged or confidential nature.

The Rhode Island Supreme Court has held that this confidential information exemption applies where disclosure of information would be likely either (1) to impair the Government's ability to obtain necessary information in the future; or (2) to cause substantial harm to the competitive position of the person from whom the information was obtained. Providence Journal Company v. Convention Center Authority, 774 A.2d 40 (R.I.2001).

The first prong of the test is satisfied when information is voluntarily provided to the governmental agency and that information is of a kind that would customarily not be released to the public by the person from whom it was obtained. Providence Journal, 774 A.2d at 47.

In addition, the Court has held that the agencies making determinations as to the disclosure of information under APRA may apply the balancing test established in Providence Journal v. Kane, 577 A.2d 661 (R.I.1990). Under that balancing test, the Commission may protect information from public disclosure if the benefit of such protection outweighs the public interest inherent in disclosure of information pending before regulatory agencies.

II. BASIS FOR CONFIDENTIALITY

The information regarding ESAI forecasts contained in the un-redacted version of Attachment DIV 1-16 is derived from the ESAI report contained in Exhibit 5 to Mr. Milhous' testimony. As was stated in National Grid's December 9, 2009 Motion for Protective Treatment in connection with Exhibit 5, the information was developed by ESAI through its proprietary methods of analysis and was provided to National Grid on a confidential basis. The ESAI report contains information that is not publicly available. National Grid is providing the un-redacted version of Attachment DIV 1-16 to the Commission and the Division on a voluntary basis to assist the Commission with its decision-making in this proceeding. Disclosure of this information would directly reveal the ESAI forecast values, which were treated as confidential in National Grid's December 9, 2009 and December 17, 2009 filings. As was further stated in National Grid's December 9, 2009 Motion for Protective Treatment and its December 17, 2009 Motion for Protective Treatment, such disclosure could adversely affect ESAI's competitive position and would tend to make it less likely that such information would be provided voluntarily in the future. Moreover, such disclosure would impede National

Grid's future ability to obtain this type of proprietary information from third-party consultants or would increase the cost at which that information could be obtained.

III. CONCLUSION

Accordingly, the Company requests that the Commission grant protective treatment to the un-redacted version of Attachment DIV 1-16.

WHEREFORE, the Company respectfully requests that the Commission grant its Motion for Protective Treatment as stated herein.

Respectfully submitted,

NATIONAL GRID

By its attorney,

A handwritten signature in cursive script, appearing to read "Jennifer Brooks Hutchinson", written in black ink on a white background.

Jennifer Brooks Hutchinson (RI Bar #6176)
National Grid
40 Sylvan Road
Waltham, MA 02451
(781) 907-2121

Dated: December 30, 2009

Division Data Request 1-1

Request:

For any offshore wind project for which Mr. Hamal provides a PPA price, please state whether or not that PPA price includes the cost of transmission from the offshore locations to the mainland. Also provide the basis for that determination.

Response:

The prices provided were taken from the source material referenced in the testimony and exhibits, and this material was used in preparing this response. The Bluewater PPS states the seller is responsible for interconnection facilities at the point of receipt, which is at the 230 kV bus at the Indian River Substation on the PJM grid (the mainland). The Ontario feed-in tariff (and supporting standard definitions) states that the connection point is the existing electric system, either the Independent Electricity System Operator controlled grid (the transmission system) or one of the distribution systems controlled by others (the mainland). Such details are not available for the European data, although it seems reasonable to assume that deliveries would be made at a landfall, and this would be the mainland in most circumstances.

Division Data Request 1-2

Request:

Please provide the calculations that converted prices from Euros to dollars, including all assumptions in regards to Mr. Hamal's testimony, page 3. Also describe the assumptions that Mr. Hamal would need to make in order to project prices for 2013.

Response:

Please see the attached work papers for calculations converting prices in Euros to dollars. When reviewing this analysis, I determined that I made an error transcribing the Spain 2009 price. Correcting this error changes the 2009 price from \$167/MWh to \$181/MWh. I have attached a revised Exhibit 3 to my testimony.

Forecasts for 2013 and 2023 were not provided in several instances, due to a lack of information. In order to forecast 2013 prices, one would need a forecast of electricity market prices for the relevant geographic regions. In addition, in some regions one would also need a forecast of the renewable obligation credit (ROC) price. These inputs were not available in the source documentation that was relied upon.

<HELP> for explanation.

CurrencyFRD

SPOT & FORWARD RATES										
Curve	Chart	Refresh	EUR - USD		Source	Use Selected Sources				
Pricing Date	12/07/09				Price Type	Contributed Prices				
Pts Format	Conventional		Source	ECN		Display	Direct Bid/Ask			
<input checked="" type="checkbox"/> Show Long Terms	<input checked="" type="checkbox"/> Show IMM Terms									
Standard Rates						Spot Rates				
Dates	Pts - Bid	Ask	Fwd - Bid	Ask	Days	Dates	Pts - Bid	Ask	Fwd - Bid	Ask
ON 12/04/09	-0.03	-0.02	1.504575	1.504889						
1M 12/07/09	0.14	0.27	1.504573	1.504886						
3M 12/07/09	1.5046	1.5049	1.504600	1.504900						
6M 12/08/09	-0.20	-0.04	1.504580	1.504896						
9M 12/14/09	-0.41	-0.33	1.504559	1.504867						
1Y 12/16/09	-0.55	-0.35	1.504545	1.504865						
1Y 12/21/09	-0.75	-0.66	1.504525	1.504834						
1Y 12/28/09	-1.05	-0.93	1.504495	1.504807						
1Y 01/07/10	-1.57	-1.33	1.504443	1.504767						
1Y 02/08/10	-3.30	-3.00	1.504270	1.504600		12/02/09			1.504573	1.504886
1Y 03/08/10	-5.69	-5.24	1.504031	1.504376		01/02/10	-1.28	-0.94	1.504445	1.504792
1Y 03/17/10	-6.31	-5.99	1.503969	1.504301					1.504573	1.504886
1Y 04/07/10	-8.29	-7.79	1.503771	1.504121		12/02/09			1.504573	1.504886
1Y 05/07/10	-11.35	-10.60	1.503465	1.503840		01/02/10	-1.28	-0.94	1.504445	1.504792
1Y 06/07/10	-14.60	-13.60	1.503140	1.503540					1.504573	1.504886
1Y 06/16/10	-15.60	-14.60	1.503040	1.503440		12/02/09			1.504573	1.504886
1Y 09/07/10	-29.54	-27.66	1.501646	1.502134		01/02/10	-1.28	-0.94	1.504445	1.504792
1Y 09/15/10	-30.90	-29.40	1.501510	1.501960					1.504573	1.504886
1Y 12/07/10	-46.65	-44.65	1.499935	1.500435		12/02/09			1.504573	1.504886
						01/02/10	-1.28	-0.94	1.504445	1.504792

<HELP> for explanation.
Screen Printed

CurrencyFRD

SPOT & FORWARD RATES											
Curve	Chart	Refresh	EUR	USD	Source	User Selected Sources					
Pricing Date	12/07/10				Price Type	Contributed Prices					
Pts Format	Conventional	Source	ECN	Display	Bid - Bid/Ask						
<input checked="" type="checkbox"/> Show Long Terms		<input checked="" type="checkbox"/> Show IMM Terms									
Dates	Pts - Bid	Ask	Fwd - Bid	Ask	Days	Dates	Pts - Bid	Ask	Fwd - Bid	Ask	
01 06/16/10	-15.60	-14.60	1.503040	1.503440							
02 09/07/10	-29.54	-27.66	1.501646	1.502134							
03 09/15/10	-30.90	-29.40	1.501510	1.501960							
04 12/07/10	-46.65	-44.65	1.499935	1.500435							
05 03/07/11	-62.80	-57.80	1.498320	1.499120							
06 06/07/11	-76.25	-69.25	1.496975	1.497975							
07 12/07/11	-91.03	-81.05	1.495497	1.496795							
08 12/07/12	-68.99	-49.01	1.497701	1.499999							
09 12/09/13	-1.31	28.61	1.504469	1.507761							
10 12/08/14	86.10	131.13	1.513210	1.518013					1.504573	1.504886	
11 12/07/15	185.74	238.36	1.523174	1.528736			-1.28	-0.94	1.504445	1.504792	
12 12/07/16	268.12	338.18	1.531412	1.538718					1.504573	1.504886	
13 12/07/17	349.50	439.50	1.539550	1.548850			-1.28	-0.94	1.504445	1.504792	
14 12/07/18	434.10	524.10	1.548010	1.557310							
15 12/09/19	491.80	621.80	1.553780	1.557080					1.504573	1.504886	
16 12/09/24	435.24	513.36	1.548124	1.556236			-1.28	-0.94	1.504445	1.504792	
17 12/07/29	807.32	921.64	1.585332	1.597064							
18 12/07/34	1663.61	1669.12	1.670961	1.671812					1.504573	1.504886	
19 12/07/39	2890.86	3116.68	1.793686	1.816568			-1.28	-0.94	1.504445	1.504792	

Workpaper to Exhibit 3: Exchange Rate Calculations

		Price (€/MWh)	Exchange rate dated	EUR-USD	US \$
Germany	projects in operation before end of 2015	€150	12/4/2009	1.504732	\$226
Germany	all other projects	€130	12/4/2009	1.504732	\$196
Germany	projects in operation before end of 2015	€150	12/9/2013	1.506115	\$226
Germany	all other projects	€130	12/9/2013	1.506115	\$196
Germany	projects in operation before end of 2015	€150	12/9/2024	1.55218	\$233
Germany	all other projects	€130	12/9/2024	1.55218	\$202
UK	Renewable certificate market price with tax incentive	€88 €64 €152	12/4/2009	1.504732	\$229
Denmark		€67	12/4/2009	1.504732	\$101
France		€130	12/4/2009	1.504732	\$196
Spain	premium Est market price 2007	€84.30 €36.00 €120	12/4/2009	1.504732	\$181
Sweden	certificate est market price 2007 environmental bonus	€22 €25 €15 €62	12/4/2009	1.504732	\$93

Notes:

1) Exchange rate and forward from Bloomberg, accessed 12/4/2009. We use the average of the bid and ask price. For our 2023 price, we use the 15 year forward dated 12/9/2024 (the closest date available).

Summary of PPA Prices for Offshore Wind Power Projects

	Project	2009 Price	2013 Price	2023 Price	Source/Note
1	United Kingdom	\$229/MWh			1
2	France	\$196/MWh			2
3	Spain	\$181/MWh			3
4	Denmark	\$101/MWh			4
5	Sweden	\$93/MWh			5
6	Germany Feed-In Tariff Price	\$196/MWh and \$226/MWh for projects in operation by the end of 2015	\$196/MWh and \$226/MWh for projects in operation by the end of 2015	\$202/MWh and \$233/MWh for projects in operation by the end of 2015	6
7	Delmarva Bluewater	\$126/MWh	\$139/MWh	\$177/MWh	7
8	Feed-In Tariff Prices for Renewable Energy Projects in Ontario, Canada Base Date: September 30, 2009	\$176/MWh	\$186/MWh	\$190/MWh	8

Sources/Notes:

1) Financing of Offshore Wind Farms - Challenges and Solutions, HSH Nordbank, March 2009, p. 5. HSH Nordbank estimate of UK Offshore Wind Price as equal to power price from long term PPA + green certificate. Offshore Wind Energy, 2009 Issue, p. 35. UK price of 15.23 cents/kWh (Euros) = 8.82 cents/kWh certificate + an estimated 6.41 cents/kWh for market price. Euro exchange rates and forwards (used for projects 1 - 6) from Bloomberg, accessed 12/4/2009. We use the average of the bid and ask price.

2) Offshore Wind Energy, 2009 Issue, p. 35. France's price appears fixed for 10 years and then has a variable tariff.

3) Offshore Wind Farms in Europe, KPMG, 2007, p. 20, 27. Spain provides a fixed price of 8.43 cents/kWh (Euros) plus the market price (estimated at 3.6 cents/kWh (Euros) in 2007) for 20 years for offshore wind projects. Payment is capped at 16.4 cents/kWh (Euros).

4) Offshore Wind Energy, 2009 Issue, p. 35. Denmark's price is fixed for about 14 years (50,000 full load hours) and then the market price applies. This price may be in addition to the market price -- the reports are ambiguous. "The tariff is guaranteed in addition to the market and the basic price and is calculated on the basis of the offer made by the bidders in the tender procedure" (Offshore Wind Farms in Europe, KPMG, 2007, p. 20).

5) Offshore Wind Farms in Europe, KPMG, 2007, p. 20, 27. Sweden provides an estimated 6.19 cents/kWh for offshore wind projects in 2007 comprised of a certificate component of 2.18 cents/kWh (Euros) plus the market price (estimated at 2.49 cents/kWh (Euros) in 2007 and an environmental bonus of 1.52 (bonus through 2009).

6) Global Wind Energy Council, Germany Section. The initial 15 cents/kWh (Euros) will be paid for a period of 12 years, and 3.5 cents/kWh (Euros) thereafter. For offshore wind farms starting operation after 2015, the initial tariff is reduced by 5% per year, so projects starting operation in 2016 will receive 13 cents/kWh – 5%, etc.

7) PPA between DelMarVa Power and Light Company and Bluewater Wind Delaware LLC, June 23, 2008. Price starts at \$120 in 2007 and escalates at 2.5% per year thereafter.

8) Feed-In Tariff Prices for Renewable Energy Projects in Ontario; Base Date: September 30, 2009, Commercial Operation Date: 9/30/2012; http://fit.powerauthority.on.ca/Storage/98/10718_FIT_Pricing_Schedule_-_Final_September_30_2009_PV_10MW.pdf; http://fit.powerauthority.on.ca/Storage/98/10741_FIT_Contract.pdf; CPI information from the Bank of Canada. See <http://www1.bank-banque-canada.ca/en/cpi.html>

We assume a 2% annual increase in inflation/CPI, per the Bank of Canada's target rate. See <http://www1.bank-banque-canada.ca/en/inflation/index.html>

Prices converted to US dollars at exchange rate forwards from Bloomberg. For the 2009 rate, we use the exchange rate on 10/27/2009. For the 2013 rate, we use the 4 year forward, dated 10/28/13; for the 2023 rate, we use the 15 year forward, dated 10/28/2024 (the closest date available), and use the average of the bid and ask price.

Division Data Request 1-12

Request:

Referring to the testimony of Mr. Milhous, Exhibit 9 estimates the ESAI market price based on 24-7 pricing. Please explain whether he uses the same price pattern for the analyses of the above market cost of the Deepwater project.

Response:

National Grid primarily relied on the ESAI annual 7x24 pricing for its estimates of the market value of capacity, energy and RECs. As indicated on page 15 of the testimony, energy prices were provided as monthly peak/offpeak prices for 2010 through 2019, and as annual 7x24 prices for 2010 through 2031. As noted in the response to Division Data Request 1-13, the market value of the project output was also estimated using the monthly peak/offpeak pricing, and a monthly peak/offpeak projection of output provided by Deepwater in its proposal. It was found that the two estimates agreed within approximately one percent, the monthly estimates being slightly lower.

Division Data Request 1-13

Request:

Has Mr. Milhous reviewed the projected hourly pattern of offshore wind generation in Rhode Island, and if so, please explain whether the market pricing based on that pattern would produce more or less above market cost than the estimate made in his testimony.

Response:

In its proposal, Deepwater provided an Energy Resource Plan, based on existing meteorological data and meso-scale modeling, and an estimate of the monthly peak/offpeak output at the P50 capacity factor of 40%. (The P50 capacity factor has a probability of 50%.) This schedule, a copy of which is attached to this response, was used to estimate the market value of the project output using the ESAI monthly peak/offpeak forecast and the Synapse seasonal peak/offpeak forecast. (Note that the annual output in this schedule is slightly higher than provided by Deepwater in later pricing schedules.) As noted in the response to Division Data Request 1-12, the estimates using the ESAI monthly forecast and the annual 7/24 forecast closely agreed. No hourly patterns were examined.

SECTION 5: OPERATIONAL PARAMETERS**5.1 OPERATING CHARACTERISTICS**

Nameplate Capacity	<u>28.8 MW</u>
Net Capacity at Average Site conditions	<u>11.5 MW</u>
Net Capacity Offered Under this RFP	<u>11.5 MW⁶</u>

Deepwater Wind believes we have sized the project – and its expected output – within the limits defined in National Grid’s RFP; we are prepared to address any questions or concerns National Grid may have regarding the wind farm’s projected electrical output.

ENERGY GENERATION

Expected Gross Annual Energy Production	<u>121,225 MWh/yr</u>
Expected Net Annual Energy Production	<u>101,091 MWh/yr</u>

Expected Peak and Off-Peak Monthly Production⁷

Month	On-Peak (MWh/Mon)	Off-Peak (MWh/Mon)
January	6370	4054
February	5380	3339
March	6100	3610
April	5760	3074
May	5728	2954
June	5358	2865
July	4703	2294
August	4069	2213
September	3737	2263
October	5019	2977
November	5515	3472
December	6238	3999
Total	63,976	37,115

The calculation of MWh in the above table is based upon ISO-NE’s definition of On-Peak and Off-Peak hours, under which “On-Peak Hours” are defined as “hours ending 8:00AM through 11:00PM on all non-NEC holiday weekdays” and “Off-Peak Hours” are defined as “all hours that are not On-Peak hours”.

⁶ Deepwater Wind believes we have sized the project – and its expected output – within the limits defined in National Grid’s RFP; we are prepared to address any questions or concerns National Grid may have regarding the wind farm’s projected electrical output.

⁷ If the level of generation is expected to vary over the life of the contract the bidder should provide an expanded table for the term of the contract.

Division Data Request 1-14

Request:

If National Grid has not reviewed the projected hourly and monthly pattern of offshore wind generation in Rhode Island please explain, the reason for not engaging in such a review.

Response:

National Grid did utilize a schedule of monthly generation provided by Deepwater in its response to the RFP. National Grid did not examine the projected hourly and monthly pattern of offshore wind generation independently, because no such independent information was available. All information regarding the effect of wind patterns on capacity factor and monthly distribution of annual production was provided by Deepwater. See the response to Division Data Request 1-13.

Division Data Request 1-15

Request:

Please provide the basis for the estimate that the above market cost of supplying 10% of National Grid's load with offshore wind in 2013 would be \$100 million. What impact would a \$100 million rate increase represent to National Grid's ratepayers assuming today's rates were in effect at the time of the increase.

Response:

The above market cost estimate referred to in the question was not estimating the above market cost of supplying 10% of National Grid's load with offshore wind in 2013. Rather, it was used as an illustration to show the above market cost to customers, if the pricing proposed by Deepwater set the pricing standard for all renewable resources (regardless of technology), assuming the full statutory requirement of 90 MW was met at such price. To construct the hypothetical estimate, the higher energy output of 788,400 MWh replaced the projected Deepwater output of 100,915 MWh in the spreadsheets, using the ESAI forecast. The higher energy output is derived from the statutory requirement of 90 MW, and is equivalent to 90 MW at 100% capacity factor. The impact on the typical 500 kWh monthly residential bill would be \$7.22 per month.

Division Data Request 1-16

Request:

Please provide the electronic files and work papers for Exhibit 7- Milhous and Exhibit 9- Milhous in excel spreadsheet form with all formulae intact.

Response:

The attached workbook incorporates all of the analyses referenced in the testimony. The workbook utilizes the complete ESAI Annual 7x24 forecast and monthly peak/offpeak forecasts, as well as the Synapse Seasonal peak/offpeak forecast, in connection with the pricing schedules provided by Deepwater at various points in the negotiation process. The first summary sheet is based on the PPA pricing; the second summary sheet includes the pricing provided by Deepwater for six, seven, and eight turbine projects for PPA terms of fifteen and twenty years. Because it contains the ESAI forecast, the complete workbook is considered confidential and is being provided to the Division and to the Commission. National Grid has previously filed a motion for confidential treatment of the ESAI forecast on December 9, 2009. A PDF version with the columns containing the ESAI forecast redacted is being provided to other parties.

Several notes are in order with respect to the Synapse forecast, which was used as a second forecast to corroborate the estimates. First, the spreadsheet entries are converted to nominal dollars from the 2009 dollars in the spreadsheets in the Synapse Report using a rate of 2%. Second, with respect to carbon allowance pricing, the spreadsheet in Appendix B of the Synapse Report incorporates the effect of REGGI only. However, the spreadsheet in the body of the report includes a federal carbon program, but extends only to the year 2024. After consultation with Synapse, the energy forecast from the spreadsheet in the body of the report was extrapolated beyond 2024 consistent with the trend for the Massachusetts hub prices. Last, the Synapse Report does not provide a capacity price beyond 2024; this forecast was also extrapolated.

It should be noted that the initial pricing schedules provided by Deepwater indicated reduced availability in the first two complete years of operation. In particular, for a project comprised of eight turbine generators, having a total nameplate rating of 28.8 MW, the annual output at the P50 (50% probability) capacity factor was estimated at 100,915 MWh. The output in 2013 and 2014 was estimated at 85,778 MWh and 95,869 MWh, respectively, corresponding to reductions of 15% and 5%, respectively, in the two years. In its analysis, National Grid chose to use the full P50 capacity factor over the life of the project, in part to avoid the appearance of a higher escalation rate in the earlier years. This difference is small, approximately \$2.6 million in

The Narragansett Electric Company
d/b/a National Grid
Docket No. 4111
In Re: Review of Proposed
Town of New Shoreham Project
Responses to Division Data Requests – Set 1
Issued December 22, 2009

Division Data Request 1-16 (cont.)

estimated above-market cost for the term of the project, of which approximately \$1.9 million would be attributed to the first year.

Prepared by or under the supervision of: Madison N. Milhous, Jr.

SUMMARY ANALYSIS OF DEEPWATER WIND BLOCK ISLAND PROJECT

Project Size	01/02/09 RI MOU Nameplate Rating	Statute Rating @ 100% CF	Nameplate Rating @ 40% CF
BI Project	20 MW	10 MW	25 MW
Offshore Project	385 MW	100-150 MW	250-375 MW

Effect of Block Island Project Size on Pricing	8 WTG	7 WTG	6 WTG
Rating at Statutory CF (MW)	11.52	10.08	8.64
Rating at 40% CF (MW)	28.8	25.2	21.6
2009 Bundled Energy Rate (\$/MWh) 15-year term	\$ 264.21	\$ 280.17	\$ 300.56
2009 Bundled Energy Rate (\$/MWh) 20-year term	\$ 236.30	\$ 250.14	\$ 268.00

Indicative Pricing from 2008 Proposal to RI	
Capacity	\$74.24/KW-yr
Energy	\$91.04/MWh
REC	\$57.92/MWh (ACP)
Bundled Rate @ 39% CF	\$155/MWh

Above Market Comparisons (8WTG and DWW 20 yr pricing)				
	ESAI 7x24 Pricing	ESAI Monthly Pricing	Synapse Yrly Pricing	Synapse Seasonal Pricing
2012	\$ 1,934,724	\$ 1,274,587	\$ 1,989,902	\$ 2,382,577
2013	\$ 12,377,137	\$ 12,174,342	\$ 12,714,597	\$ 12,602,541
2014	\$ 13,731,626	\$ 13,521,057	\$ 12,988,240	\$ 12,870,799
2015	\$ 13,725,001	\$ 13,506,278	\$ 13,629,247	\$ 13,521,199
2016	\$ 13,418,825	\$ 13,190,914	\$ 14,040,205	\$ 13,950,993
2017	\$ 13,620,891	\$ 13,405,258	\$ 13,770,942	\$ 13,686,589
2018	\$ 13,948,124	\$ 13,727,197	\$ 14,032,575	\$ 13,938,274
2019	\$ 14,302,924	\$ 14,077,476	\$ 15,076,077	\$ 14,982,145
2020	\$ 14,804,580		\$ 16,126,712	\$ 16,050,996
2021	\$ 15,978,725		\$ 17,595,086	\$ 17,545,645
2022	\$ 17,059,630		\$ 18,531,344	\$ 18,486,632
2023	\$ 18,356,944		\$ 19,641,594	\$ 19,609,889
2024	\$ 19,998,948		\$ 20,861,035	\$ 20,802,606
2025	\$ 21,765,986		\$ 22,377,480	\$ 22,328,570
2026	\$ 23,318,612		\$ 23,190,646	\$ 23,134,511
2027	\$ 24,290,747		\$ 24,024,525	\$ 23,961,129
2028	\$ 25,309,776		\$ 24,879,665	\$ 24,808,985
2029	\$ 26,378,181		\$ 25,755,614	\$ 25,677,636
2030	\$ 27,498,586		\$ 26,652,939	\$ 26,567,664
2031	\$ 28,693,036		\$ 27,573,226	\$ 27,480,672
2032	\$ 29,946,727		\$ 28,517,062	\$ 28,417,262
TOTAL	\$ 390,459,730		\$ 393,968,713	\$ 392,807,313
NPV @ 7%	\$ 173,871,638		\$ 176,663,580	\$ 176,217,468

Extrapolated using MA trend; Synapse forecast for RI was for REGGI only after 2024.
Synapse yearly pricing was developed as a composite of seasonal peak/offpeak prices.
A project with 8 wind turbine generators conforms with the amended statute. DWW's original proposal was based on 8 wind turbines.

SUMMARY ANALYSIS OF DEEPWATER WIND BLOCK ISLAND PROJECT

Project Size	01/02/09 RI MOU	Statute
	Nameplate Rating	Rating @ 100% CF
BI Project	20 MW	10 MW
Offshore Project	385 MW	100-150 MW
	Nameplate Rating @ 40% CF	25 MW
		250-375 MW

Effect of Block Island Project Size on Pricing			
	8 WTG	7 WTG	6 WTG
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Rating at 40% CF (MW)		28.8	25.2
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Indicative Pricing from 2008 Proposal to RI	
Capacity	\$74.24/KW-yr
Energy	\$91.04/MWh
REC	\$57.92/MWh (ACP)
Bundled Rate @ 39% CF	\$155/MWh

	Above Market Comparisons (6WTG and DWW 20 yr pricing)				Above Market Comparisons (7WTG and DWW 20 yr pricing)				Above Market Comparisons (8WTG and DWW 20 yr pricing)			
	ESAI 7x24 Pricing	ESAI Monthly Pricing	Synapse Yrly Pricing	Synapse Seasonal Pricing	ESAI 7x24 Pricing	ESAI Monthly Pricing	Synapse Yrly Pricing	Synapse Seasonal Pricing	ESAI 7x24 Pricing	ESAI Monthly Pricing	Synapse Yrly Pricing	Synapse Seasonal Pricing
2012	\$ 2,264,088	\$ 1,427,226	\$ 2,305,471	\$ 2,671,953	\$ 2,335,474	\$ 1,487,741	\$ 2,383,754	\$ 2,784,226	\$ 2,398,181	\$ 1,543,240	\$ 2,453,359	\$ 2,887,079
2013	\$ 14,091,394	\$ 13,947,656	\$ 14,344,489	\$ 14,268,805	\$ 14,630,676	\$ 14,459,830	\$ 14,925,954	\$ 14,834,504	\$ 15,118,209	\$ 14,920,194	\$ 15,455,669	\$ 15,348,393
2014	\$ 15,276,049	\$ 15,126,772	\$ 14,718,508	\$ 14,639,079	\$ 15,949,197	\$ 15,771,778	\$ 15,298,733	\$ 15,202,803	\$ 16,568,575	\$ 16,362,953	\$ 15,825,188	\$ 15,712,696
2015	\$ 15,445,248	\$ 15,290,159	\$ 15,373,432	\$ 15,301,350	\$ 16,080,371	\$ 15,896,056	\$ 15,996,586	\$ 15,909,112	\$ 16,660,966	\$ 16,447,363	\$ 16,565,211	\$ 16,462,284
2016	\$ 15,395,887	\$ 15,234,222	\$ 15,861,923	\$ 15,804,281	\$ 15,955,674	\$ 15,763,570	\$ 16,499,383	\$ 16,428,639	\$ 16,457,907	\$ 16,235,296	\$ 17,079,286	\$ 16,995,375
2017	\$ 15,733,750	\$ 15,581,617	\$ 15,846,288	\$ 15,792,615	\$ 16,279,206	\$ 16,098,100	\$ 16,410,501	\$ 16,344,265	\$ 16,766,099	\$ 16,555,951	\$ 16,916,149	\$ 16,837,281
2018	\$ 16,172,193	\$ 16,016,425	\$ 16,235,532	\$ 16,174,733	\$ 16,718,317	\$ 16,532,844	\$ 16,792,212	\$ 16,717,537	\$ 17,203,353	\$ 16,988,103	\$ 17,287,804	\$ 17,199,180
2019	\$ 16,638,654	\$ 16,479,845	\$ 17,218,520	\$ 17,158,346	\$ 17,186,583	\$ 16,997,429	\$ 17,863,093	\$ 17,789,014	\$ 17,671,909	\$ 17,452,337	\$ 18,445,062	\$ 18,357,006
2020	\$ 17,221,691		\$ 18,213,292	\$ 18,167,139	\$ 17,789,089		\$ 18,945,956	\$ 18,888,099	\$ 18,888,099	\$ 18,291,863	\$ 19,613,995	\$ 19,544,361
2021	\$ 18,316,104		\$ 19,528,376	\$ 19,502,300	\$ 18,986,432		\$ 20,400,750	\$ 20,366,178	\$ 19,587,594	\$ 21,203,955	\$ 21,160,808	\$ 21,160,808
2022	\$ 19,348,890		\$ 20,452,677	\$ 20,430,533	\$ 20,107,464		\$ 21,395,216	\$ 21,365,084	\$ 20,795,102	\$ 22,266,816	\$ 22,228,618	\$ 22,228,618
2023	\$ 20,550,623		\$ 21,514,012	\$ 21,502,020	\$ 21,423,717		\$ 22,547,787	\$ 22,529,351	\$ 22,223,702	\$ 23,508,352	\$ 23,483,391	\$ 23,483,391
2024	\$ 22,019,957		\$ 22,666,522	\$ 22,634,899	\$ 23,047,989		\$ 23,802,315	\$ 23,760,820	\$ 24,000,286	\$ 24,862,373	\$ 24,810,923	\$ 24,810,923
2025	\$ 23,590,610		\$ 24,049,231	\$ 24,025,173	\$ 24,788,586		\$ 25,323,644	\$ 25,290,813	\$ 25,907,794	\$ 26,519,289	\$ 26,477,602	\$ 26,477,602
2026	\$ 25,009,812		\$ 24,913,836	\$ 24,884,802	\$ 26,348,073		\$ 26,236,102	\$ 26,197,298	\$ 27,605,293	\$ 27,477,328	\$ 27,428,668	\$ 27,428,668
2027	\$ 26,001,844		\$ 25,802,176	\$ 25,768,153	\$ 27,406,547		\$ 27,173,602	\$ 27,128,805	\$ 28,727,179	\$ 28,460,958	\$ 28,405,299	\$ 28,405,299
2028	\$ 27,038,321		\$ 26,716,737	\$ 26,676,723	\$ 28,513,342		\$ 28,136,993	\$ 28,086,196	\$ 29,901,261	\$ 29,471,151	\$ 29,408,478	\$ 29,408,478
2029	\$ 28,122,138		\$ 27,655,210	\$ 27,611,214	\$ 29,670,950		\$ 29,126,202	\$ 29,069,406	\$ 31,130,389	\$ 30,507,822	\$ 30,438,132	\$ 30,438,132
2030	\$ 29,253,979		\$ 28,619,741	\$ 28,570,779	\$ 30,881,939		\$ 30,141,995	\$ 30,079,214	\$ 32,417,495	\$ 31,571,848	\$ 31,495,151	\$ 31,495,151
2031	\$ 30,452,080		\$ 29,612,220	\$ 29,558,323	\$ 32,165,815		\$ 31,185,978	\$ 31,117,243	\$ 33,783,864	\$ 32,664,054	\$ 32,580,378	\$ 32,580,378
2032	\$ 31,704,722		\$ 30,632,469	\$ 30,573,681	\$ 33,509,791		\$ 32,258,829	\$ 32,184,183	\$ 35,215,891	\$ 33,786,225	\$ 33,695,615	\$ 33,695,615
TOTAL	\$ 429,647,935		\$ 432,279,663	\$ 431,716,901	\$ 449,775,233		\$ 452,845,583	\$ 452,072,787	\$ 468,432,912	\$ 471,941,894	\$ 470,956,719	\$ 470,956,719
NPV @ 7%	\$ 193,542,891		\$ 195,636,847	\$ 195,477,934	\$ 202,039,934		\$ 204,482,882	\$ 204,231,272	\$ 209,859,086	\$ 212,651,038	\$ 212,305,293	\$ 212,305,293

	Above Market Comparisons (6WTG and DWW 15 yr pricing)				Above Market Comparisons (7WTG and DWW 15 yr pricing)				Above Market Comparisons (8WTG and DWW 15 yr pricing)			
	ESAI 7x24 Pricing	ESAI Monthly Pricing	Synapse Yrly Pricing	Synapse Seasonal Pricing	ESAI 7x24 Pricing	ESAI Monthly Pricing	Synapse Yrly Pricing	Synapse Seasonal Pricing	ESAI 7x24 Pricing	ESAI Monthly Pricing	Synapse Yrly Pricing	Synapse Seasonal Pricing
2012	\$ 2,742,237	\$ 1,704,393	\$ 2,783,620	\$ 3,192,443	\$ 2,850,047	\$ 1,786,022	\$ 2,898,327	\$ 3,344,365	\$ 2,944,582	\$ 1,859,973	\$ 2,999,759	\$ 3,481,869
2013	\$ 16,919,795	\$ 16,780,984	\$ 17,172,890	\$ 17,102,133	\$ 17,673,522	\$ 17,507,976	\$ 17,968,800	\$ 17,882,650	\$ 18,350,516	\$ 18,158,139	\$ 18,687,976	\$ 18,586,338
2014	\$ 18,202,842	\$ 18,058,664	\$ 17,645,301	\$ 17,570,971	\$ 19,098,887	\$ 18,926,955	\$ 18,448,422	\$ 18,357,979	\$ 19,913,907	\$ 19,714,120	\$ 19,170,521	\$ 19,063,863
2015	\$ 18,474,216	\$ 18,324,406	\$ 18,402,402	\$ 18,335,596	\$ 19,340,436	\$ 19,161,800	\$ 19,256,651	\$ 19,174,856	\$ 20,123,359	\$ 19,915,795	\$ 20,027,605	\$ 19,930,716
2016	\$ 18,530,818	\$ 18,374,614	\$ 18,996,854	\$ 18,944,673	\$ 19,329,648	\$ 19,143,421	\$ 19,873,356	\$ 19,808,490	\$ 20,041,398	\$ 19,825,037	\$ 20,662,778	\$ 20,585,116
2017	\$ 18,979,182	\$ 18,832,703	\$ 19,091,720	\$ 19,043,701	\$ 19,771,503	\$ 19,596,480	\$ 19,902,797	\$ 19,842,645	\$ 20,474,725	\$ 20,271,045	\$ 20,624,775	\$ 20,552,376
2018	\$ 19,531,156	\$ 19,381,239	\$ 19,594,494	\$ 19,539,547	\$ 20,333,352	\$ 20,154,176	\$ 20,407,247	\$ 20,338,869	\$ 21,042,160	\$ 20,833,604	\$ 21,126,611	\$ 21,044,682
2019	\$ 20,114,931	\$ 19,962,177	\$ 20,694,796	\$ 20,640,679	\$ 20,927,888	\$ 20,745,251	\$ 21,604,398	\$ 21,536,837	\$ 21,644,933	\$ 21,432,289	\$ 22,418,086	\$ 22,336,958
2020	\$ 20,819,066		\$ 21,810,667	\$ 21,770,781	\$ 21,661,079		\$ 22,817,946	\$ 22,766,835	\$ 22,404,149		\$ 23,726,281	\$ 23,663,819
2021	\$ 22,039,874		\$ 23,252,147	\$ 23,232,558	\$ 22,993,522		\$ 24,407,841	\$ 24,380,249	\$ 23,844,189		\$ 25,460,549	\$ 25,424,826
2022	\$ 23,202,841		\$ 24,306,629	\$ 24,291,198	\$ 24,254,952		\$ 25,542,704	\$ 25,519,797	\$ 25,200,042		\$ 26,671,756	\$ 26,641,241
2023	\$ 24,539,953		\$ 25,503,442	\$ 25,498,399	\$ 25,716,019		\$ 26,840,089	\$ 26,829,130	\$ 26,782,033		\$ 28,066,683	\$ 28,049,672
2024	\$ 26,148,650		\$ 26,795,215	\$ 26,770,785	\$ 27,491,286		\$ 28,245,611	\$ 28,211,857	\$ 28,719,072		\$ 29,581,158	\$ 29,537,938
2025	\$ 27,863,864		\$ 28,322,485	\$ 28,305,871	\$ 29,387,292		\$ 29,922,349	\$ 29,887,530	\$ 30,791,071		\$ 31,402,566	\$ 31,369,396
2026	\$ 29,432,168		\$ 29,336,193	\$ 29,314,862	\$ 31,107,486		\$ 30,995,515	\$ 30,965,002	\$ 32,660,126		\$ 32,532,160	\$ 32,492,317
2027	\$ 30,579,357		\$ 30,379,690	\$ 30,353,641	\$ 32,332,849		\$ 32,099,903	\$ 32,063,689	\$ 33,958,613		\$ 33,692,391	\$ 33,645,857
2028	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -
2029	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -
2030	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -
2031	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -
2032	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -	\$ -		\$ -	\$ -
TOTAL	\$ 338,120,954		\$ 344,088,545	\$ 343,907,838	\$ 354,269,767		\$ 361,231,957	\$ 360,920,780	\$ 368,894,873		\$ 376,851,656	\$ 376,406,983
NPV @ 7%	\$ 183,153,407		\$ 186,139,003	\$ 186,138,361	\$ 191,688,960		\$ 195,172,155	\$ 195,104,768	\$ 199,392,294		\$ 203,373,085	\$ 203,236,858

Extrapolated using MA trend; Synapse forecast for RI was for REGGI only after 2024.
Synapse yearly pricing was developed as a composite of seasonal peak/offpeak prices.
A project with 6 wind turbine generators (highlighted column) strictly conforms with the statute. DWW's proposal was based on 8 wind turbines.
Given available turbine sizes and the current projection of CF, the 7 turbine project would slightly exceed the 10 MW limit, without any apparent economic benefit.

REDACTED VERSION

ESAI Rhode Island Forecast					6 WTG Project 8.64 MW: 15 year contract term				6 WTG Project 8.64 MW: 20 year contract term				
	Energy 7x24	RI REC Forecast	Energy & RECs	Capacity \$/kW-mo	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	ESAI Monthly Summary (from below)	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	ESAI Monthly Summary (from below)	% over 24x7 forecast
2009					N/A	\$ 300.56			N/A	\$ 268.00			
2010													
2011													
2012					13245.1	\$ 333.23	\$ 2,742,237	\$ 1,704,393	13245.1	\$ 297.13	\$ 2,264,088	\$ 1,427,226	
2013					75686.4	\$ 344.90	\$ 16,919,795	\$ 16,780,984	75686.4	\$ 307.53	\$ 14,091,394	\$ 13,947,656	
2014					75686.4	\$ 356.97	\$ 18,202,842	\$ 18,058,664	75686.4	\$ 318.30	\$ 15,276,049	\$ 15,126,772	
2015					75686.4	\$ 369.46	\$ 18,474,218	\$ 18,324,406	75686.4	\$ 329.44	\$ 15,445,248	\$ 15,290,159	99.0%
2016					75686.4	\$ 382.39	\$ 18,530,818	\$ 18,374,614	75686.4	\$ 340.97	\$ 15,395,887	\$ 15,234,222	98.9%
2017					75686.4	\$ 395.78	\$ 18,979,182	\$ 18,832,703	75686.4	\$ 352.90	\$ 15,733,750	\$ 15,581,617	99.0%
2018					75686.4	\$ 409.63	\$ 19,531,156	\$ 19,381,239	75686.4	\$ 365.25	\$ 16,172,193	\$ 16,016,425	99.0%
2019					75686.4	\$ 423.97	\$ 20,114,931	\$ 19,962,177	75686.4	\$ 378.04	\$ 16,638,654	\$ 16,479,845	99.0%
2020					75686.4	\$ 438.80	\$ 20,819,066		75686.4	\$ 391.27	\$ 17,221,691		
2021					75686.4	\$ 454.16	\$ 22,039,874		75686.4	\$ 404.96	\$ 18,316,104		
2022					75686.4	\$ 470.06	\$ 23,202,841		75686.4	\$ 419.14	\$ 19,348,890		
2023					75686.4	\$ 486.51	\$ 24,539,953		75686.4	\$ 433.80	\$ 20,550,523		
2024					75686.4	\$ 503.54	\$ 26,148,650		75686.4	\$ 448.99	\$ 22,019,957		
2025					75686.4	\$ 521.16	\$ 27,863,864		75686.4	\$ 464.70	\$ 23,590,610		
2026					75686.4	\$ 539.40	\$ 29,432,168		75686.4	\$ 480.97	\$ 25,009,812		
2027					75686.4	\$ 558.28	\$ 30,579,357		75686.4	\$ 497.80	\$ 26,001,844		
2028									75686.4	\$ 515.22	\$ 27,038,321		
2029									75686.4	\$ 533.26	\$ 28,122,138		
2030									75686.4	\$ 551.92	\$ 29,253,979		
2031									75686.4	\$ 571.24	\$ 30,452,080		
2032									75686.4	\$ 591.23	\$ 31,704,722		
					SUM		\$ 338,120,954				\$ 429,647,935		
					NPV @ 7%		\$ 183,153,407				\$ 193,542,891		

Six 3.6 MW Siemens wind turbine generators for a combined
 Capacity Factor for FCM 28%

21.6 MW

REDACTED VERSION

	Energy Prices (ESAI)		DWW Production		Capacity	RECs	Market Value	DWW Contract Cost (15Yr)	Above Mkt Costs (15 Yr)	DWW Contract Cost (20Yr)	Above Mkt Costs (20 Yr)
	On-Peak	Off-Peak	On-Peak	Off-Peak	\$/kw-mo	\$/kw-mo					
December-12	4679	2999					\$ 854,063.86	\$ 2,558,456.63	\$ 1,704,392.77	\$ 2,281,289.86	\$ 1,427,225.99
January-13	4778	3041					\$ 1,044,111.56	\$ 2,696,428.20	\$ 1,652,316.64	\$ 2,404,269.54	\$ 1,360,157.98
February-13	4035	2504					\$ 842,901.82	\$ 2,255,387.33	\$ 1,412,485.50	\$ 2,011,015.55	\$ 1,168,113.73
March-13	4575	2708					\$ 858,621.46	\$ 2,511,734.25	\$ 1,653,112.79	\$ 2,239,587.23	\$ 1,380,965.76
April-13	4320	2306					\$ 749,547.50	\$ 2,285,134.95	\$ 1,535,587.45	\$ 2,037,540.02	\$ 1,287,992.52
May-13	4296	2216					\$ 736,690.35	\$ 2,245,816.35	\$ 1,509,126.00	\$ 2,002,481.60	\$ 1,265,791.25
June-13	4019	2149					\$ 793,737.74	\$ 2,127,084.53	\$ 1,333,346.79	\$ 1,896,614.39	\$ 1,102,876.65
July-13	3527	1721					\$ 714,096.27	\$ 1,809,948.98	\$ 1,095,852.70	\$ 1,613,840.56	\$ 899,744.29
August-13	3052	1660					\$ 616,072.18	\$ 1,624,996.35	\$ 1,008,924.17	\$ 1,448,927.60	\$ 832,855.41
September-13	2803	1697					\$ 546,449.58	\$ 1,552,050.00	\$ 1,005,600.42	\$ 1,383,885.00	\$ 837,435.42
October-13	3764	2233					\$ 706,461.44	\$ 2,068,365.30	\$ 1,361,903.86	\$ 1,844,257.41	\$ 1,137,795.97
November-13	4136	2604					\$ 817,562.82	\$ 2,324,712.23	\$ 1,507,149.40	\$ 2,072,829.08	\$ 1,255,266.26
December-13	4679	2999					\$ 942,478.07	\$ 2,648,055.98	\$ 1,705,577.90	\$ 2,361,138.46	\$ 1,418,660.38
January-14	4778	3041					\$ 1,005,183.49	\$ 2,790,791.46	\$ 1,785,607.97	\$ 2,488,469.40	\$ 1,483,285.91
February-14	4035	2504					\$ 808,660.57	\$ 2,334,316.07	\$ 1,525,655.51	\$ 2,081,443.28	\$ 1,272,782.71
March-14	4575	2708					\$ 819,568.12	\$ 2,599,634.03	\$ 1,780,065.90	\$ 2,318,019.75	\$ 1,498,451.63
April-14	4320	2306					\$ 715,423.00	\$ 2,365,104.74	\$ 1,649,681.74	\$ 2,108,896.65	\$ 1,393,473.65
May-14	4296	2216					\$ 703,713.60	\$ 2,324,410.16	\$ 1,620,696.55	\$ 2,072,610.45	\$ 1,368,896.85
June-14	4019	2149					\$ 771,650.85	\$ 2,201,523.23	\$ 1,429,872.38	\$ 1,963,035.68	\$ 1,191,384.83
July-14	3527	1721					\$ 696,819.09	\$ 1,873,289.32	\$ 1,176,470.22	\$ 1,670,358.83	\$ 973,539.73
August-14	3052	1660					\$ 593,501.90	\$ 1,681,864.16	\$ 1,088,362.26	\$ 1,499,670.45	\$ 906,168.55
September-14	2803	1697					\$ 526,342.89	\$ 1,606,365.00	\$ 1,080,022.11	\$ 1,432,350.00	\$ 906,007.11
October-14	3764	2233					\$ 676,558.09	\$ 2,140,749.09	\$ 1,464,191.00	\$ 1,908,845.10	\$ 1,232,287.01
November-14	4136	2604					\$ 784,479.27	\$ 2,406,067.04	\$ 1,621,587.77	\$ 2,145,421.58	\$ 1,360,942.30
December-14	4679	2999					\$ 904,276.13	\$ 2,740,726.42	\$ 1,836,450.28	\$ 2,443,827.83	\$ 1,539,551.69
January-15	4778	3041					\$ 1,071,552.22	\$ 2,888,438.28	\$ 1,816,886.06	\$ 2,575,561.92	\$ 1,504,009.70
February-15	4035	2504					\$ 864,802.61	\$ 2,415,991.31	\$ 1,551,188.69	\$ 2,154,290.52	\$ 1,289,487.91
March-15	4575	2708					\$ 882,340.49	\$ 2,690,592.45	\$ 1,808,251.96	\$ 2,399,146.80	\$ 1,516,806.31
April-15	4320	2306					\$ 772,586.22	\$ 2,447,857.23	\$ 1,675,271.01	\$ 2,182,704.72	\$ 1,410,118.50
May-15	4296	2216					\$ 761,260.14	\$ 2,405,738.79	\$ 1,644,478.65	\$ 2,145,148.56	\$ 1,383,888.42
June-15	4019	2149					\$ 838,976.28	\$ 2,278,552.19	\$ 1,439,575.90	\$ 2,031,738.84	\$ 1,192,762.56
July-15	3527	1721					\$ 744,039.50	\$ 1,938,833.72	\$ 1,194,794.21	\$ 1,728,818.76	\$ 984,779.26
August-15	3052	1660					\$ 634,998.65	\$ 1,740,710.79	\$ 1,105,712.14	\$ 1,552,156.56	\$ 917,157.91
September-15	2803	1697					\$ 565,367.29	\$ 1,662,570.00	\$ 1,097,202.71	\$ 1,482,480.00	\$ 917,112.71
October-15	3764	2233					\$ 730,163.34	\$ 2,215,651.62	\$ 1,485,488.28	\$ 1,975,651.68	\$ 1,245,488.34
November-15	4136	2604					\$ 848,481.02	\$ 2,490,252.77	\$ 1,641,771.74	\$ 2,220,507.96	\$ 1,372,026.94
December-15	4679	2999					\$ 972,837.17	\$ 2,836,621.52	\$ 1,863,784.34	\$ 2,529,357.96	\$ 1,556,520.79
January-16	4778	3041					\$ 1,164,141.49	\$ 2,989,525.02	\$ 1,825,383.53	\$ 2,665,703.46	\$ 1,501,561.97
February-16	4035	2504					\$ 941,093.98	\$ 2,500,543.81	\$ 1,559,449.82	\$ 2,229,688.07	\$ 1,288,594.09
March-16	4575	2708					\$ 967,859.74	\$ 2,784,755.18	\$ 1,816,895.44	\$ 2,483,114.03	\$ 1,515,254.29
April-16	4320	2306					\$ 849,737.26	\$ 2,533,524.95	\$ 1,683,787.69	\$ 2,259,096.74	\$ 1,409,359.48
May-16	4296	2216					\$ 846,967.81	\$ 2,489,932.49	\$ 1,642,964.68	\$ 2,220,226.16	\$ 1,373,258.35
June-16	4019	2149					\$ 922,374.61	\$ 2,358,294.73	\$ 1,435,920.12	\$ 2,102,847.23	\$ 1,180,472.62
July-16	3527	1721					\$ 808,562.61	\$ 2,006,687.12	\$ 1,198,124.52	\$ 1,789,325.32	\$ 980,762.71

REDACTED VERSION

	Energy Prices (ES&I)		DWW Production		Capacity	RECs	Market Value	DWW Contract Cost (15Yr)	Above Mkt Costs (15 Yr)	DWW Contract Cost (20Yr)	Above Mkt Costs (20 Yr)
	On-Peak	Off-Peak	On-Peak	Off-Peak	\$/kw-mo	\$/kw-mo					
August-16			3052	1660			\$ 699,573.64	\$ 1,801,630.49	\$ 1,102,056.84	\$ 1,606,480.16	\$ 906,906.51
September-16			2803	1697			\$ 613,143.14	\$ 1,720,755.00	\$ 1,107,611.86	\$ 1,534,365.00	\$ 921,221.86
October-16			3764	2233			\$ 803,410.55	\$ 2,293,192.83	\$ 1,489,782.28	\$ 2,044,797.09	\$ 1,241,386.54
November-16			4136	2604			\$ 935,921.65	\$ 2,577,404.20	\$ 1,641,482.55	\$ 2,298,223.04	\$ 1,362,301.39
December-16			4679	2999			\$ 1,064,740.30	\$ 2,935,894.82	\$ 1,871,154.53	\$ 2,617,882.42	\$ 1,553,142.12
January-17			4778	3041			\$ 1,219,910.82	\$ 3,094,208.04	\$ 1,874,297.22	\$ 2,758,972.20	\$ 1,539,061.38
February-17			4035	2504			\$ 995,170.98	\$ 2,588,104.37	\$ 1,592,933.38	\$ 2,307,701.33	\$ 1,312,530.34
March-17			4575	2708			\$ 1,024,086.74	\$ 2,882,267.85	\$ 1,858,181.11	\$ 2,569,994.25	\$ 1,545,907.51
April-17			4320	2306			\$ 900,546.76	\$ 2,622,240.39	\$ 1,721,693.63	\$ 2,338,138.95	\$ 1,437,592.19
May-17			4296	2216			\$ 885,722.69	\$ 2,577,121.47	\$ 1,691,398.78	\$ 2,297,908.35	\$ 1,412,185.66
June-17			4019	2149			\$ 951,069.24	\$ 2,440,874.21	\$ 1,489,804.96	\$ 2,176,422.53	\$ 1,225,353.28
July-17			3527	1721			\$ 838,392.33	\$ 2,076,954.50	\$ 1,238,562.16	\$ 1,851,930.98	\$ 1,013,538.64
August-17			3052	1660			\$ 752,559.55	\$ 1,864,717.47	\$ 1,112,157.92	\$ 1,662,688.35	\$ 910,128.80
September-17			2803	1697			\$ 662,574.21	\$ 1,781,010.00	\$ 1,118,435.79	\$ 1,588,050.00	\$ 925,475.79
October-17			3764	2233			\$ 844,736.43	\$ 2,373,492.66	\$ 1,528,756.23	\$ 2,116,341.30	\$ 1,271,604.87
November-17			4136	2604			\$ 977,444.55	\$ 2,667,656.15	\$ 1,690,211.59	\$ 2,378,634.23	\$ 1,401,189.67
December-17			4679	2999			\$ 1,122,429.44	\$ 3,038,699.90	\$ 1,916,270.46	\$ 2,709,477.98	\$ 1,587,048.54
January-18			4778	3041			\$ 1,274,376.44	\$ 3,202,487.34	\$ 1,928,110.90	\$ 2,855,524.50	\$ 1,581,148.06
February-18			4035	2504			\$ 1,036,756.50	\$ 2,678,672.98	\$ 1,641,916.48	\$ 2,388,461.06	\$ 1,351,704.56
March-18			4575	2708			\$ 1,071,092.85	\$ 2,983,130.48	\$ 1,912,037.63	\$ 2,659,933.13	\$ 1,588,840.28
April-18			4320	2306			\$ 942,333.14	\$ 2,714,003.57	\$ 1,771,670.42	\$ 2,419,963.88	\$ 1,477,630.73
May-18			4296	2216			\$ 929,945.06	\$ 2,667,305.75	\$ 1,737,360.68	\$ 2,378,325.38	\$ 1,448,380.31
June-18			4019	2149			\$ 992,156.03	\$ 2,526,290.62	\$ 1,534,134.59	\$ 2,252,588.06	\$ 1,260,432.03
July-18			3527	1721			\$ 881,540.85	\$ 2,149,635.83	\$ 1,268,094.98	\$ 1,916,740.69	\$ 1,035,199.84
August-18			3052	1660			\$ 780,220.83	\$ 1,929,971.75	\$ 1,149,750.91	\$ 1,720,875.38	\$ 940,654.54
September-18			2803	1697			\$ 688,209.42	\$ 1,843,335.00	\$ 1,155,125.58	\$ 1,643,625.00	\$ 955,415.58
October-18			3764	2233			\$ 885,488.67	\$ 2,456,551.11	\$ 1,571,062.44	\$ 2,190,404.25	\$ 1,304,915.58
November-18			4136	2604			\$ 1,023,305.34	\$ 2,761,008.61	\$ 1,737,703.27	\$ 2,461,876.31	\$ 1,438,570.97
December-18			4679	2999			\$ 1,170,765.29	\$ 3,145,036.73	\$ 1,974,271.44	\$ 2,804,298.19	\$ 1,633,532.90
January-19			4778	3041			\$ 1,328,544.95	\$ 3,314,597.46	\$ 1,986,052.51	\$ 2,955,516.72	\$ 1,626,971.77
February-19			4035	2504			\$ 1,079,004.76	\$ 2,772,445.82	\$ 1,693,441.06	\$ 2,472,098.07	\$ 1,393,093.31
March-19			4575	2708			\$ 1,118,478.62	\$ 3,087,561.53	\$ 1,969,082.91	\$ 2,753,076.30	\$ 1,634,597.68
April-19			4320	2306			\$ 985,722.47	\$ 2,809,013.24	\$ 1,823,290.76	\$ 2,504,704.02	\$ 1,518,981.55
May-19			4296	2216			\$ 974,241.50	\$ 2,760,680.66	\$ 1,786,439.16	\$ 2,461,607.46	\$ 1,487,365.96
June-19			4019	2149			\$ 1,035,970.54	\$ 2,614,728.98	\$ 1,578,758.44	\$ 2,331,467.19	\$ 1,295,496.65
July-19			3527	1721			\$ 926,437.38	\$ 2,224,888.57	\$ 1,298,451.19	\$ 1,983,859.41	\$ 1,057,422.03
August-19			3052	1660			\$ 806,442.54	\$ 1,997,534.66	\$ 1,191,092.12	\$ 1,781,135.46	\$ 974,692.92
September-19			2803	1697			\$ 717,438.01	\$ 1,907,865.00	\$ 1,190,426.99	\$ 1,701,180.00	\$ 983,741.99
October-19			3764	2233			\$ 925,238.37	\$ 2,542,548.09	\$ 1,617,309.72	\$ 2,267,105.88	\$ 1,341,867.51
November-19			4136	2604			\$ 1,065,712.81	\$ 2,857,663.79	\$ 1,791,950.98	\$ 2,548,084.11	\$ 1,482,371.30
December-19			4679	2999			\$ 1,219,254.77	\$ 3,255,135.67	\$ 2,035,880.90	\$ 2,902,496.61	\$ 1,683,241.84

Year	Capacity
2010/11	
2011/12	
2012/13	2012
2013/14	2013
2014/15	2014
2015/16	2015
2016/17	2016
2017/18	2017
2018/19	2018
2019/20	2019
2020/21	2020
2021/22	2021
2022/23	2022
2023/24	2023
2024/25	2024
2025/26	2025
2026/27	2026
2027/28	2027
2028/29	2028
2029/30	2029
2030/31	2030
	2031
	2032

REDACTED VERSION

ES&I Rhode Island Forecast					7 WTG Project 10.08 MW 15 year contract term				7 WTG Project 10.08 MW 20 year contract term				
	Energy 7x24	RI REC Forecast	Energy & RECs	Capacity \$/kW-mo	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	Monthly Summary (from below)	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	Monthly Summary (from below)	% over 24x7 forecast
2009					N/A	\$ 280.17			N/A	\$ 250.14			
2010													
2011													
2012					15452.6	\$ 310.63	\$ 2,850,047	\$ 1,786,022	15452.6	\$ 277.33	\$ 2,335,474	\$ 1,487,741	
2013					88300.8	\$ 321.50	\$ 17,673,522	\$ 17,507,976	88300.8	\$ 287.04	\$ 14,630,676	\$ 14,459,830	
2014					88300.8	\$ 332.76	\$ 19,098,887	\$ 18,926,955	88300.8	\$ 297.09	\$ 15,949,197	\$ 15,771,778	
2015					88300.8	\$ 344.40	\$ 19,340,436	\$ 19,161,800	88300.8	\$ 307.48	\$ 16,080,371	\$ 15,896,056	98.9%
2016					88300.8	\$ 356.46	\$ 19,329,648	\$ 19,143,421	88300.8	\$ 318.25	\$ 15,955,674	\$ 15,763,570	98.8%
2017					88300.8	\$ 368.93	\$ 19,771,503	\$ 19,596,480	88300.8	\$ 329.38	\$ 16,279,206	\$ 16,098,100	98.9%
2018					88300.8	\$ 381.85	\$ 20,333,352	\$ 20,154,176	88300.8	\$ 340.91	\$ 16,718,317	\$ 16,532,844	98.9%
2019					88300.8	\$ 395.21	\$ 20,927,888	\$ 20,745,251	88300.8	\$ 352.84	\$ 17,186,583	\$ 16,997,429	98.9%
2020					88300.8	\$ 409.04	\$ 21,661,079		88300.8	\$ 365.19	\$ 17,789,089		
2021					88300.8	\$ 423.36	\$ 22,993,522		88300.8	\$ 377.98	\$ 18,986,432		
2022					88300.8	\$ 438.18	\$ 24,254,952		88300.8	\$ 391.21	\$ 20,107,464		
2023					88300.8	\$ 453.51	\$ 25,716,019		88300.8	\$ 404.90	\$ 21,423,717		
2024					88300.8	\$ 469.39	\$ 27,491,286		88300.8	\$ 419.07	\$ 23,047,989		
2025					88300.8	\$ 485.82	\$ 29,387,292		88300.8	\$ 433.74	\$ 24,788,586		
2026					88300.8	\$ 502.82	\$ 31,107,486		88300.8	\$ 448.92	\$ 26,348,073		
2027					88300.8	\$ 520.42	\$ 32,332,849		88300.8	\$ 464.63	\$ 27,406,547		
2028									88300.8	\$ 480.89	\$ 28,513,342		
2029									88300.8	\$ 497.72	\$ 29,670,950		
2030									88300.8	\$ 515.14	\$ 30,881,939		
2031									88300.8	\$ 533.17	\$ 32,165,815		
2032									88300.8	\$ 551.83	\$ 33,509,791		
					SUM		\$ 354,269,767				\$ 449,775,233		
					NPV @ 7%		\$ 191,688,960				\$ 202,039,934		

REDACTED VERSION

	Energy Prices (ESA)		DWW Production		Capacity	RECs	Market Value	DWW Contract Cost (15 Yr)	Above Mkt Costs (15 Yr)	DWW Contract Cost (20 Yr)	Above Mkt Costs (20 Yr)
	On-Peak	Off-Peak	On-Peak	Off-Peak	\$/kw-mo	\$/kw-mo					
December 12			5458	3499			\$ 996,407.84	\$ 2,782,429.40	\$ 1,786,021.56	\$ 2,484,148.81	\$ 1,487,740.97
January 13			5574	3547			\$ 1,218,130.15	\$ 2,932,401.50	\$ 1,714,271.35	\$ 2,618,091.84	\$ 1,399,961.69
February 13			4708	2922			\$ 983,385.46	\$ 2,452,763.69	\$ 1,469,378.23	\$ 2,189,864.04	\$ 1,206,478.58
March 13			5338	3159			\$ 1,001,725.04	\$ 2,731,544.38	\$ 1,729,819.33	\$ 2,438,763.60	\$ 1,437,038.56
April 13			5040	2690			\$ 874,472.08	\$ 2,485,114.63	\$ 1,610,642.55	\$ 2,218,747.44	\$ 1,344,275.36
May 13			5012	2585			\$ 859,472.07	\$ 2,442,355.13	\$ 1,582,883.05	\$ 2,180,571.12	\$ 1,321,099.05
June 13			4688	2507			\$ 926,027.36	\$ 2,313,232.69	\$ 1,387,205.32	\$ 2,065,288.68	\$ 1,139,261.32
July 13			4115	2007			\$ 833,112.32	\$ 1,968,343.56	\$ 1,135,231.25	\$ 1,757,366.52	\$ 924,254.20
August 13			3560	1936			\$ 718,750.88	\$ 1,767,205.13	\$ 1,048,454.25	\$ 1,577,787.12	\$ 859,036.24
September 13			3270	1980			\$ 637,524.51	\$ 1,687,875.00	\$ 1,050,350.49	\$ 1,506,960.00	\$ 869,435.49
October 13			4392	2605			\$ 824,205.02	\$ 2,249,374.75	\$ 1,425,169.73	\$ 2,008,275.36	\$ 1,184,070.34
November 13			4826	3038			\$ 953,823.29	\$ 2,528,155.44	\$ 1,574,332.15	\$ 2,257,174.92	\$ 1,303,351.63
December 13			5458	3499			\$ 1,099,557.75	\$ 2,879,796.06	\$ 1,780,238.31	\$ 2,571,124.92	\$ 1,471,567.17
January 14			5574	3547			\$ 1,172,714.07	\$ 3,035,103.96	\$ 1,862,389.89	\$ 2,709,757.89	\$ 1,537,043.82
February 14			4708	2922			\$ 943,437.33	\$ 2,538,667.64	\$ 1,595,230.31	\$ 2,266,536.75	\$ 1,323,099.42
March 14			5338	3159			\$ 956,162.81	\$ 2,827,212.15	\$ 1,871,049.34	\$ 2,524,150.91	\$ 1,567,988.10
April 14			5040	2690			\$ 834,660.16	\$ 2,572,151.61	\$ 1,737,491.45	\$ 2,296,431.43	\$ 1,461,771.27
May 14			5012	2585			\$ 820,999.20	\$ 2,527,894.53	\$ 1,706,895.33	\$ 2,256,918.46	\$ 1,435,919.26
June 14			4688	2507			\$ 900,259.32	\$ 2,394,249.80	\$ 1,493,990.47	\$ 2,137,599.69	\$ 1,237,340.36
July 14			4115	2007			\$ 812,955.61	\$ 2,037,281.51	\$ 1,224,325.90	\$ 1,818,896.39	\$ 1,005,940.78
August 14			3560	1936			\$ 692,418.88	\$ 1,829,098.53	\$ 1,136,679.65	\$ 1,633,029.46	\$ 940,610.58
September 14			3270	1980			\$ 614,066.70	\$ 1,746,990.00	\$ 1,132,923.30	\$ 1,559,722.50	\$ 945,655.80
October 14			4392	2605			\$ 789,317.77	\$ 2,328,155.34	\$ 1,538,837.57	\$ 2,078,590.19	\$ 1,289,272.42
November 14			4826	3038			\$ 915,225.82	\$ 2,616,699.86	\$ 1,701,474.04	\$ 2,336,204.35	\$ 1,420,978.53
December 14			5458	3499			\$ 1,054,988.82	\$ 2,980,656.11	\$ 1,925,667.28	\$ 2,661,146.54	\$ 1,606,157.72
January 15			5574	3547			\$ 1,250,144.25	\$ 3,141,272.40	\$ 1,891,128.15	\$ 2,804,525.08	\$ 1,554,380.83
February 15			4708	2922			\$ 1,008,936.38	\$ 2,627,470.65	\$ 1,618,534.27	\$ 2,345,803.36	\$ 1,336,866.97
March 15			5338	3159			\$ 1,029,397.23	\$ 2,926,108.50	\$ 1,896,711.27	\$ 2,612,426.95	\$ 1,583,029.72
April 15			5040	2690			\$ 901,350.59	\$ 2,662,125.90	\$ 1,760,775.31	\$ 2,376,743.53	\$ 1,475,392.94
May 15			5012	2585			\$ 888,136.83	\$ 2,616,320.70	\$ 1,728,183.87	\$ 2,335,848.69	\$ 1,447,711.86
June 15			4688	2507			\$ 978,805.66	\$ 2,478,001.05	\$ 1,499,195.39	\$ 2,212,357.04	\$ 1,233,551.37
July 15			4115	2007			\$ 868,046.08	\$ 2,108,545.95	\$ 1,240,499.87	\$ 1,882,507.87	\$ 1,014,461.78
August 15			3560	1936			\$ 740,831.76	\$ 1,893,080.70	\$ 1,152,248.94	\$ 1,690,140.69	\$ 949,308.93
September 15			3270	1980			\$ 659,595.17	\$ 1,808,100.00	\$ 1,148,504.83	\$ 1,614,270.00	\$ 954,674.83
October 15			4392	2605			\$ 851,857.23	\$ 2,409,594.60	\$ 1,557,737.37	\$ 2,151,283.82	\$ 1,299,426.59
November 15			4826	3038			\$ 989,894.53	\$ 2,708,232.45	\$ 1,718,337.92	\$ 2,417,907.42	\$ 1,428,012.89
December 15			5458	3499			\$ 1,134,976.70	\$ 3,084,919.95	\$ 1,949,943.25	\$ 2,754,213.67	\$ 1,619,236.96
January 16			5574	3547			\$ 1,358,165.08	\$ 3,251,271.66	\$ 1,893,106.58	\$ 2,902,758.25	\$ 1,544,593.17
February 16			4708	2922			\$ 1,097,942.98	\$ 2,719,477.90	\$ 1,621,534.92	\$ 2,427,969.03	\$ 1,330,026.05
March 16			5338	3159			\$ 1,129,169.69	\$ 3,028,573.28	\$ 1,899,403.58	\$ 2,703,931.56	\$ 1,574,761.87
April 16			5040	2690			\$ 991,360.13	\$ 2,755,346.69	\$ 1,763,986.55	\$ 2,459,992.94	\$ 1,468,632.80
May 16			5012	2585			\$ 988,129.11	\$ 2,707,937.51	\$ 1,719,808.39	\$ 2,417,665.69	\$ 1,429,536.58
June 16			4688	2507			\$ 1,076,103.71	\$ 2,564,774.26	\$ 1,488,670.55	\$ 2,289,848.53	\$ 1,213,744.82
July 16			4115	2007			\$ 943,323.04	\$ 2,182,381.79	\$ 1,239,058.75	\$ 1,948,445.84	\$ 1,005,122.80
August 16			3560	1936			\$ 816,169.25	\$ 1,959,371.51	\$ 1,143,202.25	\$ 1,749,340.69	\$ 933,171.44
September 16			3270	1980			\$ 715,333.66	\$ 1,871,415.00	\$ 1,156,081.34	\$ 1,670,812.50	\$ 955,478.84
October 16			4392	2605			\$ 937,312.31	\$ 2,493,972.39	\$ 1,556,660.08	\$ 2,226,636.13	\$ 1,289,323.81
November 16			4826	3038			\$ 1,091,908.59	\$ 2,803,067.77	\$ 1,711,159.17	\$ 2,502,598.66	\$ 1,410,690.06

REDACTED VERSION

	Energy Prices (ESA)		DWW Production		Capacity	RECs	Market Value	DWW Contract Cost (15 Yr)	Above Mkt Costs (15 Yr)	DWW Contract Cost (20 Yr)	Above Mkt Costs (20 Yr)
	On-Peak	Off-Peak	On-Peak	Off-Peak	\$/kw-mo	\$/kw-mo					
December 16			5458	3499			\$ 1,242,197.01	\$ 3,192,945.89	\$ 1,950,748.88	\$ 2,850,684.59	\$ 1,608,487.58
January 17			5574	3547			\$ 1,423,229.29	\$ 3,365,010.53	\$ 1,941,781.24	\$ 3,004,274.98	\$ 1,581,045.69
February 17			4708	2922			\$ 1,161,032.81	\$ 2,814,613.09	\$ 1,653,580.27	\$ 2,512,881.19	\$ 1,351,848.38
March 17			5338	3159			\$ 1,194,767.86	\$ 3,134,521.51	\$ 1,939,753.65	\$ 2,798,494.83	\$ 1,603,726.96
April 17			5040	2690			\$ 1,050,637.88	\$ 2,851,736.67	\$ 1,801,098.79	\$ 2,546,025.06	\$ 1,495,387.17
May 17			5012	2585			\$ 1,033,343.13	\$ 2,802,668.98	\$ 1,769,325.84	\$ 2,502,217.52	\$ 1,468,874.38
June 17			4688	2507			\$ 1,109,580.78	\$ 2,654,497.47	\$ 1,544,916.69	\$ 2,369,930.27	\$ 1,260,349.49
July 17			4115	2007			\$ 978,124.39	\$ 2,258,727.81	\$ 1,280,603.42	\$ 2,016,587.88	\$ 1,038,463.49
August 17			3560	1936			\$ 877,986.14	\$ 2,027,915.98	\$ 1,149,929.84	\$ 1,810,519.52	\$ 932,533.38
September 17			3270	1980			\$ 773,003.25	\$ 1,936,882.50	\$ 1,163,879.25	\$ 1,729,245.00	\$ 956,241.75
October 17			4392	2605			\$ 985,525.84	\$ 2,581,218.75	\$ 1,595,692.91	\$ 2,304,507.17	\$ 1,318,981.33
November 17			4826	3038			\$ 1,140,351.98	\$ 2,901,127.17	\$ 1,760,775.19	\$ 2,590,120.80	\$ 1,449,768.82
December 17			5458	3499			\$ 1,309,501.01	\$ 3,304,644.36	\$ 1,995,143.35	\$ 2,950,380.18	\$ 1,640,879.16
January 18			5574	3547			\$ 1,486,772.51	\$ 3,482,853.85	\$ 1,996,081.34	\$ 3,109,440.11	\$ 1,622,667.60
February 18			4708	2922			\$ 1,209,549.25	\$ 2,913,181.38	\$ 1,703,632.13	\$ 2,600,845.00	\$ 1,391,295.76
March 18			5338	3159			\$ 1,249,608.32	\$ 3,244,293.06	\$ 1,994,684.74	\$ 2,896,456.59	\$ 1,646,848.26
April 18			5040	2690			\$ 1,099,388.67	\$ 2,951,605.04	\$ 1,852,216.37	\$ 2,635,149.07	\$ 1,535,760.41
May 18			5012	2585			\$ 1,084,935.91	\$ 2,900,818.99	\$ 1,815,883.08	\$ 2,589,808.04	\$ 1,504,872.13
June 18			4688	2507			\$ 1,157,515.37	\$ 2,747,458.48	\$ 1,589,943.11	\$ 2,452,890.06	\$ 1,295,374.69
July 18			4115	2007			\$ 1,028,464.32	\$ 2,337,828.89	\$ 1,309,364.57	\$ 2,087,178.86	\$ 1,058,714.54
August 18			3560	1936			\$ 910,257.64	\$ 2,098,933.99	\$ 1,188,676.35	\$ 1,873,897.04	\$ 963,639.40
September 18			3270	1980			\$ 802,910.98	\$ 2,004,712.50	\$ 1,201,801.52	\$ 1,789,777.50	\$ 986,866.52
October 18			4392	2605			\$ 1,033,070.11	\$ 2,671,613.53	\$ 1,638,543.41	\$ 2,385,176.82	\$ 1,352,106.70
November 18			4826	3038			\$ 1,193,856.23	\$ 3,002,725.21	\$ 1,808,868.98	\$ 2,680,788.40	\$ 1,486,932.17
December 18			5458	3499			\$ 1,365,892.84	\$ 3,420,373.64	\$ 2,054,480.81	\$ 3,053,658.71	\$ 1,687,765.87
January 19			5574	3547			\$ 1,549,969.11	\$ 3,604,710.41	\$ 2,054,741.30	\$ 3,218,253.64	\$ 1,668,284.53
February 19			4708	2922			\$ 1,258,838.89	\$ 3,015,106.49	\$ 1,756,267.60	\$ 2,691,860.47	\$ 1,433,021.58
March 19			5338	3159			\$ 1,304,891.72	\$ 3,357,802.96	\$ 2,052,911.24	\$ 2,997,816.85	\$ 1,692,925.13
April 19			5040	2690			\$ 1,150,009.55	\$ 3,054,874.50	\$ 1,904,864.95	\$ 2,727,364.99	\$ 1,577,355.44
May 19			5012	2585			\$ 1,136,615.08	\$ 3,002,311.57	\$ 1,865,696.49	\$ 2,680,437.27	\$ 1,543,822.19
June 19			4688	2507			\$ 1,208,632.29	\$ 2,843,585.35	\$ 1,634,953.06	\$ 2,538,727.91	\$ 1,330,095.61
July 19			4115	2007			\$ 1,080,843.61	\$ 2,419,623.82	\$ 1,338,780.22	\$ 2,160,218.80	\$ 1,079,375.19
August 19			3560	1936			\$ 940,849.63	\$ 2,172,370.57	\$ 1,231,520.94	\$ 1,939,473.27	\$ 998,623.64
September 19			3270	1980			\$ 837,011.01	\$ 2,074,852.50	\$ 1,237,841.49	\$ 1,852,410.00	\$ 1,015,398.99
October 19			4392	2605			\$ 1,079,444.76	\$ 2,765,086.77	\$ 1,685,642.00	\$ 2,468,645.06	\$ 1,389,200.30
November 19			4826	3038			\$ 1,243,331.61	\$ 3,107,783.24	\$ 1,864,451.62	\$ 2,774,601.45	\$ 1,531,269.83
December 19			5458	3499			\$ 1,422,463.90	\$ 3,540,044.17	\$ 2,117,580.28	\$ 3,160,520.20	\$ 1,738,056.30

Year	Capacity
2010/11	
2011/12	
2012/13	2012
2013/14	2013
2014/15	2014
2015/16	2015
2016/17	2016
2017/18	2017
2018/19	2018
2019/20	2019
2020/21	2020
2021/22	2021
2022/23	2022
2023/24	2023
2024/25	2024
2025/26	2025
2026/27	2026
2027/28	2027
2028/29	2028
2029/30	2029
2030/31	2030
	2031
	2032

REDACTED VERSION

ESAI Rhode Island Forecast					8 WTG Project 11.52 MW: 15 year contract term				8 WTG Project 11.52 MW: 20 year contract term				
	Energy 7x24	RI REC Forecast	Energy & RECs	Capacity \$/kW-mo	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	Monthly Summary (from below)	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	Monthly Summary (from below)	% over 24x7 forecast
2009					N/A	\$ 264.21			N/A	\$ 236.40			
2010													
2011													
2012					17,660	\$ 292.93	\$ 2,944,582	\$ 1,859,973	17,660	\$ 261.99	\$ 2,398,181	\$ 1,543,240	
2013					100,915	\$ 303.19	\$ 18,350,516	\$ 18,158,139	100,915	\$ 271.16	\$ 15,118,209	\$ 14,920,194	
2014					100,915	\$ 313.80	\$ 19,913,907	\$ 19,714,120	100,915	\$ 280.65	\$ 16,568,575	\$ 16,362,953	
2015					100,915	\$ 324.78	\$ 20,123,359	\$ 19,915,795	100,915	\$ 290.47	\$ 16,660,966	\$ 16,447,363	98.7%
2016					100,915	\$ 336.15	\$ 20,041,398	\$ 19,825,037	100,915	\$ 300.64	\$ 16,457,907	\$ 16,235,296	98.6%
2017					100,915	\$ 347.91	\$ 20,474,725	\$ 20,271,045	100,915	\$ 311.16	\$ 16,766,099	\$ 16,555,951	98.7%
2018					100,915	\$ 360.09	\$ 21,042,160	\$ 20,833,604	100,915	\$ 322.05	\$ 17,203,353	\$ 16,988,103	98.7%
2019					100,915	\$ 372.69	\$ 21,644,933	\$ 21,432,289	100,915	\$ 333.32	\$ 17,671,909	\$ 17,452,337	98.8%
2020					100,915	\$ 385.74	\$ 22,404,149		100,915	\$ 344.99	\$ 18,291,863		
2021					100,915	\$ 399.24	\$ 23,844,189		100,915	\$ 357.06	\$ 19,587,594		
2022					100,915	\$ 413.21	\$ 25,200,042		100,915	\$ 369.56	\$ 20,795,102		
2023					100,915	\$ 427.67	\$ 26,782,033		100,915	\$ 382.50	\$ 22,223,702		
2024					100,915	\$ 442.64	\$ 28,719,072		100,915	\$ 395.88	\$ 24,000,286		
2025					100,915	\$ 458.13	\$ 30,791,071		100,915	\$ 409.74	\$ 25,907,794		
2026					100,915	\$ 474.17	\$ 32,660,126		100,915	\$ 424.08	\$ 27,605,293		
2027					100,915	\$ 490.76	\$ 33,958,613		100,915	\$ 438.92	\$ 28,727,179		
2028					100,915				100,915	\$ 454.28	\$ 29,901,261		
2029					100,915				100,915	\$ 470.18	\$ 31,130,389		
2030					100,915				100,915	\$ 486.64	\$ 32,417,495		
2031					100,915				100,915	\$ 503.67	\$ 33,783,864		
2032					100,915				100,915	\$ 521.30	\$ 35,215,891		
					SUM		\$ 368,894,873				\$ 468,432,912		
					NPV @ 7%		\$ 199,392,294				\$ 209,859,096		

Eight 3.6 MW Siemens wind turbine generators for a combined
Capacity Factor for FCM 28%

28.8 MW

REDACTED VERSION

	Energy Prices (ESAI)		DWW Production		Capacity	RECs	Market Value	DWW Contract Cost (15 Yr)	Above Mkt Costs (15 Yr)	DWW Contract Cost (20 Yr)	Above Mkt Costs (20 Yr)
	On-Peak	Off-Peak	On-Peak	Off-Peak	\$/kw-mo	\$/MWH					
December-12			6238	3999			\$ 1,138,751.82	\$ 2,998,724.41	\$ 1,859,972.59	\$ 2,681,991.63	\$ 1,543,239.81
January-13			6370	4054			\$ 1,392,148.74	\$ 3,160,452.56	\$ 1,768,303.82	\$ 2,826,571.84	\$ 1,434,423.10
February-13			5380	3339			\$ 1,123,869.10	\$ 2,643,513.61	\$ 1,519,644.51	\$ 2,364,244.04	\$ 1,240,374.94
March-13			6100	3610			\$ 1,144,828.62	\$ 2,943,974.90	\$ 1,799,146.28	\$ 2,632,963.60	\$ 1,488,134.98
April-13			5760	3074			\$ 999,396.66	\$ 2,678,380.46	\$ 1,678,983.80	\$ 2,395,427.44	\$ 1,396,030.78
May-13			5728	2954			\$ 982,253.80	\$ 2,632,295.58	\$ 1,650,041.78	\$ 2,354,211.12	\$ 1,371,957.32
June-13			5358	2865			\$ 1,058,316.99	\$ 2,493,131.37	\$ 1,434,814.38	\$ 2,229,748.68	\$ 1,171,431.69
July-13			4703	2294			\$ 952,128.36	\$ 2,121,420.43	\$ 1,169,292.07	\$ 1,897,306.52	\$ 945,178.16
August-13			4069	2213			\$ 821,429.57	\$ 1,904,639.58	\$ 1,083,210.01	\$ 1,703,427.12	\$ 881,997.55
September-13			3737	2263			\$ 728,599.44	\$ 1,819,140.00	\$ 1,090,540.56	\$ 1,626,960.00	\$ 898,360.56
October-13			5019	2977			\$ 941,948.59	\$ 2,424,307.24	\$ 1,482,358.65	\$ 2,168,195.36	\$ 1,226,246.77
November-13			5515	3472			\$ 1,090,083.76	\$ 2,724,768.53	\$ 1,634,684.77	\$ 2,436,914.92	\$ 1,346,831.16
December-13			6238	3999			\$ 1,256,637.43	\$ 3,103,756.03	\$ 1,847,118.60	\$ 2,775,864.92	\$ 1,519,227.49
January-14			6370	4054			\$ 1,340,244.66	\$ 3,271,051.20	\$ 1,930,806.54	\$ 2,925,495.60	\$ 1,585,250.94
February-14			5380	3339			\$ 1,078,214.09	\$ 2,736,022.20	\$ 1,657,808.11	\$ 2,446,987.35	\$ 1,368,773.26
March-14			6100	3610			\$ 1,092,757.50	\$ 3,046,998.00	\$ 1,954,240.50	\$ 2,725,111.50	\$ 1,632,354.00
April-14			5760	3074			\$ 953,897.33	\$ 2,772,109.20	\$ 1,818,211.87	\$ 2,479,262.10	\$ 1,525,364.77
May-14			5728	2954			\$ 938,284.80	\$ 2,724,411.60	\$ 1,786,126.80	\$ 2,436,603.30	\$ 1,498,318.50
June-14			5358	2865			\$ 1,028,867.80	\$ 2,580,377.40	\$ 1,551,509.60	\$ 2,307,784.95	\$ 1,278,917.15
July-14			4703	2294			\$ 929,092.13	\$ 2,195,658.60	\$ 1,266,566.47	\$ 1,963,708.05	\$ 1,034,615.92
August-14			4069	2213			\$ 791,335.86	\$ 1,971,291.60	\$ 1,179,955.74	\$ 1,763,043.30	\$ 971,707.44
September-14			3737	2263			\$ 701,790.52	\$ 1,882,800.00	\$ 1,181,009.48	\$ 1,683,900.00	\$ 982,109.48
October-14			5019	2977			\$ 902,077.45	\$ 2,509,144.80	\$ 1,607,067.35	\$ 2,244,077.40	\$ 1,341,999.95
November-14			5515	3472			\$ 1,045,972.36	\$ 2,820,120.60	\$ 1,774,148.24	\$ 2,522,201.55	\$ 1,476,229.19
December-14			6238	3999			\$ 1,205,701.51	\$ 3,212,370.60	\$ 2,006,669.09	\$ 2,873,014.05	\$ 1,667,312.54
January-15			6370	4054			\$ 1,428,736.29	\$ 3,385,506.72	\$ 1,956,770.43	\$ 3,027,859.28	\$ 1,599,122.99
February-15			5380	3339			\$ 1,153,070.15	\$ 2,831,756.82	\$ 1,678,686.67	\$ 2,532,607.93	\$ 1,379,537.78
March-15			6100	3610			\$ 1,176,453.98	\$ 3,153,613.80	\$ 1,977,159.82	\$ 2,820,463.70	\$ 1,644,009.72
April-15			5760	3074			\$ 1,030,114.95	\$ 2,869,106.52	\$ 1,838,991.57	\$ 2,566,011.98	\$ 1,535,897.03
May-15			5728	2954			\$ 1,015,013.52	\$ 2,819,739.96	\$ 1,804,726.44	\$ 2,521,860.54	\$ 1,506,847.02
June-15			5358	2865			\$ 1,118,635.04	\$ 2,670,665.94	\$ 1,552,030.90	\$ 2,388,534.81	\$ 1,269,899.77
July-15			4703	2294			\$ 992,052.67	\$ 2,272,485.66	\$ 1,280,432.99	\$ 2,032,418.59	\$ 1,040,365.92
August-15			4069	2213			\$ 846,664.87	\$ 2,040,267.96	\$ 1,193,603.09	\$ 1,824,732.54	\$ 978,067.67
September-15			3737	2263			\$ 753,823.05	\$ 1,948,680.00	\$ 1,194,856.95	\$ 1,742,820.00	\$ 988,996.95
October-15			5019	2977			\$ 973,551.13	\$ 2,596,940.88	\$ 1,623,389.75	\$ 2,322,598.12	\$ 1,349,046.99
November-15			5515	3472			\$ 1,131,308.03	\$ 2,918,797.86	\$ 1,787,489.83	\$ 2,610,453.89	\$ 1,479,145.86
December-15			6238	3999			\$ 1,297,116.23	\$ 3,324,772.86	\$ 2,027,656.63	\$ 2,973,541.39	\$ 1,676,425.16
January-16			6370	4054			\$ 1,552,188.66	\$ 3,504,027.60	\$ 1,951,838.94	\$ 3,133,871.36	\$ 1,581,682.70
February-16			5380	3339			\$ 1,254,791.98	\$ 2,930,891.85	\$ 1,676,099.87	\$ 2,621,280.16	\$ 1,366,488.18
March-16			6100	3610			\$ 1,290,479.65	\$ 3,264,016.50	\$ 1,973,536.85	\$ 2,919,214.40	\$ 1,628,734.75
April-16			5760	3074			\$ 1,132,983.01	\$ 2,969,549.10	\$ 1,836,566.09	\$ 2,655,853.76	\$ 1,522,870.75
May-16			5728	2954			\$ 1,129,290.41	\$ 2,918,454.30	\$ 1,789,163.89	\$ 2,610,156.48	\$ 1,480,866.07
June-16			5358	2865			\$ 1,229,832.81	\$ 2,764,161.45	\$ 1,534,328.64	\$ 2,472,162.72	\$ 1,242,329.91
July-16			4703	2294			\$ 1,078,083.47	\$ 2,352,041.55	\$ 1,273,958.08	\$ 2,103,578.08	\$ 1,025,494.61
August-16			4069	2213			\$ 932,764.86	\$ 2,111,694.30	\$ 1,178,929.44	\$ 1,888,620.48	\$ 955,855.62
September-16			3737	2263			\$ 817,524.19	\$ 2,016,900.00	\$ 1,199,375.81	\$ 1,803,840.00	\$ 986,315.81
October-16			5019	2977			\$ 1,071,214.07	\$ 2,687,855.40	\$ 1,616,641.33	\$ 2,403,917.44	\$ 1,332,703.37
November-16			5515	3472			\$ 1,247,895.54	\$ 3,020,980.05	\$ 1,773,084.51	\$ 2,701,851.68	\$ 1,453,956.14
December-16			6238	3999			\$ 1,419,653.73	\$ 3,441,167.55	\$ 2,021,513.82	\$ 3,077,651.68	\$ 1,657,997.95
January-17			6370	4054			\$ 1,626,547.76	\$ 3,626,613.84	\$ 2,000,066.08	\$ 3,243,531.84	\$ 1,616,984.08
February-17			5380	3339			\$ 1,326,894.65	\$ 3,033,427.29	\$ 1,706,532.64	\$ 2,713,004.04	\$ 1,386,109.39
March-17			6100	3610			\$ 1,365,448.99	\$ 3,378,206.10	\$ 2,012,757.11	\$ 3,021,363.60	\$ 1,655,914.61

REDACTED VERSION

April-17	5760	3074	\$ 1,200,729.01	\$ 3,073,436.94	\$ 1,872,707.93	\$ 2,748,787.44	\$ 1,548,058.43
May-17	5728	2954	\$ 1,180,963.58	\$ 3,020,554.62	\$ 1,839,591.04	\$ 2,701,491.12	\$ 1,520,527.54
June-17	5358	2865	\$ 1,268,092.32	\$ 2,860,863.93	\$ 1,592,771.61	\$ 2,558,668.68	\$ 1,290,576.36
July-17	4703	2294	\$ 1,117,856.44	\$ 2,434,326.27	\$ 1,316,469.83	\$ 2,177,186.52	\$ 1,059,330.08
August-17	4069	2213	\$ 1,003,412.73	\$ 2,185,570.62	\$ 1,182,157.89	\$ 1,954,707.12	\$ 951,294.39
September-17	3737	2263	\$ 883,432.28	\$ 2,087,460.00	\$ 1,204,027.72	\$ 1,866,960.00	\$ 983,527.72
October-17	5019	2977	\$ 1,126,315.24	\$ 2,781,888.36	\$ 1,655,573.12	\$ 2,488,035.36	\$ 1,361,720.12
November-17	5515	3472	\$ 1,303,259.40	\$ 3,126,667.17	\$ 1,823,407.77	\$ 2,796,394.92	\$ 1,493,135.52
December-17	6238	3999	\$ 1,496,572.59	\$ 3,561,554.67	\$ 2,064,982.08	\$ 3,185,344.92	\$ 1,688,772.33
January-18	6370	4054	\$ 1,699,168.58	\$ 3,753,578.16	\$ 2,054,409.58	\$ 3,357,049.20	\$ 1,657,880.62
February-18	5380	3339	\$ 1,382,342.00	\$ 3,139,624.71	\$ 1,757,282.71	\$ 2,807,953.95	\$ 1,425,611.95
March-18	6100	3610	\$ 1,428,123.80	\$ 3,496,473.90	\$ 2,068,350.10	\$ 3,127,105.50	\$ 1,698,981.70
April-18	5760	3074	\$ 1,256,444.19	\$ 3,181,035.06	\$ 1,924,590.87	\$ 2,844,989.70	\$ 1,588,545.51
May-18	5728	2954	\$ 1,239,926.75	\$ 3,126,301.38	\$ 1,886,374.63	\$ 2,796,038.10	\$ 1,556,111.35
June-18	5358	2865	\$ 1,322,874.71	\$ 2,961,020.07	\$ 1,638,145.36	\$ 2,648,217.15	\$ 1,325,342.44
July-18	4703	2294	\$ 1,175,387.80	\$ 2,519,549.73	\$ 1,344,161.93	\$ 2,253,383.85	\$ 1,077,996.05
August-18	4069	2213	\$ 1,040,294.45	\$ 2,262,085.38	\$ 1,221,790.93	\$ 2,023,118.10	\$ 982,823.65
September-18	3737	2263	\$ 917,612.55	\$ 2,160,540.00	\$ 1,242,927.45	\$ 1,932,300.00	\$ 1,014,687.45
October-18	5019	2977	\$ 1,180,651.56	\$ 2,879,279.64	\$ 1,698,628.08	\$ 2,575,111.80	\$ 1,394,460.24
November-18	5515	3472	\$ 1,364,407.12	\$ 3,236,128.83	\$ 1,871,721.71	\$ 2,894,263.35	\$ 1,529,856.23
December-18	6238	3999	\$ 1,561,020.39	\$ 3,686,241.33	\$ 2,125,220.94	\$ 3,296,825.85	\$ 1,735,805.46
January-19	6370	4054	\$ 1,771,393.27	\$ 3,884,920.56	\$ 2,113,527.29	\$ 3,474,527.68	\$ 1,703,134.41
February-19	5380	3339	\$ 1,438,673.02	\$ 3,249,484.11	\$ 1,810,811.09	\$ 2,906,217.08	\$ 1,467,544.06
March-19	6100	3610	\$ 1,491,304.82	\$ 3,618,819.90	\$ 2,127,515.08	\$ 3,236,537.20	\$ 1,745,232.38
April-19	5760	3074	\$ 1,314,296.63	\$ 3,292,343.46	\$ 1,978,046.83	\$ 2,944,548.88	\$ 1,630,252.25
May-19	5728	2954	\$ 1,298,988.66	\$ 3,235,694.58	\$ 1,936,705.92	\$ 2,893,884.24	\$ 1,594,895.58
June-19	5358	2865	\$ 1,381,294.05	\$ 3,064,629.87	\$ 1,683,335.82	\$ 2,740,890.36	\$ 1,359,596.31
July-19	4703	2294	\$ 1,235,249.84	\$ 2,607,711.93	\$ 1,372,462.09	\$ 2,332,240.04	\$ 1,096,990.20
August-19	4069	2213	\$ 1,075,256.72	\$ 2,341,238.58	\$ 1,265,981.86	\$ 2,093,916.24	\$ 1,018,659.52
September-19	3737	2263	\$ 956,584.01	\$ 2,236,140.00	\$ 1,279,555.99	\$ 1,999,920.00	\$ 1,043,335.99
October-19	5019	2977	\$ 1,233,651.16	\$ 2,980,029.24	\$ 1,746,378.08	\$ 2,665,226.72	\$ 1,431,575.56
November-19	5515	3472	\$ 1,420,950.41	\$ 3,349,365.03	\$ 1,928,414.62	\$ 2,995,546.84	\$ 1,574,596.43
December-19	6238	3999	\$ 1,625,673.03	\$ 3,815,227.53	\$ 2,189,554.50	\$ 3,412,196.84	\$ 1,786,523.81

	Capacity (seasonal)	Capacity (yearly)	RECs
2010/11			
2011/12			2012
2012/13			2013
2013/14			2014
2014/15			2015
2015/16			2016
2016/17			2017
2017/18			2018
2018/19			2019
2019/20			2020
2020/21			2021
2021/22			2022
2022/23			2023
2023/24			2024
2024/25			2025
2025/26			2026
2026/27			2027
2027/28			2028
2028/29			2029
2029/30			2030
2030/31			2031

ESAI Rhode Island Forecast					8 WTG Project 11.52 MW: 20 year contract term					
	Energy 7x24	RI REC Forecast	Energy & RECs	Capacity \$/kW-mo	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	Monthly Summary (from below)	% over 24x7 forecast	
2009					N/A	\$ 212.63				
2010										
2011										
2012					17,660	\$ 235.75	\$ 1,934,724	\$ 1,274,587		
2013					100,915	\$ 244.00	\$ 12,377,137	\$ 12,174,342		
2014					100,915	\$ 252.54	\$ 13,731,626	\$ 13,521,057		
2015					100,915	\$ 261.38	\$ 13,725,001	\$ 13,506,278	98.4%	
2016					100,915	\$ 270.52	\$ 13,418,825	\$ 13,190,914	98.3%	
2017					100,915	\$ 279.99	\$ 13,620,891	\$ 13,405,258	98.4%	
2018					100,915	\$ 289.79	\$ 13,948,124	\$ 13,727,197	98.4%	
2019					100,915	\$ 299.94	\$ 14,302,924	\$ 14,077,476	98.4%	
2020					100,915	\$ 310.43	\$ 14,804,580			
2021					100,915	\$ 321.30	\$ 15,978,725			
2022					100,915	\$ 332.54	\$ 17,059,630			
2023					100,915	\$ 344.18	\$ 18,356,944			
2024					100,915	\$ 356.23	\$ 19,998,948			
2025					100,915	\$ 368.70	\$ 21,765,986			
2026					100,915	\$ 381.60	\$ 23,318,612			
2027					100,915	\$ 394.96	\$ 24,290,747			
2028					100,915	\$ 408.78	\$ 25,309,776			
2029					100,915	\$ 423.09	\$ 26,378,181			
2030					100,915	\$ 437.90	\$ 27,498,586			
2031					100,915	\$ 453.22	\$ 28,693,036			
2032					100,915	\$ 469.09	\$ 29,946,727			
							\$ 390,459,730			
							NPV @ 7%	\$ 173,871,638		

Eight 3.6 MW Siemens wind turbine generators for a combined
 Capacity Factor for FCM 28%

28.8 MW

REDACTED VERSION

	Energy Prices (ESA)		DWW Production		Capacity	RECs	Market Value	DWW Contract Cost (20 Yr)	Above Mkt Costs (20 Yr)
	On-Peak	Off-Peak	On-Peak	Off-Peak	\$/kw-mo	\$/MWH			
December-12			6238	3999			\$ 1,138,751.82	\$ 2,413,338.78	\$ 1,274,586.96
January-13			6370	4054			\$ 1,392,148.74	\$ 2,543,433.23	\$ 1,151,284.49
February-13			5380	3339			\$ 1,123,869.10	\$ 2,127,416.95	\$ 1,003,547.86
March-13			6100	3610			\$ 1,144,828.62	\$ 2,369,218.79	\$ 1,224,390.17
April-13			5760	3074			\$ 999,396.66	\$ 2,155,476.70	\$ 1,156,080.04
May-13			5728	2954			\$ 982,253.80	\$ 2,118,389.04	\$ 1,136,135.24
June-13			5358	2865			\$ 1,058,316.99	\$ 2,006,394.04	\$ 948,077.05
July-13			4703	2294			\$ 952,128.36	\$ 1,707,252.72	\$ 755,124.35
August-13			4069	2213			\$ 821,429.57	\$ 1,532,794.28	\$ 711,364.70
September-13			3737	2263			\$ 728,599.44	\$ 1,463,986.89	\$ 735,387.46
October-13			5019	2977			\$ 941,948.59	\$ 1,951,006.53	\$ 1,009,057.94
November-13			5515	3472			\$ 1,090,083.76	\$ 2,192,808.37	\$ 1,102,724.61
December-13			6238	3999			\$ 1,256,637.43	\$ 2,497,805.64	\$ 1,241,168.21
January-14			6370	4054			\$ 1,340,244.66	\$ 2,632,453.39	\$ 1,292,208.74
February-14			5380	3339			\$ 1,078,214.09	\$ 2,201,876.55	\$ 1,123,662.46
March-14			6100	3610			\$ 1,092,757.50	\$ 2,452,141.45	\$ 1,359,383.95
April-14			5760	3074			\$ 953,897.33	\$ 2,230,918.39	\$ 1,277,021.06
May-14			5728	2954			\$ 938,284.80	\$ 2,192,532.65	\$ 1,254,247.85
June-14			5358	2865			\$ 1,028,867.80	\$ 2,076,617.83	\$ 1,047,750.03
July-14			4703	2294			\$ 929,092.13	\$ 1,767,006.56	\$ 837,914.44
August-14			4069	2213			\$ 791,335.86	\$ 1,586,442.08	\$ 795,106.22
September-14			3737	2263			\$ 701,790.52	\$ 1,515,226.44	\$ 813,435.92
October-14			5019	2977			\$ 902,077.45	\$ 2,019,291.76	\$ 1,117,214.32
November-14			5515	3472			\$ 1,045,972.36	\$ 2,269,556.66	\$ 1,223,584.30
December-14			6238	3999			\$ 1,205,701.51	\$ 2,585,228.84	\$ 1,379,527.32
January-15			6370	4054			\$ 1,428,736.29	\$ 2,724,589.26	\$ 1,295,852.97
February-15			5380	3339			\$ 1,153,070.15	\$ 2,278,942.23	\$ 1,125,872.08
March-15			6100	3610			\$ 1,176,453.98	\$ 2,537,966.40	\$ 1,361,512.42
April-15			5760	3074			\$ 1,030,114.95	\$ 2,309,000.53	\$ 1,278,885.58
May-15			5728	2954			\$ 1,015,013.52	\$ 2,269,271.29	\$ 1,254,257.78
June-15			5358	2865			\$ 1,118,635.04	\$ 2,149,299.45	\$ 1,030,664.41
July-15			4703	2294			\$ 992,052.67	\$ 1,828,851.79	\$ 836,799.12
August-15			4069	2213			\$ 846,664.87	\$ 1,641,967.55	\$ 795,302.68
September-15			3737	2263			\$ 753,823.05	\$ 1,568,259.36	\$ 814,436.31
October-15			5019	2977			\$ 973,551.13	\$ 2,089,966.97	\$ 1,116,415.85
November-15			5515	3472			\$ 1,131,308.03	\$ 2,348,991.15	\$ 1,217,683.12
December-15			6238	3999			\$ 1,297,116.23	\$ 2,675,711.85	\$ 1,378,595.62
January-16			6370	4054			\$ 1,552,188.66	\$ 2,819,949.89	\$ 1,267,761.23
February-16			5380	3339			\$ 1,254,791.98	\$ 2,358,705.20	\$ 1,103,913.23
March-16			6100	3610			\$ 1,290,479.65	\$ 2,626,795.22	\$ 1,336,315.57
April-16			5760	3074			\$ 1,132,983.01	\$ 2,389,815.55	\$ 1,256,832.54
May-16			5728	2954			\$ 1,129,290.41	\$ 2,348,695.79	\$ 1,219,405.38
June-16			5358	2865			\$ 1,229,832.81	\$ 2,224,524.93	\$ 994,692.12
July-16			4703	2294			\$ 1,078,083.47	\$ 1,892,861.60	\$ 814,778.13
August-16			4069	2213			\$ 932,764.86	\$ 1,699,436.41	\$ 766,671.55
September-16			3737	2263			\$ 817,524.19	\$ 1,623,148.44	\$ 805,624.25
October-16			5019	2977			\$ 1,071,214.07	\$ 2,163,115.82	\$ 1,091,901.75
November-16			5515	3472			\$ 1,247,895.54	\$ 2,431,205.84	\$ 1,183,310.30
December-16			6238	3999			\$ 1,419,653.73	\$ 2,769,361.76	\$ 1,349,708.03
January-17			6370	4054			\$ 1,626,547.76	\$ 2,918,648.13	\$ 1,292,100.37
February-17			5380	3339			\$ 1,326,894.65	\$ 2,441,259.89	\$ 1,114,365.24
March-17			6100	3610			\$ 1,365,448.99	\$ 2,718,733.05	\$ 1,353,284.07

	Energy Prices (ESA)		DWW Production		Capacity	RECs	Market Value	DWW Contract Cost (20 Yr)	Above Mkt Costs (20 Yr)
	On-Peak	Off-Peak	On-Peak	Off-Peak	\$/kw-mo	\$/MWH			
April-17			5760	3074			\$ 1,200,729.01	\$ 2,473,459.09	\$ 1,272,730.09
May-17			5728	2954			\$ 1,180,963.58	\$ 2,430,900.14	\$ 1,249,936.56
June-17			5358	2865			\$ 1,268,092.32	\$ 2,302,383.31	\$ 1,034,290.99
July-17			4703	2294			\$ 1,117,856.44	\$ 1,959,111.76	\$ 841,255.32
August-17			4069	2213			\$ 1,003,412.73	\$ 1,758,916.69	\$ 755,503.96
September-17			3737	2263			\$ 883,432.28	\$ 1,679,958.63	\$ 796,526.35
October-17			5019	2977			\$ 1,126,315.24	\$ 2,238,824.87	\$ 1,112,509.63
November-17			5515	3472			\$ 1,303,259.40	\$ 2,516,298.04	\$ 1,213,038.63
December-17			6238	3999			\$ 1,496,572.59	\$ 2,866,289.42	\$ 1,369,716.83
January-18			6370	4054			\$ 1,699,168.58	\$ 3,020,800.82	\$ 1,321,632.23
February-18			5380	3339			\$ 1,382,342.00	\$ 2,526,703.98	\$ 1,144,361.99
March-18			6100	3610			\$ 1,428,123.80	\$ 2,813,888.71	\$ 1,385,764.91
April-18			5760	3074			\$ 1,256,444.19	\$ 2,560,030.16	\$ 1,303,585.97
May-18			5728	2954			\$ 1,239,926.75	\$ 2,515,981.65	\$ 1,276,054.90
June-18			5358	2865			\$ 1,322,874.71	\$ 2,382,966.72	\$ 1,060,092.01
July-18			4703	2294			\$ 1,175,387.80	\$ 2,027,680.67	\$ 852,292.87
August-18			4069	2213			\$ 1,040,294.45	\$ 1,820,478.77	\$ 780,184.33
September-18			3737	2263			\$ 917,612.55	\$ 1,738,757.19	\$ 821,144.63
October-18			5019	2977			\$ 1,180,651.56	\$ 2,317,183.74	\$ 1,136,532.19
November-18			5515	3472			\$ 1,364,407.12	\$ 2,604,368.47	\$ 1,239,961.35
December-18			6238	3999			\$ 1,561,020.39	\$ 2,966,609.55	\$ 1,405,589.17
January-19			6370	4054			\$ 1,771,393.27	\$ 3,126,528.85	\$ 1,355,135.57
February-19			5380	3339			\$ 1,438,673.02	\$ 2,615,138.62	\$ 1,176,465.61
March-19			6100	3610			\$ 1,491,304.82	\$ 2,912,374.82	\$ 1,421,069.99
April-19			5760	3074			\$ 1,314,296.63	\$ 2,649,631.22	\$ 1,335,334.59
May-19			5728	2954			\$ 1,298,988.66	\$ 2,604,041.00	\$ 1,305,052.34
June-19			5358	2865			\$ 1,381,294.05	\$ 2,466,370.56	\$ 1,085,076.51
July-19			4703	2294			\$ 1,235,249.84	\$ 2,098,649.49	\$ 863,399.66
August-19			4069	2213			\$ 1,075,256.72	\$ 1,884,195.53	\$ 808,938.81
September-19			3737	2263			\$ 956,584.01	\$ 1,799,613.69	\$ 843,029.68
October-19			5019	2977			\$ 1,233,651.16	\$ 2,398,285.17	\$ 1,164,634.01
November-19			5515	3472			\$ 1,420,950.41	\$ 2,695,521.37	\$ 1,274,570.95
December-19			6238	3999			\$ 1,625,673.03	\$ 3,070,440.89	\$ 1,444,767.86

	Capacity (seasonal)	Capacity (yearly)	RECs
2010/11			
2011/12			2012
2012/13			2013
2013/14			2014
2014/15			2015
2015/16			2016
2016/17			2017
2017/18			2018
2018/19			2019
2019/20			2020
2020/21			2021
2021/22			2022
2022/23			2023
2023/24			2024
2024/25			2025
2025/26			2026
2026/27			2027
2027/28			2028
2028/29			2029
2029/30			2030
2030/31			2031
			2032

SYNAPSE

Synapse Rhode Island Forecast					6 WTG Project 8.64 MW: 15 year contract term				6 WTG Project 8.64 MW: 20 year contract term					
	Energy 7x24	RI REC Forecast	Energy & RECs	Capacity \$/kW-mo	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	Seasonal Summary (Synapse)	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	% over ESAI 24x7 forecast	Seasonal Summary (Synapse)	% over ESAI 24x7 forecast
2009					N/A	\$ 300.56			N/A	\$ 268.00				
2010	\$ 59.25	\$ 37.50	\$ 96.75											
2011	\$ 64.67	\$ 36.80	\$ 101.47											
2012	\$ 70.92	\$ 36.10	\$ 107.02	\$2.93	13245.1	\$ 333.23	\$ 2,783,620	\$ 3,192,443	13245.1	\$ 297.13	\$ 2,305,471	101.8%	\$ 2,671,953	118.0%
2013	\$ 75.46	\$ 41.20	\$ 116.66	\$1.41	75686.4	\$ 344.90	\$ 17,172,890	\$ 17,102,133	75686.4	\$ 307.53	\$ 14,344,489	101.8%	\$ 14,268,805	101.3%
2014	\$ 77.55	\$ 44.90	\$ 122.46	\$1.44	75686.4	\$ 356.97	\$ 17,645,301	\$ 17,570,971	75686.4	\$ 318.30	\$ 14,718,508	96.4%	\$ 14,639,079	95.8%
2015	\$ 80.21	\$ 44.60	\$ 124.81	\$1.58	75686.4	\$ 369.46	\$ 18,402,402	\$ 18,335,596	75686.4	\$ 329.44	\$ 15,373,432	99.5%	\$ 15,301,350	99.1%
2016	\$ 83.14	\$ 46.60	\$ 129.74	\$1.72	75686.4	\$ 382.39	\$ 18,996,854	\$ 18,944,673	75686.4	\$ 340.97	\$ 15,861,923	103.0%	\$ 15,804,281	102.7%
2017	\$ 87.14	\$ 54.70	\$ 141.85	\$1.76	75686.4	\$ 395.78	\$ 19,091,720	\$ 19,043,701	75686.4	\$ 352.90	\$ 15,846,288	100.7%	\$ 15,792,615	100.4%
2018	\$ 91.90	\$ 57.01	\$ 148.91	\$1.91	75686.4	\$ 409.63	\$ 19,594,494	\$ 19,539,547	75686.4	\$ 365.25	\$ 16,235,532	100.4%	\$ 16,174,733	100.0%
2019	\$ 96.57	\$ 52.10	\$ 148.67	\$1.95	75686.4	\$ 423.97	\$ 20,694,796	\$ 20,640,679	75686.4	\$ 378.04	\$ 17,218,520	103.5%	\$ 17,158,346	103.1%
2020	\$ 98.41	\$ 50.20	\$ 148.60	\$2.11	75686.4	\$ 438.80	\$ 21,810,667	\$ 21,770,781	75686.4	\$ 391.27	\$ 18,213,292	105.8%	\$ 18,167,139	105.5%
2021	\$ 99.66	\$ 45.10	\$ 144.75	\$2.28	75686.4	\$ 454.16	\$ 23,252,147	\$ 23,232,558	75686.4	\$ 404.96	\$ 19,528,376	106.6%	\$ 19,502,300	106.5%
2022	\$ 103.96	\$ 42.60	\$ 146.55	\$2.46	75686.4	\$ 470.06	\$ 24,306,629	\$ 24,291,198	75686.4	\$ 419.14	\$ 20,452,677	105.7%	\$ 20,430,533	105.6%
2023	\$ 109.21	\$ 37.80	\$ 147.02	\$2.64	75686.4	\$ 486.51	\$ 25,503,442	\$ 25,498,399	75686.4	\$ 433.80	\$ 21,514,012	104.7%	\$ 21,502,020	104.6%
2024	\$ 118.29	\$ 28.51	\$ 146.80	\$2.83	75686.4	\$ 503.54	\$ 26,795,215	\$ 26,770,785	75686.4	\$ 448.99	\$ 22,666,522	102.9%	\$ 22,634,899	102.8%
2025	\$ 123.46	\$ 20.61	\$ 144.07	\$3.00	75686.4	\$ 521.16	\$ 28,322,485	\$ 28,305,871	75686.4	\$ 464.70	\$ 24,049,231		\$ 24,025,173	
2026	\$ 128.86	\$ 20.06	\$ 148.92	\$3.00	75686.4	\$ 539.40	\$ 29,336,193	\$ 29,314,862	75686.4	\$ 480.97	\$ 24,913,836		\$ 24,884,802	
2027	\$ 134.49	\$ 19.52	\$ 154.01	\$3.00	75686.4	\$ 558.28	\$ 30,379,690	\$ 30,353,641	75686.4	\$ 497.80	\$ 25,802,176		\$ 25,768,153	
2028	\$ 140.37	\$ 18.99	\$ 159.36	\$3.00				\$ -	75686.4	\$ 515.22	\$ 26,715,737		\$ 26,676,723	
2029	\$ 146.51	\$ 18.48	\$ 164.99	\$3.00				\$ -	75686.4	\$ 533.26	\$ 27,655,210		\$ 27,611,214	
2030	\$ 152.92	\$ 17.99	\$ 170.91	\$3.00				\$ -	75686.4	\$ 551.92	\$ 28,619,741		\$ 28,570,779	
2031	\$ 159.60	\$ 17.51	\$ 177.11	\$3.00				\$ -	75686.4	\$ 571.24	\$ 29,612,220		\$ 29,558,323	
2032	\$ 166.58	\$ 17.04	\$ 183.62	\$3.00				\$ -	75686.4	\$ 591.23	\$ 30,632,469		\$ 30,573,681	
					SUM		\$ 344,088,545	\$ 343,907,838			\$ 432,279,663		\$ 431,716,901	
					NPV @ 7%		\$ 186,139,003	\$ 186,138,361			\$ 195,636,847		\$ 195,477,934	

Six 3.6 MW Siemens wind turbine generators for a combined
Capacity Factor for FCM 28%

21.6 MW

Year	Season	Energy Prices (Synapse)		DWW Production		Market Value (Energy)	Capacity \$/kw-mo	RECs \$/MWH	Market Value	Contract Cost (15Yr)	Above Mkt Costs (15Yr)	Contract Cost (20Yr)	Above Mkt Costs (20Yr)
		On-Peak	Off-Peak	On-Peak	Off-Peak								
2012	Winter 2012	\$ 81.82	\$ 62.93	8915	5603	\$ 1,073,830.43	\$ 2.93	\$ 36.10	\$ 1,612,067.53	\$ 4,804,510.14	\$ 3,192,442.61	\$ 4,284,020.34	\$ 2,671,952.81
	Summer 2013	\$ 84.10	\$ 65.05	13400	7226	\$ 1,597,125.46							
2013	Winter 2013	\$ 84.10	\$ 68.41	34583	20609	\$ 4,318,433.30	\$ 1.41	\$ 41.20	\$ 9,047,581.62	\$ 26,149,714.43	\$ 17,102,132.81	\$ 23,316,386.42	\$ 14,268,804.80
	Summer 2014	\$ 86.67	\$ 66.36	13400	7226	\$ 1,640,903.94							
2014	Winter 2014	\$ 86.34	\$ 70.55	34583	20609	\$ 4,439,820.90	\$ 1.44	\$ 44.90	\$ 9,493,869.88	\$ 27,064,840.70	\$ 17,570,970.83	\$ 24,132,948.98	\$ 14,639,079.10
	Summer 2015	\$ 90.54	\$ 68.13	13400	7226	\$ 1,705,649.82							
2015	Winter 2015	\$ 88.74	\$ 73.31	34583	20609	\$ 4,579,835.86	\$ 1.58	\$ 44.60	\$ 9,676,214.20	\$ 28,011,810.65	\$ 18,335,596.44	\$ 24,977,564.28	\$ 15,301,350.08
	Summer 2016	\$ 95.57	\$ 70.76	13400	7226	\$ 1,791,993.06							
2016	Winter 2016	\$ 90.86	\$ 76.16	34583	20609	\$ 4,711,758.16	\$ 1.72	\$ 46.60	\$ 10,047,467.64	\$ 28,992,140.62	\$ 18,944,672.97	\$ 25,851,748.70	\$ 15,804,281.06
	Summer 2017	\$ 99.47	\$ 75.22	13400	7226	\$ 1,876,537.25							
2017	Winter 2017	\$ 94.90	\$ 79.91	34583	20609	\$ 4,928,858.59	\$ 1.76	\$ 54.70	\$ 10,963,645.56	\$ 30,007,346.99	\$ 19,043,701.43	\$ 26,756,260.43	\$ 15,792,614.87
	Summer 2018	\$ 103.38	\$ 79.59	13400	7226	\$ 1,960,417.75							
2018	Winter 2018	\$ 100.99	\$ 84.02	34583	20609	\$ 5,223,811.19	\$ 1.91	\$ 57.01	\$ 11,517,882.37	\$ 31,057,429.75	\$ 19,539,547.38	\$ 27,692,615.81	\$ 16,174,733.44
	Summer 2019	\$ 109.10	\$ 82.53	13400	7226	\$ 2,058,320.23							
2019	Winter 2019	\$ 105.32	\$ 89.35	34583	20609	\$ 5,483,751.26	\$ 1.95	\$ 52.10	\$ 11,503,984.75	\$ 32,144,663.45	\$ 20,640,678.70	\$ 28,662,331.23	\$ 17,158,346.48
	Summer 2020	\$ 110.78	\$ 85.30	13400	7226	\$ 2,100,908.46							
2020	Winter 2020	\$ 107.30	\$ 90.64	34583	20609	\$ 5,578,876.38	\$ 2.11	\$ 50.20	\$ 11,498,267.36	\$ 33,269,048.10	\$ 21,770,780.74	\$ 29,665,406.68	\$ 18,167,139.32
	Summer 2021	\$ 111.99	\$ 86.62	13400	7226	\$ 2,126,581.44							
2021	Winter 2021	\$ 108.18	\$ 92.20	34583	20609	\$ 5,641,367.44	\$ 2.28	\$ 45.10	\$ 11,201,058.32	\$ 34,433,616.42	\$ 23,232,558.10	\$ 30,703,358.52	\$ 19,502,300.20
	Summer 2022	\$ 116.30	\$ 90.04	13400	7226	\$ 2,209,000.81							
2022	Winter 2022	\$ 112.93	\$ 96.50	34583	20609	\$ 5,894,321.59	\$ 2.46	\$ 42.60	\$ 11,347,928.66	\$ 35,639,126.60	\$ 24,291,197.93	\$ 31,778,461.31	\$ 20,430,532.64
	Summer 2023	\$ 123.64	\$ 95.40	13400	7226	\$ 2,346,114.12							
2023	Winter 2023	\$ 117.96	\$ 100.94	34583	20609	\$ 6,159,700.44	\$ 2.64	\$ 37.80	\$ 11,387,937.33	\$ 36,886,336.81	\$ 25,498,399.47	\$ 32,889,956.85	\$ 21,502,019.52
	Summer 2024	\$ 134.72	\$ 104.04	13400	7226	\$ 2,557,088.13							
2024	Winter 2024	\$ 128.67	\$ 107.80	34583	20609	\$ 6,671,318.51	\$ 2.83	\$ 28.51	\$ 11,406,736.73	\$ 38,177,521.61	\$ 26,770,784.88	\$ 34,041,636.07	\$ 22,634,899.34
	Summer 2025	\$ 140.76	\$ 109.01	13400	7226	\$ 2,673,881.66							
2025	Winter 2025	\$ 134.02	\$ 112.48	34583	20609	\$ 6,952,928.32	\$ 3.00	\$ 20.61	\$ 11,207,568.11	\$ 39,513,439.17	\$ 28,305,871.06	\$ 35,232,740.78	\$ 24,025,172.66
	Summer 2026	\$ 147.06	\$ 114.22	13400	7226	\$ 2,796,014.40							
2026	Winter 2026	\$ 139.61	\$ 117.35	34583	20609	\$ 7,246,429.67	\$ 3.00	\$ 20.06	\$ 11,581,502.17	\$ 40,896,364.05	\$ 29,314,861.88	\$ 36,466,303.70	\$ 24,884,801.53
	Summer 2027	\$ 153.65	\$ 119.67	13400	7226	\$ 2,923,730.65							
2027	Winter 2027	\$ 145.42	\$ 122.44	34583	20609	\$ 7,552,324.90	\$ 3.00	\$ 19.52	\$ 11,974,171.80	\$ 42,327,812.61	\$ 30,353,640.81	\$ 37,742,324.85	\$ 25,768,153.05
	Summer 2028	\$ 160.53	\$ 125.39	13400	7226	\$ 3,057,285.91							
2028	Winter 2028	\$ 151.48	\$ 127.74	34583	20609	\$ 7,871,137.57	\$ 3.00	\$ 18.99	\$ 12,386,356.04		\$ 39,063,078.77	\$ 26,676,722.73	
	Summer 2029	\$ 167.72	\$ 131.38	13400	7226	\$ 3,196,947.36							
2029	Winter 2029	\$ 157.79	\$ 133.28	34583	20609	\$ 8,203,413.34	\$ 3.00	\$ 18.48	\$ 12,819,625.96		\$ 40,430,840.00	\$ 27,611,214.04	
	Summer 2030	\$ 175.24	\$ 137.66	13400	7226	\$ 3,342,994.44							
2030	Winter 2030	\$ 164.36	\$ 139.06	34583	20609	\$ 8,549,720.96	\$ 3.00	\$ 17.99	\$ 13,274,829.71		\$ 41,845,608.54	\$ 28,570,778.83	
	Summer 2031	\$ 183.09	\$ 144.24	13400	7226	\$ 3,495,719.38							
2031	Winter 2031	\$ 171.20	\$ 145.08	34583	20609	\$ 8,910,653.20	\$ 3.00	\$ 17.51	\$ 13,752,094.13		\$ 43,310,417.13	\$ 29,558,323.00	
	Summer 2032	\$ 191.29	\$ 151.13	13400	7226	\$ 3,655,427.80							
2032	Winter 2032	\$ 178.33	\$ 151.37	34583	20609	\$ 9,286,827.88	\$ 3.00	\$ 17.04	\$ 14,252,342.65		\$ 44,826,023.95	\$ 30,573,681.29	

SYNAPSE

Synapse Rhode Island Forecast					7 WTG Project 10.08 MW 15 year contract term				7 WTG Project 10.08 MW 20 year contract term					
	Energy 7x24	RI REC Forecast	Energy & RECs	Capacity \$/kW-mo	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	Seasonal Summary (Synapse)	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	% over ESAI 24x7 forecast	Seasonal Summary (Synapse)	% over ESAI 24x7 forecast
2009					N/A	\$ 300.56			N/A	\$ 250.14				
2010	\$ 59.25	\$ 37.50	\$ 96.75											
2011	\$ 64.67	\$ 36.80	\$ 101.47											
2012	\$ 70.92	\$ 36.10	\$ 107.02	\$2.93	15452.6	\$ 310.63	\$ 2,898,327	\$ 3,344,365	15452.6	\$ 277.33	\$ 2,383,754	102.1%	\$ 2,784,226	119.2%
2013	\$ 75.46	\$ 41.20	\$ 116.66	\$1.41	88300.8	\$ 321.50	\$ 17,968,800	\$ 17,882,650	88300.8	\$ 287.04	\$ 14,925,954	102.0%	\$ 14,834,504	101.4%
2014	\$ 77.55	\$ 44.90	\$ 122.46	\$1.44	88300.8	\$ 332.76	\$ 18,448,422	\$ 18,357,979	88300.8	\$ 297.09	\$ 15,298,733	95.9%	\$ 15,202,803	95.3%
2015	\$ 80.21	\$ 44.60	\$ 124.81	\$1.58	88300.8	\$ 344.40	\$ 19,256,651	\$ 19,174,856	88300.8	\$ 307.48	\$ 15,996,586	99.5%	\$ 15,909,112	98.9%
2016	\$ 83.14	\$ 46.60	\$ 129.74	\$1.72	88300.8	\$ 356.46	\$ 19,873,356	\$ 19,808,490	88300.8	\$ 318.25	\$ 16,499,383	103.4%	\$ 16,428,639	103.0%
2017	\$ 87.14	\$ 54.70	\$ 141.85	\$1.76	88300.8	\$ 368.93	\$ 19,902,797	\$ 19,842,645	88300.8	\$ 329.38	\$ 16,410,501	100.8%	\$ 16,344,265	100.4%
2018	\$ 91.90	\$ 57.01	\$ 148.91	\$1.91	88300.8	\$ 381.85	\$ 20,407,247	\$ 20,338,869	88300.8	\$ 340.91	\$ 16,792,212	100.4%	\$ 16,717,537	100.0%
2019	\$ 96.57	\$ 52.10	\$ 148.67	\$1.95	88300.8	\$ 395.21	\$ 21,604,398	\$ 21,536,837	88300.8	\$ 352.84	\$ 17,863,093	103.9%	\$ 17,789,014	103.5%
2020	\$ 98.41	\$ 50.20	\$ 148.60	\$2.11	88300.8	\$ 409.04	\$ 22,817,946	\$ 22,766,835	88300.8	\$ 365.19	\$ 18,945,956	106.5%	\$ 18,888,099	106.2%
2021	\$ 99.66	\$ 45.10	\$ 144.75	\$2.28	88300.8	\$ 423.36	\$ 24,407,841	\$ 24,380,249	88300.8	\$ 377.98	\$ 20,400,750	107.4%	\$ 20,366,178	107.3%
2022	\$ 103.96	\$ 42.60	\$ 146.55	\$2.46	88300.8	\$ 438.18	\$ 25,542,704	\$ 25,519,797	88300.8	\$ 391.21	\$ 21,395,216	106.4%	\$ 21,365,084	106.3%
2023	\$ 109.21	\$ 37.80	\$ 147.02	\$2.64	88300.8	\$ 453.51	\$ 26,840,089	\$ 26,829,130	88300.8	\$ 404.90	\$ 22,547,787	105.2%	\$ 22,529,351	105.2%
2024	\$ 118.29	\$ 28.51	\$ 146.80	\$2.83	88300.8	\$ 469.39	\$ 28,245,611	\$ 28,211,857	88300.8	\$ 419.07	\$ 23,802,315	103.3%	\$ 23,760,820	103.1%
2025	\$ 123.46	\$ 20.61	\$ 144.07	\$3.00	88300.8	\$ 485.82	\$ 29,922,349	\$ 29,897,530	88300.8	\$ 433.74	\$ 25,323,644		\$ 25,290,813	
2026	\$ 128.86	\$ 20.06	\$ 148.92	\$3.00	88300.8	\$ 502.82	\$ 30,995,515	\$ 30,965,002	88300.8	\$ 448.92	\$ 26,236,102		\$ 26,197,298	
2027	\$ 134.49	\$ 19.52	\$ 154.01	\$3.00	88300.8	\$ 520.42	\$ 32,099,903	\$ 32,063,689	88300.8	\$ 464.63	\$ 27,173,602		\$ 27,128,805	
2028	\$ 140.37	\$ 18.99	\$ 159.36	\$3.00				\$ -	88300.8	\$ 480.89	\$ 28,136,993		\$ 28,086,196	
2029	\$ 146.51	\$ 18.48	\$ 164.99	\$3.00				\$ -	88300.8	\$ 497.72	\$ 29,126,202		\$ 29,069,406	
2030	\$ 152.92	\$ 17.99	\$ 170.91	\$3.00				\$ -	88300.8	\$ 515.14	\$ 30,141,995		\$ 30,079,214	
2031	\$ 159.60	\$ 17.51	\$ 177.11	\$3.00				\$ -	88300.8	\$ 533.17	\$ 31,185,978		\$ 31,117,243	
2032	\$ 166.58	\$ 17.04	\$ 183.62	\$3.00				\$ -	88300.8	\$ 551.83	\$ 32,258,829		\$ 32,184,183	
SUM							\$ 361,231,957	\$ 360,920,780				\$ 452,845,583	\$ 452,072,787	
NPV @ 7%							\$ 195,172,155	\$ 195,104,768				\$ 204,482,882	\$ 204,231,272	

Six 3.6 MW Siemens wind turbine generators for a combined
Capacity Factor for FCM 28%

25.2 MW

Year	Season	Energy Prices (Synapse)		DWW Production		Market Value (Energy)	Capacity	RECs	Market Value	Contract Cost (15Yr)	Above Mkt Costs (15Yr)	Contract Cost (20Yr)	Above Mkt Costs (20Yr)
		On-Peak	Off-Peak	On-Peak	Off-Peak		\$/kw-mo	\$/MWH					
2012	Winter 2012	\$ 81.82	\$ 62.93	10284	6537	\$ 1,252,799.02	2.93	\$ 36.10	\$ 1,880,742.31	\$ 5,225,107.23	\$ 3,344,364.92	\$ 4,664,967.93	\$ 2,784,225.62
	Summer 2013	\$ 84.10	\$ 65.05	15634	8431	\$ 1,863,313.04							
2013	Winter 2013	\$ 84.10	\$ 68.41	40346	24044	\$ 5,038,172.18	1.41	\$ 41.20	\$ 10,555,511.89	\$ 28,438,161.94	\$ 17,882,650.05	\$ 25,390,015.56	\$ 14,834,503.67
	Summer 2014	\$ 86.67	\$ 66.36	15634	8431	\$ 1,914,387.92							
2014	Winter 2014	\$ 86.34	\$ 70.55	40346	24044	\$ 5,179,791.04	1.44	\$ 44.90	\$ 11,076,181.52	\$ 29,434,161.02	\$ 18,357,979.49	\$ 26,278,984.54	\$ 15,202,803.02
	Summer 2015	\$ 90.54	\$ 68.13	15634	8431	\$ 1,989,924.79							
2015	Winter 2015	\$ 88.74	\$ 73.31	40346	24044	\$ 5,343,141.83	1.58	\$ 44.60	\$ 11,288,916.57	\$ 30,463,772.85	\$ 19,174,856.28	\$ 27,198,028.10	\$ 15,909,111.53
	Summer 2016	\$ 95.57	\$ 70.76	15634	8431	\$ 2,090,658.57							
2016	Winter 2016	\$ 90.86	\$ 76.16	40346	24044	\$ 5,497,051.19	1.72	\$ 46.60	\$ 11,722,045.59	\$ 31,530,535.63	\$ 19,808,490.04	\$ 28,150,684.41	\$ 16,428,638.82
	Summer 2017	\$ 99.47	\$ 75.22	15634	8431	\$ 2,189,293.46							
2017	Winter 2017	\$ 94.90	\$ 79.91	40346	24044	\$ 5,750,335.03	1.76	\$ 54.70	\$ 12,790,919.82	\$ 32,633,564.80	\$ 19,842,644.98	\$ 29,135,184.38	\$ 16,344,264.56
	Summer 2018	\$ 103.38	\$ 79.59	15634	8431	\$ 2,287,154.04							
2018	Winter 2018	\$ 100.99	\$ 84.02	40346	24044	\$ 6,094,446.39	1.91	\$ 57.01	\$ 13,437,529.43	\$ 33,776,398.56	\$ 20,338,869.12	\$ 30,155,066.21	\$ 16,717,536.78
	Summer 2019	\$ 109.10	\$ 82.53	15634	8431	\$ 2,401,373.60							
2019	Winter 2019	\$ 105.32	\$ 89.35	40346	24044	\$ 6,397,709.81	1.95	\$ 52.10	\$ 13,421,315.54	\$ 34,958,152.35	\$ 21,536,836.81	\$ 31,210,329.89	\$ 17,789,014.35
	Summer 2020	\$ 110.78	\$ 85.30	15634	8431	\$ 2,451,059.87							
2020	Winter 2020	\$ 107.30	\$ 90.64	40346	24044	\$ 6,508,689.11	2.11	\$ 50.20	\$ 13,414,645.26	\$ 36,181,479.81	\$ 22,766,834.55	\$ 32,302,744.50	\$ 18,888,099.25
	Summer 2021	\$ 111.99	\$ 86.62	15634	8431	\$ 2,481,011.68							
2021	Winter 2021	\$ 108.18	\$ 92.20	40346	24044	\$ 6,581,595.34	2.28	\$ 45.10	\$ 13,067,901.37	\$ 37,448,150.04	\$ 24,380,248.67	\$ 33,434,079.16	\$ 20,366,177.78
	Summer 2022	\$ 116.30	\$ 90.04	15634	8431	\$ 2,577,167.61							
2022	Winter 2022	\$ 112.93	\$ 96.50	40346	24044	\$ 6,876,708.52	2.46	\$ 42.60	\$ 13,239,250.10	\$ 38,759,047.58	\$ 25,519,797.48	\$ 34,604,333.85	\$ 21,365,083.74
	Summer 2023	\$ 123.64	\$ 95.40	15634	8431	\$ 2,737,133.15							
2023	Winter 2023	\$ 117.96	\$ 100.94	40346	24044	\$ 7,186,317.18	2.64	\$ 37.80	\$ 13,285,926.89	\$ 40,115,056.98	\$ 26,829,130.09	\$ 35,815,277.66	\$ 22,529,350.77
	Summer 2024	\$ 134.72	\$ 104.04	15634	8431	\$ 2,983,269.49							
2024	Winter 2024	\$ 128.67	\$ 107.80	40346	24044	\$ 7,783,204.93	2.83	\$ 28.51	\$ 13,307,859.52	\$ 41,519,716.43	\$ 28,211,856.91	\$ 37,068,679.70	\$ 23,760,820.18
	Summer 2025	\$ 140.76	\$ 109.01	15634	8431	\$ 3,119,528.61							
2025	Winter 2025	\$ 134.02	\$ 112.48	40346	24044	\$ 8,111,749.70	3.00	\$ 20.61	\$ 13,075,496.13	\$ 42,973,025.92	\$ 29,897,529.78	\$ 38,366,309.05	\$ 25,290,812.91
	Summer 2026	\$ 147.06	\$ 114.22	15634	8431	\$ 3,262,016.80							
2026	Winter 2026	\$ 139.61	\$ 117.35	40346	24044	\$ 8,454,167.95	3.00	\$ 20.06	\$ 13,511,752.53	\$ 44,476,754.54	\$ 30,965,002.01	\$ 39,709,050.26	\$ 26,197,297.72
	Summer 2027	\$ 153.65	\$ 119.67	15634	8431	\$ 3,411,019.10							
2027	Winter 2027	\$ 145.42	\$ 122.44	40346	24044	\$ 8,811,045.72	3.00	\$ 19.52	\$ 13,969,867.10	\$ 46,033,555.94	\$ 32,063,688.85	\$ 41,098,672.41	\$ 27,128,805.32
	Summer 2028	\$ 160.53	\$ 125.39	15634	8431	\$ 3,566,833.56							
2028	Winter 2028	\$ 151.48	\$ 127.74	40346	24044	\$ 9,182,993.83	3.00	\$ 18.99	\$ 14,450,748.71			\$ 42,536,944.62	\$ 28,086,195.90
	Summer 2029	\$ 167.72	\$ 131.38	15634	8431	\$ 3,729,771.92							
2029	Winter 2029	\$ 157.79	\$ 133.28	40346	24044	\$ 9,570,648.89	3.00	\$ 18.48	\$ 14,956,230.28			\$ 44,025,635.96	\$ 29,069,405.67
	Summer 2030	\$ 175.24	\$ 137.66	15634	8431	\$ 3,900,160.18							
2030	Winter 2030	\$ 164.36	\$ 139.06	40346	24044	\$ 9,974,674.45	3.00	\$ 17.99	\$ 15,487,301.33			\$ 45,566,515.52	\$ 30,079,214.19
	Summer 2031	\$ 183.09	\$ 144.24	15634	8431	\$ 4,078,339.28							
2031	Winter 2031	\$ 171.20	\$ 145.08	40346	24044	\$ 10,395,762.06	3.00	\$ 17.51	\$ 16,044,109.82			\$ 47,161,352.41	\$ 31,117,242.59
	Summer 2032	\$ 191.29	\$ 151.13	15634	8431	\$ 4,264,665.77							
2032	Winter 2032	\$ 178.33	\$ 151.37	40346	24044	\$ 10,834,632.52	3.00	\$ 17.04	\$ 16,627,733.10			\$ 48,811,915.71	\$ 32,184,182.62

SYNAPSE

8 WTG Project 11.52 MW 15 year contract term				8 WTG Project 11.52 MW 20 year contract term					
Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	Seasonal Summary (Synapse)	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	% over ESAI 24x7 forecast	Seasonal Summary (Synapse)	% over ESAI 24x7 forecast
N/A	\$ 300.56			N/A	\$ 236.30				
17660.0	\$ 292.93	\$ 2,999,759	\$ 3,481,869	17660.0	\$ 261.99	\$ 2,453,359	102.3%	\$ 2,887,079	120.4%
100915	\$ 303.19	\$ 18,687,976	\$ 18,586,338	100915	\$ 271.16	\$ 15,455,669	102.2%	\$ 15,348,393	101.5%
100915	\$ 313.80	\$ 19,170,521	\$ 19,063,863	100915	\$ 280.65	\$ 15,825,188	95.5%	\$ 15,712,696	94.8%
100915	\$ 324.78	\$ 20,027,605	\$ 19,930,716	100915	\$ 290.47	\$ 16,565,211	99.4%	\$ 16,462,284	98.8%
100915	\$ 336.15	\$ 20,662,778	\$ 20,585,116	100915	\$ 300.64	\$ 17,079,286	103.8%	\$ 16,995,375	103.3%
100915	\$ 347.91	\$ 20,624,775	\$ 20,552,376	100915	\$ 311.16	\$ 16,916,149	100.9%	\$ 16,837,281	100.4%
100915	\$ 360.09	\$ 21,126,611	\$ 21,044,682	100915	\$ 322.05	\$ 17,287,804	100.5%	\$ 17,199,180	100.0%
100915	\$ 372.69	\$ 22,418,086	\$ 22,336,958	100915	\$ 333.32	\$ 18,445,062	104.4%	\$ 18,357,006	103.9%
100915	\$ 385.74	\$ 23,726,281	\$ 23,663,819	100915	\$ 344.99	\$ 19,613,995	107.2%	\$ 19,544,361	106.8%
100915	\$ 399.24	\$ 25,460,549	\$ 25,424,826	100915	\$ 357.06	\$ 21,203,955	108.3%	\$ 21,160,808	108.0%
100915	\$ 413.21	\$ 26,671,756	\$ 26,641,241	100915	\$ 369.56	\$ 22,266,816	107.1%	\$ 22,228,618	106.9%
100915	\$ 427.67	\$ 28,066,683	\$ 28,049,672	100915	\$ 382.50	\$ 23,508,352	105.8%	\$ 23,483,391	105.7%
100915	\$ 442.64	\$ 29,581,158	\$ 29,537,938	100915	\$ 395.88	\$ 24,862,373	103.6%	\$ 24,810,923	103.4%
100915	\$ 458.13	\$ 31,402,566	\$ 31,369,396	100915	\$ 409.74	\$ 26,519,289		\$ 26,477,602	
100915	\$ 474.17	\$ 32,532,160	\$ 32,492,317	100915	\$ 424.08	\$ 27,477,328		\$ 27,428,668	
100915	\$ 490.76	\$ 33,692,391	\$ 33,645,857	100915	\$ 438.92	\$ 28,460,958		\$ 28,405,299	
100915			\$ -	100915	\$ 454.28	\$ 29,471,151		\$ 29,408,478	
100915			\$ -	100915	\$ 470.18	\$ 30,507,822		\$ 30,438,132	
100915			\$ -	100915	\$ 486.64	\$ 31,571,848		\$ 31,495,151	
100915			\$ -	100915	\$ 503.67	\$ 32,664,054		\$ 32,580,378	
100915			\$ -	100915	\$ 521.30	\$ 33,786,225		\$ 33,695,615	
SUM		\$ 376,851,656	\$ 376,406,983			\$ 471,941,894		\$ 470,956,719	
NPV @ 7%		\$ 203,373,085	\$ 203,236,858			\$ 212,651,038		\$ 212,305,293	

28.8 MW

DWW Production		Market Value (Energy)	Capacity	RECs	Market Value	Contract Cost (15Yr)	Above Mkt Costs (15Yr)	Contract Cost (20Yr)	Above Mkt Costs (20Yr)
On-Peak	Off-Peak		\$/kw-mo	\$/MWH					
11753	7471	\$ 1,431,767.61	\$ 2.93	\$ 36.10	\$ 2,149,417.08	\$ 5,631,286.32	\$ 3,481,869.24	\$ 5,036,495.76	\$ 2,887,078.68
17867	9635	\$ 2,129,500.61							
46110	27479	\$ 5,757,911.06	\$ 1.41	\$ 41.20	\$ 12,063,442.16	\$ 30,649,780.29	\$ 18,586,338.13	\$ 27,411,835.56	\$ 15,348,393.40
17867	9635	\$ 2,187,871.91							
46110	27479	\$ 5,919,761.19	\$ 1.44	\$ 44.90	\$ 12,658,493.17	\$ 31,722,355.80	\$ 19,063,862.63	\$ 28,371,189.15	\$ 15,712,695.98
17867	9635	\$ 2,274,199.76							
46110	27479	\$ 6,106,447.81	\$ 1.58	\$ 44.60	\$ 12,901,618.94	\$ 32,832,334.98	\$ 19,930,716.04	\$ 29,363,902.77	\$ 16,462,283.83
17867	9635	\$ 2,389,324.08							
46110	27479	\$ 6,282,344.21	\$ 1.72	\$ 46.60	\$ 13,396,623.53	\$ 33,981,739.65	\$ 20,585,116.12	\$ 30,391,998.24	\$ 16,995,374.71
17867	9635	\$ 2,502,049.67							
46110	27479	\$ 6,571,811.46	\$ 1.76	\$ 54.70	\$ 14,618,194.08	\$ 35,170,569.81	\$ 20,552,375.73	\$ 31,455,475.56	\$ 16,837,281.48
17867	9635	\$ 2,613,890.33							
46110	27479	\$ 6,965,081.59	\$ 1.91	\$ 57.01	\$ 15,357,176.49	\$ 36,401,858.19	\$ 21,044,681.70	\$ 32,556,356.55	\$ 17,199,180.06
17867	9635	\$ 2,744,426.97							
46110	27479	\$ 7,311,668.35	\$ 1.95	\$ 52.10	\$ 15,338,646.33	\$ 37,675,604.79	\$ 22,336,958.46	\$ 33,695,652.12	\$ 18,357,005.79
17867	9635	\$ 2,801,211.28							
46110	27479	\$ 7,438,501.84	\$ 2.11	\$ 50.20	\$ 15,331,023.15	\$ 38,994,842.34	\$ 23,663,819.19	\$ 34,875,384.09	\$ 19,544,360.94
17867	9635	\$ 2,835,441.92							
46110	27479	\$ 7,521,823.25	\$ 2.28	\$ 45.10	\$ 14,934,744.43	\$ 40,359,570.84	\$ 25,424,826.41	\$ 36,095,552.46	\$ 21,160,808.03
17867	9635	\$ 2,945,334.41							
46110	27479	\$ 7,859,095.45	\$ 2.46	\$ 42.60	\$ 15,130,571.55	\$ 41,771,812.11	\$ 26,641,240.56	\$ 37,359,189.96	\$ 22,228,618.41
17867	9635	\$ 3,128,152.17							
46110	27479	\$ 8,212,933.92	\$ 2.64	\$ 37.80	\$ 15,183,916.45	\$ 43,233,587.97	\$ 28,049,671.52	\$ 38,667,307.50	\$ 23,483,391.05
17867	9635	\$ 3,409,450.85							
46110	27479	\$ 8,895,091.35	\$ 2.83	\$ 28.51	\$ 15,208,982.30	\$ 44,746,920.24	\$ 29,537,937.94	\$ 40,019,905.08	\$ 24,810,922.78
17867	9635	\$ 3,565,175.55							
46110	27479	\$ 9,270,571.09	\$ 3.00	\$ 20.61	\$ 14,943,424.15	\$ 46,312,819.83	\$ 31,369,395.68	\$ 41,421,026.34	\$ 26,477,602.19
17867	9635	\$ 3,728,019.20							
46110	27479	\$ 9,661,906.23	\$ 3.00	\$ 20.06	\$ 15,442,002.89	\$ 47,934,319.47	\$ 32,492,316.58	\$ 42,870,671.28	\$ 27,428,668.39
17867	9635	\$ 3,898,307.54							
46110	27479	\$ 10,069,766.54	\$ 3.00	\$ 19.52	\$ 15,965,562.39	\$ 49,611,419.16	\$ 33,645,856.77	\$ 44,370,861.72	\$ 28,405,299.33
17867	9635	\$ 4,076,381.21							
46110	27479	\$ 10,494,850.09	\$ 3.00	\$ 18.99	\$ 16,515,141.39			\$ 45,923,619.48	\$ 29,408,478.09
17867	9635	\$ 4,262,596.48							
46110	27479	\$ 10,937,884.45	\$ 3.00	\$ 18.48	\$ 17,092,834.61			\$ 47,530,966.38	\$ 30,438,131.77
17867	9635	\$ 4,457,325.92							
46110	27479	\$ 11,399,627.94	\$ 3.00	\$ 17.99	\$ 17,699,772.95			\$ 49,194,924.24	\$ 31,495,151.29
17867	9635	\$ 4,660,959.17							
46110	27479	\$ 11,880,870.93	\$ 3.00	\$ 17.51	\$ 18,336,125.51			\$ 50,916,503.97	\$ 32,580,378.46
17867	9635	\$ 4,873,903.73							
46110	27479	\$ 12,382,437.17	\$ 3.00	\$ 17.04	\$ 19,003,123.54			\$ 52,698,738.30	\$ 33,695,614.76

SYNAPSE

Synapse Rhode Island Forecast					8 WTG Project 11.52 MW 20 year contract term					
	Energy 7x24	RI REC Forecast	Energy & RECs	Capacity \$/kW-mo	Delivered Energy MWh	Bundled Energy Rate \$/MWh	Above Market Cost	% over ESAI 24x7 forecast	Seasonal Summary (Synapse)	% over ESAI 24x7 forecast
2009					N/A	\$ 212.63				
2010	\$ 59.25	\$ 37.50	\$ 96.75							
2011	\$ 64.67	\$ 36.80	\$ 101.47							
2012	\$ 70.92	\$ 36.10	\$ 107.02	\$2.93	17660.0	\$ 235.75	\$ 1,989,902		\$ 2,382,577	
2013	\$ 75.46	\$ 41.20	\$ 116.66	\$1.41	100915	\$ 244.00	\$ 12,714,597		\$ 12,602,541	
2014	\$ 77.55	\$ 44.90	\$ 122.46	\$1.44	100915	\$ 252.54	\$ 12,988,240		\$ 12,870,799	
2015	\$ 80.21	\$ 44.60	\$ 124.81	\$1.58	100915	\$ 261.38	\$ 13,629,247		\$ 13,521,199	
2016	\$ 83.14	\$ 46.60	\$ 129.74	\$1.72	100915	\$ 270.52	\$ 14,040,205		\$ 13,950,993	
2017	\$ 87.14	\$ 54.70	\$ 141.85	\$1.76	100915	\$ 279.99	\$ 13,770,942		\$ 13,686,589	
2018	\$ 91.90	\$ 57.01	\$ 148.91	\$1.91	100915	\$ 289.79	\$ 14,032,575		\$ 13,938,274	
2019	\$ 96.57	\$ 52.10	\$ 148.67	\$1.95	100915	\$ 299.94	\$ 15,076,077		\$ 14,982,145	
2020	\$ 98.41	\$ 50.20	\$ 148.60	\$2.11	100915	\$ 310.43	\$ 16,126,712		\$ 16,050,996	
2021	\$ 99.66	\$ 45.10	\$ 144.75	\$2.28	100915	\$ 321.30	\$ 17,595,086		\$ 17,545,645	
2022	\$ 103.96	\$ 42.60	\$ 146.55	\$2.46	100915	\$ 332.54	\$ 18,531,344		\$ 18,486,632	
2023	\$ 109.21	\$ 37.80	\$ 147.02	\$2.64	100915	\$ 344.18	\$ 19,641,594		\$ 19,609,889	
2024	\$ 118.29	\$ 28.51	\$ 146.80	\$2.83	100915	\$ 356.23	\$ 20,861,035		\$ 20,802,606	
2025	\$ 123.46	\$ 20.61	\$ 144.07	\$3.00	100915	\$ 368.70	\$ 22,377,480		\$ 22,328,570	
2026	\$ 128.86	\$ 20.06	\$ 148.92	\$3.00	100915	\$ 381.60	\$ 23,190,646		\$ 23,134,511	
2027	\$ 134.49	\$ 19.52	\$ 154.01	\$3.00	100915	\$ 394.96	\$ 24,024,525		\$ 23,961,129	
2028	\$ 140.37	\$ 18.99	\$ 159.36	\$3.00	100915	\$ 408.78	\$ 24,879,665		\$ 24,808,985	
2029	\$ 146.51	\$ 18.48	\$ 164.99	\$3.00	100915	\$ 423.09	\$ 25,755,614		\$ 25,677,636	
2030	\$ 152.92	\$ 17.99	\$ 170.91	\$3.00	100915	\$ 437.90	\$ 26,652,939		\$ 26,567,664	
2031	\$ 159.60	\$ 17.51	\$ 177.11	\$3.00	100915	\$ 453.22	\$ 27,573,226		\$ 27,480,672	
2032	\$ 166.58	\$ 17.04	\$ 183.62	\$3.00	100915	\$ 469.09	\$ 28,517,062		\$ 28,417,262	
							\$ 393,968,713		\$ 392,807,313	
NPV @ 7%							\$ 176,663,580		\$ 176,217,468	

Six 3 MW Siemens wind turbine generators for a combined
Capacity Factor for FCM 28%

28.8 MW

Year	Season	Energy Prices (Synapse)		DWW Production		Market Value (Energy)	Capacity \$/kw-mo	RECs \$/MWH	Market Value	Contract Cost (20Yr)	Above Mkt Costs (20Yr)
		On-Peak	Off-Peak	On-Peak	Off-Peak						
2012	Winter 2012	\$ 81.82	\$ 62.93	11753	7471	\$ 1,431,767.61	2.93	36.10	\$ 2,149,417.08	\$ 4,531,994.21	\$ 2,382,577.13
	Summer 2013	\$ 84.10	\$ 65.05	17867	9635	\$ 2,129,500.61					
2013	Winter 2013	\$ 84.10	\$ 68.41	46110	27479	\$ 5,757,911.06	1.41	41.20	\$ 12,063,442.16	\$ 24,665,983.18	\$ 12,602,541.02
	Summer 2014	\$ 86.67	\$ 66.36	17867	9635	\$ 2,187,871.91					
2014	Winter 2014	\$ 86.34	\$ 70.55	46110	27479	\$ 5,919,761.19	1.44	44.90	\$ 12,658,493.17	\$ 25,529,292.59	\$ 12,870,799.42
	Summer 2015	\$ 90.54	\$ 68.13	17867	9635	\$ 2,274,199.76					
2015	Winter 2015	\$ 88.74	\$ 73.31	46110	27479	\$ 6,106,447.81	1.58	44.60	\$ 12,901,618.94	\$ 26,422,817.83	\$ 13,521,198.89
	Summer 2016	\$ 95.57	\$ 70.76	17867	9635	\$ 2,389,324.08					
2016	Winter 2016	\$ 90.86	\$ 76.16	46110	27479	\$ 6,282,344.21	1.72	46.60	\$ 13,396,623.53	\$ 27,347,616.46	\$ 13,950,992.93
	Summer 2017	\$ 99.47	\$ 75.22	17867	9635	\$ 2,502,049.67					
2017	Winter 2017	\$ 94.90	\$ 79.91	46110	27479	\$ 6,571,811.46	1.76	54.70	\$ 14,618,194.08	\$ 28,304,783.03	\$ 13,686,588.95
	Summer 2018	\$ 103.38	\$ 79.59	17867	9635	\$ 2,613,890.33					
2018	Winter 2018	\$ 100.99	\$ 84.02	46110	27479	\$ 6,965,081.59	1.91	57.01	\$ 15,357,176.49	\$ 29,295,450.44	\$ 13,938,273.94
	Summer 2019	\$ 109.10	\$ 82.53	17867	9635	\$ 2,744,426.97					
2019	Winter 2019	\$ 105.32	\$ 89.35	46110	27479	\$ 7,311,668.35	1.95	52.10	\$ 15,338,646.33	\$ 30,320,791.20	\$ 14,982,144.87
	Summer 2020	\$ 110.78	\$ 85.30	17867	9635	\$ 2,801,211.28					
2020	Winter 2020	\$ 107.30	\$ 90.64	46110	27479	\$ 7,438,501.84	2.11	50.20	\$ 15,331,023.15	\$ 31,382,018.89	\$ 16,050,995.75
	Summer 2021	\$ 111.99	\$ 86.62	17867	9635	\$ 2,835,441.92					
2021	Winter 2021	\$ 108.18	\$ 92.20	46110	27479	\$ 7,521,823.25	2.28	45.10	\$ 14,934,744.43	\$ 32,480,389.56	\$ 17,545,645.13
	Summer 2022	\$ 116.30	\$ 90.04	17867	9635	\$ 2,945,334.41				\$ 33,617,203.19	
2022	Winter 2022	\$ 112.93	\$ 96.50	46110	27479	\$ 7,859,095.45	2.46	42.60	\$ 15,130,571.55	\$ 34,519,578.63	\$ 18,486,631.64
	Summer 2023	\$ 123.64	\$ 95.40	17867	9635	\$ 3,128,152.17				\$ 34,793,805.30	
2023	Winter 2023	\$ 117.96	\$ 100.94	46110	27479	\$ 8,212,933.92	2.64	37.80	\$ 15,183,916.45	#VALUE!	\$ 19,609,888.86
	Summer 2024	\$ 134.72	\$ 104.04	17867	9635	\$ 3,409,450.85				\$ 36,011,588.49	
2024	Winter 2024	\$ 128.67	\$ 107.80	46110	27479	\$ 8,895,091.35	2.83	28.51	\$ 15,208,982.30	\$ -	\$ 20,802,606.18
	Summer 2025	\$ 140.76	\$ 109.01	17867	9635	\$ 3,565,175.55				\$ 37,271,994.08	
2025	Winter 2025	\$ 134.02	\$ 112.48	46110	27479	\$ 9,270,571.09	3.00	20.61	\$ 14,943,424.15	\$ -	\$ 22,328,569.93
	Summer 2026	\$ 147.06	\$ 114.22	17867	9635	\$ 3,728,019.20				\$ 38,576,513.88	
2026	Winter 2026	\$ 139.61	\$ 117.35	46110	27479	\$ 9,661,906.23	3.00	20.06	\$ 15,442,002.89	\$ -	\$ 23,134,510.99
	Summer 2027	\$ 153.65	\$ 119.67	17867	9635	\$ 3,898,307.54				\$ 39,926,691.86	
2027	Winter 2027	\$ 145.42	\$ 122.44	46110	27479	\$ 10,069,766.54	3.00	19.52	\$ 15,965,562.39	#REF!	\$ 23,961,129.47
	Summer 2028	\$ 160.53	\$ 125.39	17867	9635	\$ 4,076,381.21				\$ 41,324,126.08	
2028	Winter 2028	\$ 151.48	\$ 127.74	46110	27479	\$ 10,494,850.09	3.00	18.99	\$ 16,515,141.39	#REF!	\$ 24,808,984.69
	Summer 2029	\$ 167.72	\$ 131.38	17867	9635	\$ 4,262,596.48				\$ 42,770,470.49	
2029	Winter 2029	\$ 157.79	\$ 133.28	46110	27479	\$ 10,937,884.45	3.00	18.48	\$ 17,092,834.61	\$ 44,267,436.96	\$ 25,677,635.88
	Summer 2030	\$ 175.24	\$ 137.66	17867	9635	\$ 4,457,325.92				#REF!	
2030	Winter 2030	\$ 164.36	\$ 139.06	46110	27479	\$ 11,399,627.94	3.00	17.99	\$ 17,699,772.95	#REF!	\$ 26,567,664.01
	Summer 2031	\$ 183.09	\$ 144.24	17867	9635	\$ 4,660,959.17				\$ 45,816,797.25	
2031	Winter 2031	\$ 171.20	\$ 145.08	46110	27479	\$ 11,880,870.93	3.00	17.51	\$ 18,336,125.51	#REF!	\$ 27,480,671.74
	Summer 2032	\$ 191.29	\$ 151.13	17867	9635	\$ 4,873,903.73				\$ 47,420,385.16	
2032	Winter 2032	\$ 178.33	\$ 151.37	46110	27479	\$ 12,382,437.17	3.00	17.04	\$ 19,003,123.54	#REF!	\$ 28,417,261.62

Division Data Request 1-17

Request:

Please provide a complete copy of Deepwater Wind's submittal to the Rhode Island Office of Energy Resources in 2008.

Response:

Two sections of Deepwater Wind's 2008 submittal to the Rhode Island Office of Energy Resources were used in preparation of the testimony. These sections are Section 2: Executive Summary and Section 6: Price Proposal. PDF files of these two sections are attached. The entire document is too voluminous to provide as a PDF file and, therefore, will be provided under separate cover as a paper copy only.

SECTION 2: EXECUTIVE SUMMARY

With its long history as a maritime center, it is fitting that Rhode Island is poised to be the national leader in the emerging industry of offshore wind power. **Deep Water Wind Rhode Island** (“DRI”) is committed to not only building North America’s first offshore wind farm in Rhode Island, but to building the infrastructure of a new industry here in the Ocean State, bringing with it hundreds of jobs and international acclaim. We will build on the native skills and expertise of Rhode Island to show the nation that renewable energy projects are more than just possible—they are a source of community pride and a gateway to a new economy. Moreover, our experience and skill mean that we will develop this project the right way—in partnership with the people of Rhode Island and with sensitivity to the centrality of Narragansett Bay and the Ocean to this state, the shoreline communities of this state, and the people who make a living on the open waters.

I. Our Vision

RHODE ISLAND AS A NATIONAL HUB FOR A NEW INDUSTRY

DRI’s vision for Rhode Island is about building a new industry here in the Ocean State, not just building a single offshore wind farm. Yes, DRI’s offshore project for Rhode Island will create hundreds of high-paying construction jobs. In fact, we project that our unique and best-in-class technological solution will produce more than twice as many construction jobs as our competitors using European-style construction methodology. But our larger economic goal is to produce a sustainable and high growth economic sector here in Rhode Island that is new to North America. Our plan is to use the Rhode Island wind farm project to establish here in Rhode Island the infrastructure for the offshore wind industry in the northeast United States. Our unique engineered solution for offshore wind farms – which allows us to develop wind farms in deep water – means both more construction jobs for Rhode Island and more potential offshore projects in the future.

ESTABLISH QUONSET AS THE CENTER OF OFFSHORE WIND MANUFACTURING JOBS

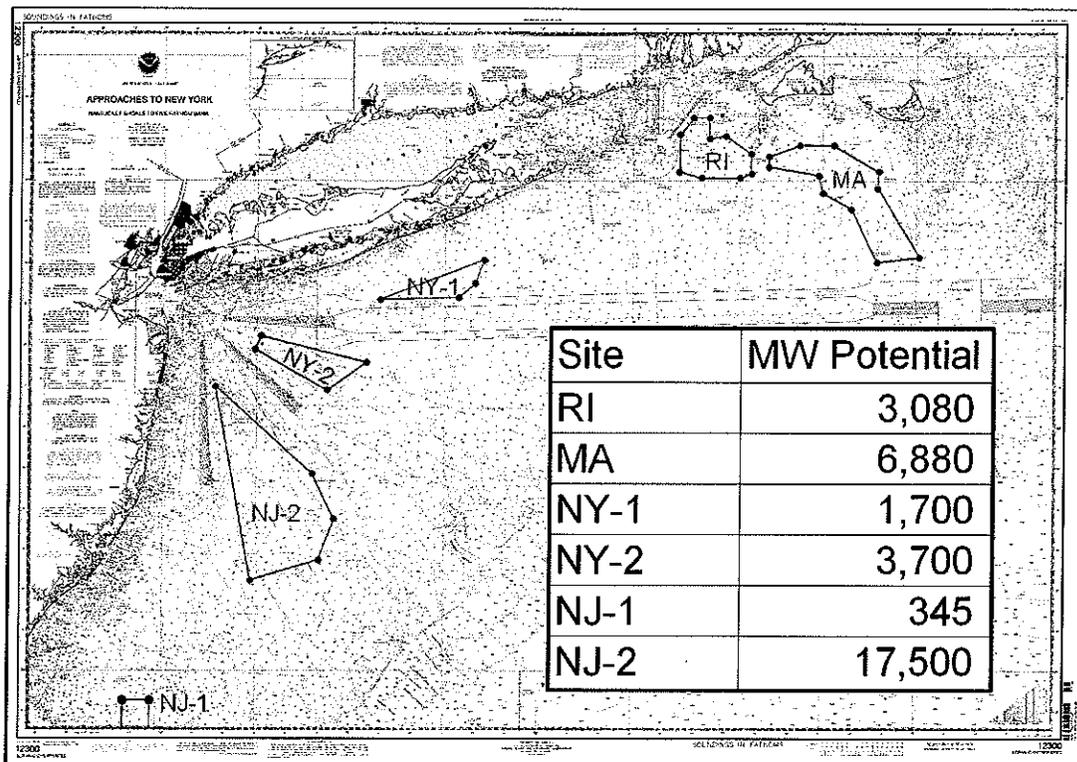
DRI will create real manufacturing jobs and act as a catalyst for continued growth at Quonset as well as an integral part of the surrounding community. The DRI Team will work with its partners in the state of Rhode Island on all levels to help ensure that the innovations established here will help the state build a knowledge base that will bring long-term benefits.

It is unclear whether by 2020 the states in the Northeast and New England will be able to satisfy their RPS requirements using traditional renewables including on-shore wind. Whether it is

Massachusetts, New York, or New Jersey which chooses offshore wind as it answer to the RPS issue, Quonset can become the East Coast's manufacturing hub.

DRI is committed to basing its corporate headquarters and manufacturing operations in Rhode Island, as it progresses through the development phases of other projects in New York, New Jersey, Massachusetts, and elsewhere in the northeast (Figure 2-1). Competitors can promise jobs for only a few years while the Rhode Island project is under construction. DRI, however, promises hundreds of jobs for many years to come as it establishes Rhode Island as its base of operations for the entire northeast. This means building an infrastructure of steel fabrication jobs, turbine assembly jobs, and specialized support and maintenance jobs. In addition, with resources like URI's Graduate School of Oceanography, Rhode Island will be uniquely situated to be a hub of the technical expertise needed in this emerging industry as other states and developers seek out professionals with specialized knowledge in offshore engineering and logistics, offshore energy, and environmental planning.

Figure 2-1: Offshore Wind Potential in the Northeast



RHODE ISLAND AS A NATIONAL ENERGY INNOVATOR

DRI believes that Rhode Island can lead the entire nation in developing affordable renewable energy. Our technology is both best-in-class, but also the most economical for consumers. Unlike our competitors, we can develop wind farms in both state and federal waters because of our unique deep water technology. This means that in addition to developing the sites already identified by the State, DRI has the capability to develop an additional 3,000 MW far offshore in Rhode Island Sound that we have already identified (Figure 2-1), producing significantly more renewable energy than any of our competitors. With North America's first offshore wind project supplying all 15% of the State's renewable energy standard, DRI's project will also make the Ocean State the Green Energy State.

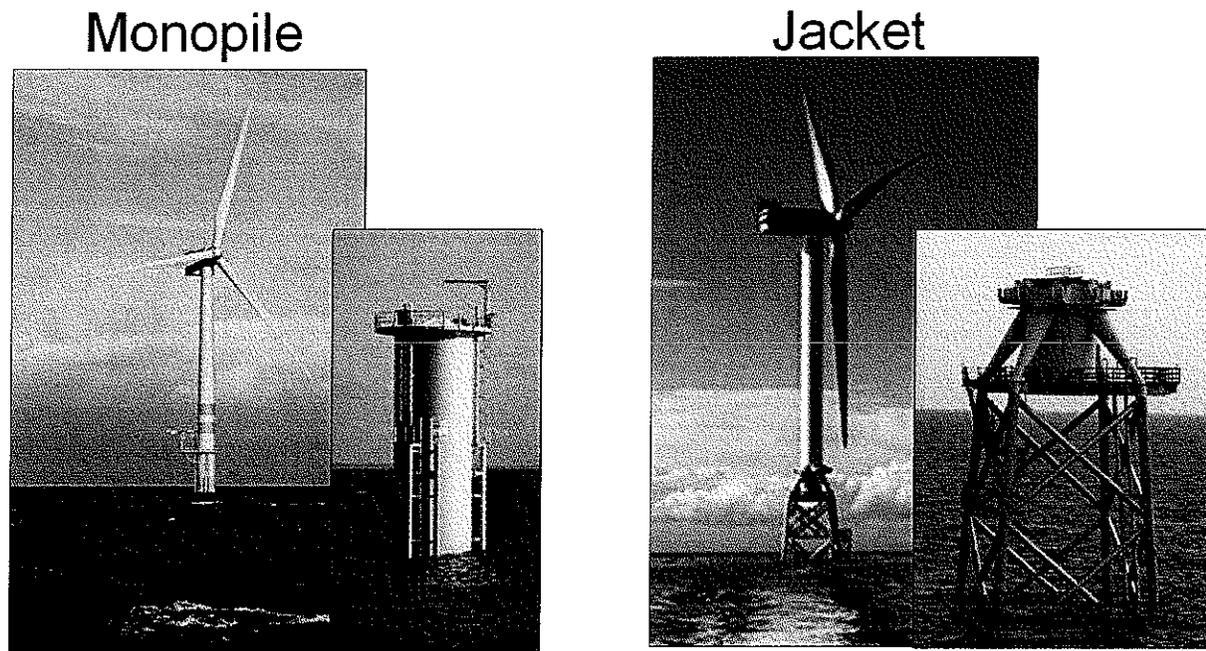
A PARTNERSHIP WITH THE PEOPLE OF RHODE ISLAND

DRI's experienced management team knows that a project of this scale and importance to the State is about more than just dollars and megawatts. Development of the DRI Project will require deep financial resources, technically skilled management, and a responsible, responsive, and flexible approach to a partnership with the people of Rhode Island. DRI is committed to working with Rhode Island to develop an offshore wind farm that we are all proud of. Rhode Island has the opportunity to show the rest of the nation that offshore wind projects can be done in collaboration with the entire community, creating jobs, producing new energy sources, and instilling pride in an entire state. We also know the central importance of Narragansett Bay and the open ocean in the life of Rhode Island. As developers of renewable energy, we are environmental stewards. Finally, Rhode Island's rich maritime tradition—including boat builders, fishermen, sailors, oceanographers, and environmentalists—provides a wealth of skill and knowledge that DRI will partner with. In turn, our vision is to help these resources prosper and grow to new heights.

II. Fulfilling the Vision: Our Unique Project

The DRI Team is uniquely positioned to fulfill the ambitious vision we have for Rhode Island. We propose a 385.2 MW offshore wind power project built on a proprietary and proven technology. The core of our competitive advantage versus our competitors is our deepwater jacket foundation technology which enables the installation of Wind Turbine Generators in waters much deeper than would be feasible with European-style monopile foundations (Figure 2-2). The use of this foundation technology and the associated construction methodology allows for three unique and significant benefits for the State of Rhode Island.

Figure 2-2: Monopile & Jacket Foundations



MAXIMUM ECONOMIC DEVELOPMENT

Through our shore-based construction methodology, we will create several hundred new advanced construction and maritime trades jobs for Rhode Island workers. Our approach will create several hundred more construction jobs than the European-style construction methodology. Further, our ability to reach deep waters with deep water jackets means that Rhode Island will be poised in the long-run to capitalize on the demand for the foundations by building the infrastructure needed to construct future deep water wind projects in the northeast. See [Section 4](#) and [Section 7](#) for more details.

MAXIMUM INSTALLED CAPACITY

Siting the DRI Project in waters up to 150' deep – beyond the feasible depth of monopile foundations allows the DRI Project to meet the State's goal of 1.3 million MWh annually. DRI is prepared to work with the state to develop and operate future deep water wind farms farther from shore potentially totaling an additional 3,000 MW of power, helping meet growing electricity demand without relying on foreign energy sources. See Figure 2.3 below and Section 3 for more details.

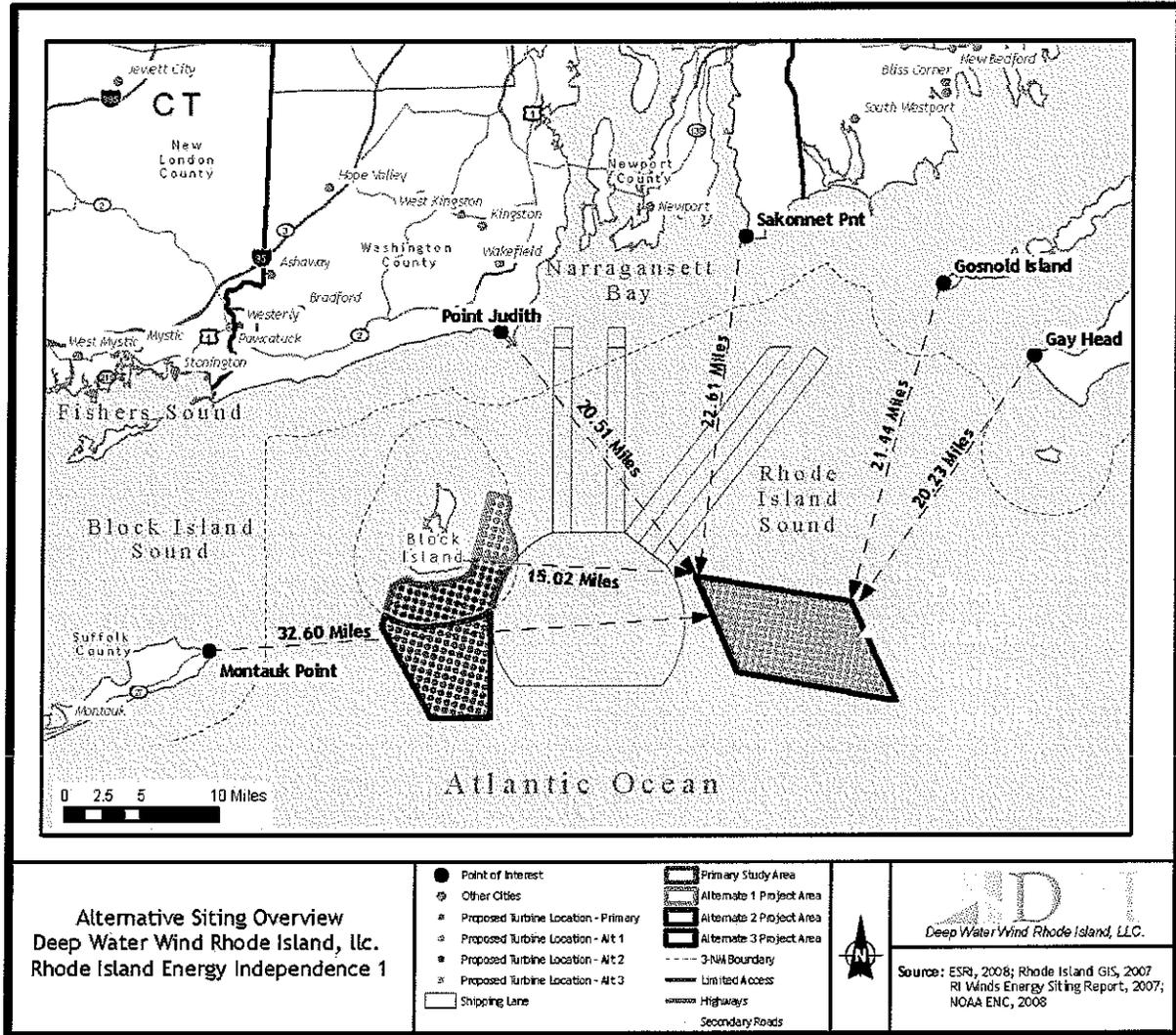
MINIMUM VISUAL IMPACT

By locating the DRI Project as far from the mainland as is commercial feasible, we virtually eliminate impact on the viewshed of the Rhode Island coastline. See Section 3 for more details.

The DRI Project will consist of one hundred seven (107) Wind Turbine Generators, each with a nominal rating of 3.6 MW. The DRI Team intends to build the project with the most reliable and cost effective turbines available at the time of final turbine selection. In the event that larger turbines become available in commercial volumes, the DRI Team would desire to build the project with a smaller number of larger turbines.

An overview of the proposed DRI Project locations appears in Figure 2-3 below. As proposed the DRI Project will have sufficient installed capacity to satisfy the State's target of 1.3 million MWh per annum, yet will be located far enough away from the Rhode Island mainland to have a minimal impact on the coastal viewshed. Full scale siting charts including turbine locations, cable routes and interconnection locations appear in Appendix 2-1. Appendix 2-2 also includes a series of visualizations depicting the viewshed impact of the wind farm from various points on the Rhode Island shore.

Figure 2-3: Project Siting Options



It is anticipated that the DRI Project will be constructed in two phases, with approximately 191 MW in operation by the end of 2011 and the second half – another 194 MW operational in 2012 and an additional 500-1,000 MW in Federal Waters by 2020, if the State desires that additional development. A detailed implementation schedule is shown in *Appendix 2-3* hereto.

The Future of Wind Energy is Built-In to this Proposal, with Technology that is Proven Today. By working with the DRI Team, the state of Rhode Island can leapfrog the monopile technology proposed for the Massachusetts offshore wind farm (Cape Wind) and quickly establish the state as a national leader in clean energy. With the ability to build wind farms in

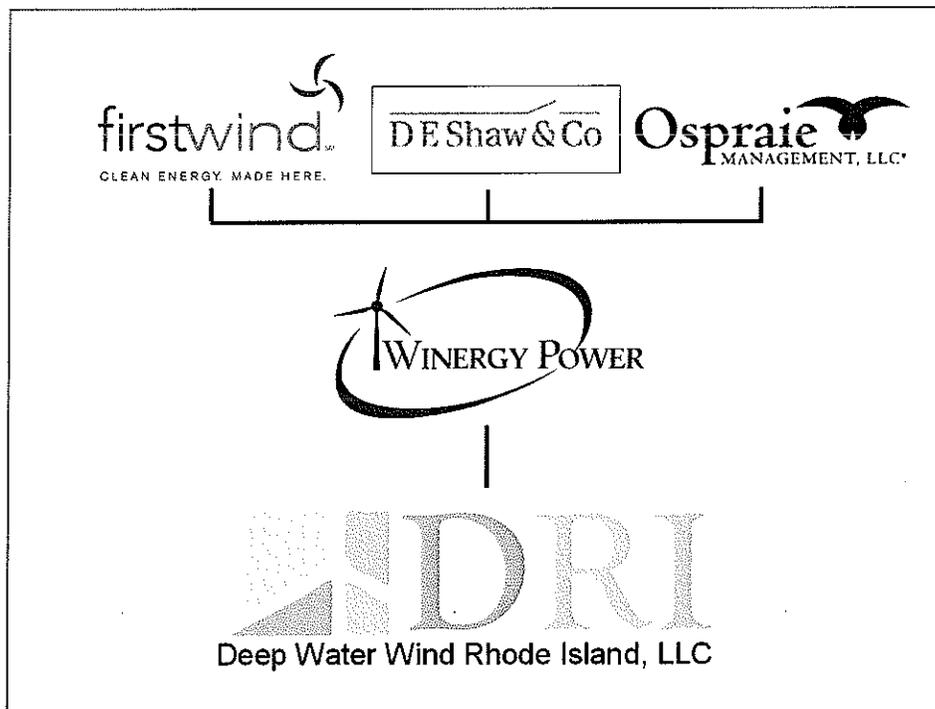
deeper water, where shoreline visual impact will be minimized, Rhode Island will be one step ahead of others in the race to increase energy independence and stabilize the cost of electricity.

While the first site location for the wind farm may be relatively close to Block Island and hence clearly visible from shore, the DRI Team's exclusive jacket technology will allow for future expansion in other areas farther from shore. As a long-term partner with the state, the DRI Team will work with all stakeholders involved to lay the groundwork for success today, and the ability to build more extensively in even deeper waters down the road. This will help Rhode Island meet its growing demand for energy on an ongoing basis, all while enhancing the state's economy.

III. Our Advantages

Winergy is the lead sponsor of the DRI Team, which includes D.E. Shaw & Company, Ospraie Management and First Wind Holdings.

Figure 2-4: The DRI Team



Winergy is a new kind of wind energy company, dedicated to developing wind farms at sea that are virtually invisible from shore. Winergy has the expertise required to make “over the horizon” wind farming a practical and economic reality, combining the knowledge of energy industry leaders, top engineers and ocean ecology experts. Working in partnership with state governments, Winergy will harvest America’s strong ocean winds to increase energy independence, create jobs, and protect our environment for future generations. Winergy brings significant expertise in developing offshore wind projects and implementation technologies including a proprietary jacket solution, a unique construction methodology and vessel design.

As a significant Winergy shareholder, First Wind provides Winergy and the DRI project significant key advantages including: a long history of developing and operating wind farms in New England and elsewhere throughout the US, proven environmental stewardship, turbine manufacturing relationships, and proven economic revitalization ability. As of April 30, 2008, First Wind’s portfolio of wind energy projects includes 5,507 MW of capacity of which 92 MW were operating and 182 MW were under construction.

The D.E. Shaw group is a global investment and technology development firm with more than 1,300 employees; approximately \$35 billion in aggregate investment capital as of November 1, 2007; and offices in North America, Europe and Asia. Since its organization in 1988, the D.E. Shaw group has earned an international reputation for financial innovation, technological leadership and an extraordinarily distinguished staff.

Ospraie is an investment management firm with more than 70 employees, including over 40 experienced investment specialists, many with extensive industry expertise. Ospraie currently manages and actively invests approximately \$8 billion on a global basis.

The DRI Team believes that our proposal offers a compelling set of Experience, Price and Economic Development, as highlighted in the following table and detailed below.

Criterion	Considerations
<p>Experience (see Section 5 for details)</p>	<p>The DRI Team's current portfolio includes:</p> <ul style="list-style-type: none"> • 92 MW of operating wind farms • 182 MW of wind farms in construction • 5,500 MW of wind farms in development <p>The DRI Team brings deep experience in developing, financing, building and operating a diverse set of energy projects such as:</p> <ul style="list-style-type: none"> • on-shore wind and other renewable generation • natural gas fired power and co-generation • transmission and other energy infrastructure
<p>Price Proposal (see Section 6 for details)</p>	<p>DRI offers two alternate Pricing Alternatives:</p> <p>Block Island Project: Siting Alternatives #1 and #2 Capacity Price = \$74.24 / KW-yr Energy Price = \$91.04 / MWh REC Price = ACP (\$57.92 / MWh)</p> <p>Deep Water Project: Siting Alternative #3 Capacity Price = \$74.24 / KW-yr Energy Price = \$69.38 / MWh REC Price = ACP (\$57.92 / MWh)</p>
<p>Economic Development (see Section 7 for details)</p>	<p>The DRI proposal creates economic value for RI in a number of ways:</p> <p>Over 800 new Rhode Island-base jobs that will outlast this specific project.</p> <p>Approximately \$56.6 Million in new salaries for Rhode Island workers.</p> <p>Over \$4.8 Million in new tax revenues generated from employment related taxes alone.</p> <p>Cost effective power for Block Island.</p>

EXPERIENCE

As detailed in *Section 5*, the DRI Team brings considerable experience in the development, financing, construction and operations of a wide variety of energy projects and stands ready to move forward at a rapid rate. The DRI Team includes Winergy, First Wind, D.E. Shaw, and Osparie Advisors; as well as many industry-leading engineers, consultants and contractors. The primary factors which distinguish the DRI Team are fourfold:

- (1) The DRI Team is Funded by Sophisticated Energy Investors who Together Manage and/or Own More Than \$60 billion in Assets.**
- (2) The DRI Team has the Development Experience to Complete this Project in Time to Satisfy Rhode Island's 2012 RPS Deadline, has Industry-Leading Technical Expertise, and Has Assembled A Consortium of Experienced Offshore Wind Experts to Execute this Significantly Sized Energy Infrastructure Project.** Corporately, the Project Sponsors currently operate a portfolio of 92 MW of operating wind farms, are in the process of constructing a further 182 MW of wind farm capacity and are developing over 5,000 MW of wind farms. Individually, the team members have developed, financed, constructed and operated a broad spectrum of energy assets, including conventional and renewable generation as well as electric transmission assets.
- (3) The DRI Team is Steeped in Developing, Owning and Operating Large Infrastructure Projects and Have the Savvy to Successfully Deliver this Project.** Having repeatedly demonstrated its ability to control project costs, deliver a high quality of work and meet agreed-upon deadlines, the DRI Team is not only highly qualified but also currently has available the personnel, equipment and facilities to perform expeditiously.
- (4) The DRI Team are Good Stewards of the Environment, the Ocean and the Communities in which We are Involved.** The DRI Team has a proven ability to create wind farms that work in harmony with the environment as well as tourist communities. First Wind built and currently operates the Kaheawa Wind project on the island of Maui, Hawaii, high above the shores of one of the most scenic locations in the United States. Because the wind farm is located in an area where protected Hawaiian plant and animal species live, First Wind worked with the state's environmental agencies and created a Habitat Conservation Plan. The plan stipulates that there must be a net gain to plant and animal species. Today, Kaheawa Wind operates in perfect harmony with these native species, and First Wind employs a full-time biologist in Maui to ensure the species are closely monitored and protected from harm. There has also been no detriment to the tourist industry on the island. In fact, the wind farm viewed with pride as a symbol of self-reliance and energy independence.

EXECUTION STRATEGY

DRI's execution strategy is based on the following four strategic elements:

Overcome siting and implementation challenges with proprietary engineered solutions.

DRI has developed engineered solutions, elements of which are patented, that overcome siting and implementation barriers, including jacket foundation designs, construction methodology, and vessel design. In addition, the DRI Team believes that the engineered solutions, together with the collection of accurate wind data and related siting selection criteria can make an offshore wind farm financially successful, even though it has a greater capital cost burden.

Minimize project costs with innovative commercial strategies. The construction challenge is being addressed through better contracting and better project management. The DRI Team has the expertise to build the Project with separate contracts for supply and construction, with the construction being split again among separate contracts for the onshore work, cable installation, and tower erection. By choosing this commercial strategy instead of a "wrap" where one party guarantees the performance of the package, the DRI Team minimizes project costs.

Secure interconnection capacity. DRI has identified and applied for interconnection with the National Grid transmission system in southern Rhode Island, thereby securing the potential to deliver the firm output of the DRI Project to the Rhode Island market.

Attain scheduling and budget certainty through an achievable work plan. DRI has outlined in *Section 4* and provided a definitive work plan in *Appendix 4-2* which demonstrates its commitment to delivering a world class project to the citizens of Rhode Island.

Price Proposal

In the context of current and projected future energy prices, offshore wind is not only competitive with the market, but also offers a valuable hedge against future price increases. It is vitally important to note that, at this stage in the development cycle, final engineering plans have not been completed and turbine orders have not been placed. Firm pricing is contingent on completing these crucial steps.

Despite this uncertainty, DRI will be able to offer **the most competitive price proposal to the State of Rhode Island as a result of three differentiating factors:**

- Given that every developer will incur the same turbine prices, DRI will have the **lowest relative project cost** as a result of our proprietary execution strategy – involving a unique jacket foundation design, onshore construction methodology and proprietary installation vessel.

- DRI's proposal will yield the **greatest energy production per unit of installed capacity** because of the DRI Team's ability to maximize energy production through siting expertise. First Wind has, through multiple operating projects, demonstrated the success of its micrositing program, which identified the exact location in which a wind turbine will produce the maximum energy output.
- The DRI Team's experience in financing large-scale infrastructure assets allows for the **lowest capital cost**.

As detailed in *Section 6*, DRI has developed two alternative pricing structures in an effort to both meet the needs of the State and also to demonstrate our flexibility and willingness to collaborate with the State in developing an equitable price.

- The first price option assumes that the DRI Project will be developed in the near-shore waters south of Block Island, in and around Area K, as designated by the ATM report.
- The second price option represents the deep water site identified by DRI (siting option #3) and, as a result of the superior wind resources available further from shore, offers considerably more cost effective power than projects at near-shore sites.

The DRI Project team is steeped in developing creative financial structures to meet the unique needs of our partners and looks forward to the opportunity to further discuss these and other pricing options with the State of Rhode Island.

ECONOMIC DEVELOPMENT

As detailed in *Section 7*, the DRI Team will implement a unique shore-based construction methodology which will add several hundred more jobs to the State of Rhode Island than would be added by any developer using European-style monopile foundations.

Through Winergy, the DRI Project has secured the exclusive use of patented foundations designed by OWEC Tower and installed in the Beatrice project in the North Sea. These jackets require extensive assembly work, totaling 579 Rhode Island-based jobs, which would be based at Quonset Point.

Also through Winergy, the DRI Project has secured the rights to utilize a custom-designed installation vessel that will be built in the United States. Significant portions of this vessel will be built in Rhode Island to be Jones Act compliant and avoid the pitfalls associated with

attempting to import foreign-flagged vessels to install wind farms in US waters. This assembly work is expected to employ 100 workers.

Further, we anticipate 100 maritime trades jobs will be created for both the construction of the DRI Project and also through the on-going operations and maintenance of the project.

Our competitors using monopile technology will not likely be using Rhode Island labor to the extent that DRI plans, they will be importing foreign workers to install the monopiles offshore. Our unique onshore construction methodology and proprietary US-flagged vessel means that we will be employing Rhode Islanders for these jobs. DRI's vessel and the construction methodology are further explained in *Section 4* as well as by the animation that is enclosed on CD in *Appendix 2-4*.

Additionally, DRI will establish its corporate headquarters in Rhode Island, bring an additional 30 permanent professional support jobs.

The DRI Team has a Proven Ability to bring about Economic Revitalization. First Wind has been recognized by the Maine Chamber of Commerce for its outstanding contribution to helping build the State's economy through its wind farm projects. The DRI Project will bring this proven ability to Rhode Island to help create jobs for the state's citizens and help revitalize local economies.

The balance of this proposal provides the review panel with the details of who we are, what we can build, how we intend to build it and ultimately how we make the project a success for Rhode Island.

SECTION 6: PRICE PROPOSAL

Offshore wind power is expensive when compared to historical fossil fuel driven power prices. However, in the context of current and projected future energy prices, offshore wind is not only competitive with the market, but also offers a valuable hedge against future price increases. Additionally, offshore wind offers Rhode Island the only practical means of securing a meaningful supply of in-state renewable energy.

Because of the following four differentiating factors, the DRI Team can offer the most competitive realistic price.

1. Given That Every Developer will Incur the Same Equipment Prices, DRI will have the **Lowest Relative Project Cost** as a Result of Our Proprietary Execution Strategy.
2. DRI's Proposal will Yield the **Greatest Energy Production** per unit of Installed Capacity because of the DRI Team's Siting Expertise.
3. DRI Team's Experience in Financing Wind and Other Large-Scale Infrastructure Assets Allows for the **Lowest Cost of Capital**.
4. DRI's Execution Strategy, Siting Expertise and Sophisticated Financial Backers allow us to Offer **Creative Approaches to Provide Market-Competitive and Stable Long-Term Energy Prices**.

It is crucially important to note that, at this stage in the development cycle, prices are, at best, indicative. Vast amounts of engineering and negotiations with vendors must be performed before an actual price can be settled.

6.1 GIVEN THAT EVERY DEVELOPER WILL INCUR THE SAME EQUIPMENT PRICES, DRI WILL HAVE THE LOWEST RELATIVE PROJECT COST AS A RESULT OF OUR PROPRIETARY EXECUTION STRATEGY

As detailed in *Section 4*, DRI's proprietary execution strategy minimizes project costs through innovative commercial strategies and allows for the DRI Project to overcome siting limitations and implementation challenges through engineered solutions. Lower total project costs translate to lower energy prices for the State of Rhode Island.

A recent study¹ of offshore wind construction costs found that the purchase of wind turbines, cable and substation components constitutes over fifty-percent (50%) of the total cost of a representative offshore wind project. This is important to note because any developer selected by the State will face effectively the same costs for these components. With First Wind having purchased over 1,400 MW of wind turbines and corresponding hardware in the past five years alone, DRI Team has significant experience purchasing these components. Based on this experience, the DRI Team anticipates that turbines will cost approximately **\$2,200 per kW** when a purchase order can be let in 2010.

The ODE study also found that the purchase of foundations, coupled with the installation of major equipment, consumes approximately thirty-six percent (36%) of the total project cost. Here, DRI has two compelling advantages. First, DRI will use a proprietary deep water jacket foundation which is less costly to purchase / fabricate than monopiles because it contains less steel. Second, DRI has engineered a construction methodology which allows the majority of the assembly work to be performed on-shore, reducing project costs while at the same time stimulating the local economy. See *Appendix 6-1* for more details on our project cost assumptions.

Because of these advantages, DRI can develop, procure and construct the DRI Project at cost considerably lower than any other developer using European-style construction methodology and monopile foundations. As a result, DRI can offer a more competitive price to the State of Rhode Island.

¹ Offshore Design Engineering (ODE) Limited. "Study of the Costs of Offshore Wind Generation" A Report to the (UK) Renewables Advisory Board & DTI. URN Number 07/779

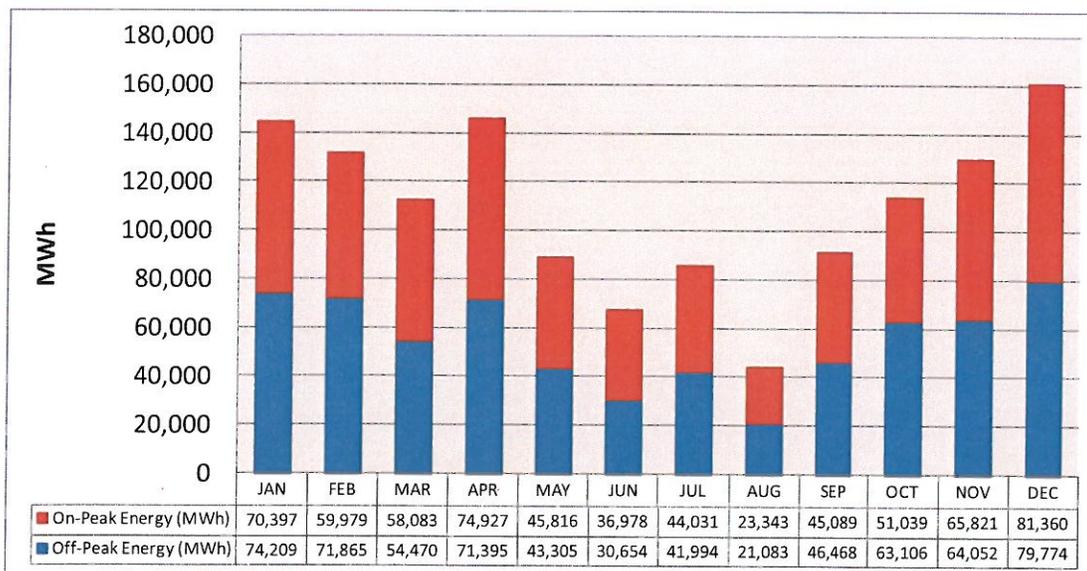
6.2 DRI’s PROPOSAL WILL YIELD THE GREATEST ENERGY PRODUCTION PER UNIT OF INSTALLED CAPACITY BECAUSE OF THE DRI TEAM’S SITING EXPERTISE

As detailed in *Section 5*, the DRI team brings unmatched experience in the siting of wind power generation projects for optimal power output. Specifically, First Wind has, through multiple operating projects demonstrated the success of its micrositing program, which identifies the exact location in which a wind turbine will produce the maximum energy output.

Similarly, Winergy’s capabilities were recently recognized by Minerals Management Service through the selection of our proposal for an offshore meteorological tower in the New York bight. Winergy’s Plum Island Wind Park project, located thirty miles west of Block Island, has also been a source of considerable wind resource data for the preliminary siting of this project.

Based on our initial data analysis, and given an installed capacity of 385.2 MW, DRI expects the DRI Project would, if located within siting alternatives #1 or #2 (the sites south of Block Island) deliver a total of approximately **1.32 million MWh** of salable electric power each year, as detailed in *Figure 6-1* below, satisfying 15% of the State’s electric consumption. It is important to note that, because most of the turbine array is on the leeward side of Block Island, these sites are expected to have a net capacity factor of approximately 39%; lower than if the wind was not obstructed by Block Island. See *Appendix 6-2* for details on our production assumptions.

Figure 6-1: DRI Electric Power Production



Alternatively, building upon Winergy’s previous Rhode Island development work (detailed in *Section 5*), DRI has anticipates that its proposed deep water site (alternative site #3, as detailed in *Section 3*) will have a considerably better wind resource, yielding a net capacity factor of 45%, and annual energy production of **1.52 million MWh**.

6.3 THE DRI TEAM'S EXPERIENCE IN FINANCING WIND AND OTHER LARGE-SCALE INFRASTRUCTURE ASSETS ALLOWS FOR THE LOWEST COST OF CAPITAL

Due to the significant amount of capital required to develop an offshore wind farm, and because of the considerable portion of the project's economics that is dependent upon income tax credits, the capital structuring and financing of an offshore wind project is a complex undertaking, as detailed in Appendix 6-3.

Fortunately, the DRI Team is well capitalized and deeply experienced in the financing of large-scale infrastructure assets. Specifically, First Wind's and Winergy's investors collectively own and/or manage more than **\$60 Billion** in assets. As such, the expected \$300 million equity requirement is well within our means.

With regards to experience, First Wind – which was formerly named “UPC Wind” – recently completed financing a portfolio of wind farms totaling **\$808.4 Million**. Additionally, DRI's investors (DE Shaw, Madison Dearborn and Ospraie) have considerable experience financing wind and power projects. Based on this comprehensive set of experience, DRI will secure tax equity investment and term financing allowing for the construction of the project at the lowest possible cost of capital, yielding the most competitive cost of energy for Rhode Island.

D. E. Shaw Group Announces Acquisition of Interest in Two Power Plants
NEW YORK, September 1, 2005—The D. E. Shaw group announced today that one of its affiliates has acquired a partial interest in two power generation facilities from affiliates of Cogentrix Energy, Inc., a wholly owned subsidiary of D. E. Shaw Synoptic Portfolios, L.L.C. purchased a 38.22% interest in ESP Cottage Grove, L.P., a power generation facility located in Cottage Grove, Minnesota, and a 39.17% interest in ESP Whitesboro Limited Partnership, a power generation facility located in Whitesboro, Wisconsin. Financial terms were not disclosed.

The D. E. Shaw Group Invests in The ERORA Group
LOUISVILLE, KY - October 18, 2006—The ERORA Group, LLC ("ERORA"), an owner and developer of coal generation projects, announced today that it has closed a transaction with global energy finance firm the D. E. Shaw group, securing up to \$60 million in equity commitments to capitalize ERORA and pursue continued development of ERORA's portfolio of electric generation projects. Former technology and fund manager focused generation facilities, ERORA is a leader in the construction and operation of coal generation.

6.4 DRI'S EXECUTION STRATEGY, SITING EXPERTISE AND SOPHISTICATED FINANCIAL BACKERS ALLOW US TO OFFER CREATIVE APPROACHES TO PROVIDE MARKET-COMPETITIVE AND STABLE LONG-TERM ENERGY PRICES

The sites identified by DRI south of Block Island (siting options #1 and #2) have considerably different economics than the site in deep water (option #3) as a function of the superior wind resource farther offshore. As detailed in *Section 3*, Winergy's proprietary deep water jacket foundations allow DRI to develop the Deep Water site where others could not. Addressing the State of Rhode Island's desire for "creative approaches to provide long-term price stability for Rhode Island electricity customers" DRI offers two alternative pricing structures, based upon the alternative siting of the project.

Option 1	Option 2
<p>Block Island Project: Siting Alternatives #1 and #2</p>	<p>Deep Water Project: Siting Alternative #3</p>
<p>Capacity Price = \$74.24 / KW-yr</p>	<p>Capacity Price = \$74.24 / KW-yr</p>
<p>Energy Price = \$91.04 / MWh</p>	<p>Energy Price = \$69.38 / MWh</p>
<p>REC Price = ACP (\$57.92 / MWh)</p>	<p>REC Price = ACP (\$57.92 / MWh)</p>

Under either of these proposals, the State would have the right to purchase the first 1.3 million MWh produced by the facility each year at the prices shown above. These prices are in *real* 2008 terms and are assumed to escalate at 2.5% over the 20 year term of a Power Purchase Agreement (PPA). Our analysis of energy market conditions, detailed in *Appendix 6-4* shows these prices are competitive with the current forward energy markets and therefore not expected to cause harm to the Rhode Island economy through unacceptable rate increases.

The DRI Team is highly experienced in creating financial structures to meet the unique need of an individual partner. As such, the DRI Team is prepared to work closely with the State of Rhode Island and National Grid to modify these structures or craft a custom structure which fits the State's desired balance of competitiveness and stability. Some alternatives could include an unbundled price, or a collared market index under which the State could benefit if the market price of power decreases. Additionally, any output in excess of 1.3 million MWh could be sold to the State under the same structure and at the same price, if desirable.

Because firm pricing cannot be determined with the level of effort feasible in the time allowed for this proposal, this proposed pricing can only be considered indicative at this early stage in development. Therefore, final pricing is subject to change. It is anticipated that final pricing will be within a range of plus or minus ten percent (10%) of proposed pricing.

6.4.1 OPTION 1: PRICE TERMS FOR BLOCK ISLAND SITE(S)

Product(s)	<ol style="list-style-type: none"> 1. Capacity 2. As-Scheduled Energy 3. All Ancillary Products 4. Renewable Energy Credits and Other Environmental Attributes
Delivery Point	ISO-NE West Kingston Substation
Term	20 years
Capacity Amount	385.2 MW
Energy	Up to 1.3 Million MWh, as scheduled annually
Scheduling	Scheduling shall be performed to the maximum flexibility allowed by the ISO-NE OATT.
Price	Energy shall be priced at \$91.04 per MWh over the Term
	Capacity shall be priced at \$74.24 per KW-year over the Term
	REC's and all other environmental attributes to be priced at Alternative Compliance Payment level (\$57.92 per MWh) over the Term
	Pricing to include all ancillary service costs, taxes and other fees necessary for delivery to the Delivery Point.
Pricing	Quoted in REAL 2008 year dollars
Escalation Rate	2.5% applicable for future years
Assumptions	<ul style="list-style-type: none"> • Sufficient wind resource to yield 39% net annual capacity factor • Total annual output of 1.320 million MWh annually, consistent with the monthly profile shown in <i>Figure 6-1</i> above • 107 Siemens 3.6 MW turbines available between 2010 and 2011 at approximately \$2,200 per kW • Cost-effective Interconnection at West Kingston • Cost-effective State and Federal permitting • Ability to cost effectively stage and assemble components at Quonset • Copper and Steel at current market prices • RECs priced at ACP • Block Island power sold at Mainland prices • PTC's at \$20 / MWh in 2008, escalating at 2.5% annually • Tax equity investment available • 5-year accelerated MACRS • No significant legislative changes or judicial actions • No State taxes, royalties or fees • No materially adverse unforeseen subsurface conditions

Division Data Request 1-18

Request:

Please provide the basis for the 28% summer capacity factor referenced on page 17 of Mr. Milhous' testimony, including any work papers.

Response:

Deepwater provided an estimate of a 28% capacity factor in the proposal for the purpose of determining the projected value of installed capacity in the ISO-NE Forward Capacity Market.