



State of Rhode Island and Providence Plantations

DEPARTMENT OF ATTORNEY GENERAL

150 South Main Street • Providence, RI 02903

(401) 274-4400

TDD (401) 453-0410

*Patrick C. Lynch, Attorney General*

March 2, 2010

*VIA HAND DELIVERY & ELECTRONIC MAIL*

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

Re: Docket 4111 – Review of Proposed Town of New Shoreham Project Pursuant to RI  
General Laws § 39-26.1-7  
Response to Data Request

Dear Ms. Massaro:

Enclosed please find an original and nine (9) copies of the Surrebuttal Testimony of Division witness Richard S. Hahn for filing by the Division of Public Utilities and Carriers in the above-captioned proceeding. An electronic copy hereof shall be served upon the service list.

Thank you for your attention in this matter and if you should have any questions kindly contact me at your convenience.

Very truly yours,

Jon G. Hagopian

Special Assistant Attorney General

Enclosures

cc: Service List

BEFORE THE  
RHODE ISLAND PUBLIC UTILITY COMMISSION

DOCKET NO. 4111  
REVIEW OF THE PROPOSED TOWN OF NEW SHOREHAM PROJECT  
PURSUANT TO R.I.G.L. § 39-26.1-7

SURREBUTTAL TESTIMONY

OF

RICHARD S. HAHN

ON BEHALF OF THE  
RHODE ISLAND DIVISION OF PUBLIC UTILITIES AND CARRIERS

March 2, 2010

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1 **I. INTRODUCTION**

2 **Q. Please identify yourself for the record.**

3 A. My name is Richard S. Hahn. I am a Principal Consultant for La Capra Associates, Inc.  
4 (“La Capra Associates”). My business address is La Capra Associates, One Washington  
5 Mall, Boston, Massachusetts 02108.

6 **Q. On whose behalf are your testifying?**

7 A. The Rhode Island Division of Public Utilities and Carriers (the “Division”).

8 **Q. Have you previously filed testimony in this proceeding?**

9 A. Yes. On February 2, 2010, I filed Direct Testimony on behalf of the Division.

10 **Q. What is the purpose of your surrebuttal testimony in this proceeding?**

11 A. The purpose of my surrebuttal testimony is to respond to certain issues raised in the  
12 rebuttal testimony of Mssrs. Moore and Nickerson and the supplemental rebuttal  
13 testimony of Mr. Moore on behalf of Deepwater Wind. I shall focus my response on key  
14 issues raised. A lack of a response to any particular issue should not be construed as  
15 agreement with Deepwater.

16 **II. EXECUTIVE SUMMARY**

17 **Q. Please summarize the results of your review.**

18 A. After reviewing the rebuttal testimony filed by Deepwater, I found no reason to change  
19 any of the conclusions from my direct testimony, which are as follows:

- 20 • The price contained in the proposed PPA is at the high end of the range of prices that  
21 an experienced power analyst would expect to pay for newly developed eligible  
22 renewable energy projects.

- 1           • Deepwater was the only bidder to the Company’s RFP. Thus, there has been no  
2           competitive process that would help ensure that the PPA price is reasonable.
- 3           • If the Commission does approve a PPA between Deepwater and the Company, that  
4           approval should be based on a determination that the PPA prices are the minimum  
5           necessary to allow the Deepwater project to go forward, so that Rhode Islanders are  
6           not paying excessive above-market costs over the contract’s 20 year term.
- 7           • My suggested changes to the non-price terms of the PPA are valid, and should be  
8           adopted.

9   **III. SUMMARY OF THE DEEPWATER REBUTTAL TESTIMONY**

10 **Q. What issues are raised in the rebuttal testimony of Mssrs. Moore and Nickerson (the**  
11 **“Deepwater rebuttal testimony”) that you wish to respond to?**

12 **A.** The Deepwater rebuttal testimony raises several key issues. The issues that I address are:

- 13           • The definition of commercially reasonable.
- 14           • The effective term of the PPA.
- 15           • Whether or not to include the cost of the Transmission Cable in the comparisons to  
16           other renewable projects.
- 17           • The project’s capacity value for Forward Capacity Market (“FCM”) purposes.
- 18           • The other renewable energy projects that the Deepwater project should be compared  
19           to.
- 20           • Non-price terms and conditions for assignment and Favored Nations pricing.
- 21           • The reasonableness of the rate of return analysis in my direct testimony.

22 I will respond to each issue above in more detail later in this surrebuttal testimony.

1 **IV. RESPONSE TO THE DEEPWATER REBUTTAL TESTIMONY**

2 **Q. How do you respond to the rebuttal testimony of Deepwater?**

3 A. Before I address specific points raised by the Deepwater rebuttal, I wish to discuss some  
4 higher level issues.

5  
6 The first matter is the overall cost per MWH of the Deepwater project. The rates per  
7 MWH contained in the PPA are very high relative to both current energy prices and  
8 prices projected over the PPA term by both of the energy consultants engaged by Grid for  
9 this docket. No party to this proceeding, including Deepwater, appears to dispute this  
10 fact. I have offered a comparison to other renewable projects that shows that the rates  
11 paid for this project are higher than other renewable technologies, except for PV solar.  
12 While Deepwater has criticized this comparison, it has not provided any comparisons of  
13 its own. Even if some of Deepwater's criticisms of my comparisons are adopted, as  
14 discussed later in this testimony, this conclusion doesn't change.

15  
16 The second subject is the definition of commercially reasonable. It is reasonable to  
17 assume that some renewable energy resources, including small offshore wind farms,  
18 might cost more than conventional power supplies combined with purchases of RECs  
19 (the "market value"). The key question is how much above market is reasonable? In  
20 round numbers, the payments to Deepwater total almost \$700 million over the term of the  
21 PPA for a 28.8 MW, eight turbine wind farm. The cost of the cable adds another \$100  
22 million over the term of the PPA. The market value of the output from this project is  
23 approximately \$300 million. Thus, the proposed PPA pricing represents a subsidy by the

1 ratepayers of Narragansett Electric Company of approximately \$400 million (without  
2 consideration of the cable costs) to approximately \$500 million (with consideration of the  
3 cable costs). So, decision makers need to consider several things. Is \$400 million to  
4 \$500 million the appropriate amount of subsidy? Will the approval of this small-scale  
5 project lead to the desired economic development gains? Are the potential economic  
6 development benefits worth the cost of the above-market payments? My testimony did  
7 not attempt to answer these questions, and indeed, they are matters of policy for the State  
8 to decide. What I did in this proceeding is provide a factual analysis of the PPA from the  
9 viewpoint of an experienced power analyst that will assist the Commission in answering  
10 these questions, when considered in conjunction with the other information in the docket,  
11 such as the public policy considerations discussed by the state Economic Development  
12 Corporation and the Rhode Island Construction and Building Trades Council.

13  
14 The third topic is the role of competition. The Deepwater rebuttal testimony implies that  
15 the PPA was the result of a competitive solicitation. This is not so. Deepwater was  
16 chosen as the State's preferred developer for the utility-scale offshore wind project. In  
17 the solicitation that led to the selection of Deepwater for the utility-scale offshore wind  
18 project, there were formal submittals, multiple bidders, and a predetermined evaluation  
19 process. For the New Shoreham project (which is the subject of this proceeding), an RFP  
20 was issued, but Deepwater was the sole bidder. There was no competition, let alone  
21 robust competition, that would help insure that Rhode Island consumers pay the lowest  
22 possible cost necessary to allow the Deepwater project to go forward. Based upon my  
23 experience with public procurements, I think it is a rare occurrence when a contract for

1 \$700 million would be awarded based upon only a single bidder to a Request for  
2 Proposals.

3  
4 Lastly, my direct testimony recommends that, if the Commission does approve the PPA,  
5 it should try to ensure that the PPA prices are no higher than the level necessary to allow  
6 the project to go forward. I stand by this recommendation. If National Grid is going to  
7 buy the output from a small-scale offshore wind project, then immediately sell the output  
8 into wholesale markets, and Rhode Island customers are going to cover all the losses  
9 through higher electric rates, then National Grid should not pay more than is necessary.

10 Given the absence of competing bids in establishing the PPA rates, some alternative  
11 method of achieving this outcome is required. In my direct testimony, I have undertaken  
12 a financial rate of return analysis as a way to assist in the assessment of the pricing  
13 component of the PPA. The availability of this information is important so the  
14 Commission can make an informed decision as it reviews the PPA. This rate of return  
15 analysis should be considered in conjunction with all the other information presented by  
16 the other parties as the Commission weighs the cost of the PPA along with the obvious  
17 desire of the State of Rhode Island, through both the executive and legislative branches,  
18 to see the project developed.

19 **V. THE DEFINITION OF COMMERCIALY REASONABLE**

20 **Q. Please respond to the Deepwater rebuttal testimony on the definition of**  
21 **commercially reasonable?**

22 **A.** It appears from the direct and rebuttal Deepwater testimony that Deepwater believes that  
23 any projects that are to be compared to the Deepwater New Shoreham project under the

1 commercially reasonable standard are only those renewable energy projects whose  
2 output is (a) delivered to Block Island and (b) that will also improve the reliability of  
3 service on Block Island. The implications of this two-part position are that the cost of the  
4 Transmission Cable should not be added to the Deepwater PPA rates, but should instead  
5 be added to the costs of any renewable energy project to which the Deepwater project is  
6 compared to. I disagree with this position. As I stated in my direct testimony, I believe it  
7 is important to separate project attributes necessary to qualify for the RFP from the  
8 standard of commercial reasonableness. That being said, I am not holding myself out as  
9 an expert on statutory interpretation, nor am I an attorney. In my reading of the 39-26.1-  
10 7, that law says that “Negotiations shall proceed in good faith to achieve a *commercially*  
11 *reasonable contract.*” (*emphasis supplied*). Within the same chapter, at section 39-26.1-  
12 2, the law provides a specific definition of “commercially reasonable.” At this point, I  
13 will leave the determination of whether the commercially reasonable standard according  
14 to 39-26.1-2 should apply to the New Shoreham project to the Commission. If the  
15 Commission determines that the commercially reasonable definition within the chapter is  
16 an appropriate standard to apply to this project under the law, then I believe the  
17 comparisons I presented in my testimony can be used for that purpose. Under that  
18 determination, it is clear that eligible renewable energy resources to which the Deepwater  
19 project is to be compared do not have to be delivered to Block Island and thus would not  
20 require construction and the cost of the Transmission Cable.

21 **VI. THE EFFECTIVE TERM OF THE PPA**

22 **Q. Please respond to the issue regarding the effective term of the PPA?**

1 A. In my direct testimony, I noted that the PPA provides Deepwater with a one-time  
2 unilateral right to extend the Commercial Operation Date by five years, which would also  
3 extend the end date of the purchases by Narragansett Electric Company. The Deepwater  
4 rebuttal testimony disagrees with this position. I have re-reviewed the PPA and remain  
5 convinced that this contractual right gives Deepwater in effect a 25 year contract, if it so  
6 chooses.

7  
8 Section 3.1(b) of the PPA states that Deepwater has a one-time right to extend the  
9 Commercial Operation Date by five years. Note that there are no conditions on the  
10 exercise of this option. This extension can be elected by Deepwater at any time even if  
11 the project could achieve operation on its originally anticipated date. In fact, Section 3.3  
12 of the PPA lists the conditions to be satisfied for Commercial Operation. One of these  
13 conditions is that Deepwater notify Narragansett Electric Company that certain  
14 conditions have been met. A strict reading of this language means that the project could  
15 have met all other conditions and have been able to operate commercially, but Deepwater  
16 has simply not notified Narragansett Electric Company in writing. Section 4.1(b) of the  
17 PPA states that Narragansett Electric Company must purchase the energy, capacity, and  
18 RECs produced by this project prior to the Commercial Operation Date at then-current  
19 market prices. Thus, Deepwater technically has the unilateral right to make this a 25-year  
20 PPA. I have no objection to a unilateral right of extension of the Commercial Operation  
21 Date if there are legitimate delays that prevent the operation of the project from starting  
22 as originally anticipated. Under such legitimate delays, there would be little, if any,  
23 products produced. Please note that I am not claiming that Deepwater will extend the

1 Commercial Operation Date. Indeed, Deepwater may have every economic incentive to  
2 declare the project as commercially operable as soon as possible, given the high PPA  
3 rates. I am stating that they could extend it. The language of the PPA should be  
4 modified to allow for an extension of the Commercial Operation Date in the event that  
5 the project's actual operation is delayed. Such a revision is not adverse to Deepwater.

6 **VII. TRANSMISSION CABLE COSTS**

7 **Q. Please respond to the issue of Transmission Cable costs.**

8 A. The Deepwater rebuttal testimony implies that the costs for the transmission cable should  
9 not be included when comparing the cost of the Deepwater project to other renewable  
10 projects. While I disagree with that position, it should be noted that removing the Cable  
11 costs from the real levelized gross cost per MWH for the Deepwater project will not  
12 change the rankings of the comparative projects. As show in the following Table 1, when  
13 the Cable costs are removed, Deepwater's real levelized gross cost per MWH is still  
14 higher than all other renewable energy technologies except for PV solar. The exclusion  
15 of the Cable costs does not change the conclusion that the PPA rates for the Deepwater  
16 project are higher than all other renewable technologies but for PV solar.

1

Table 1

<b>real levelized gross \$ per MWH (2013\$)</b>			
<b>PROJECT</b>	<b>MW</b>	<b>total</b>	<b>DWW w/o cable costs</b>
WMECO Solar	6.00	650.60	
NGRID MA Solar	4.88	544.98	
solar	5.00	442.00	
MA Solar	0.50	318.00	
<b>DWW as filed</b>	<b>28.80</b>	<b>310.62</b>	<b>262.83</b>
fuel cells	10.00	244.25	
wind offshore	100.00	195.00	
tidal	2.00	185.00	
small hydro	5.00	152.00	
Euro offshore-DPN	185.00	143.50	
biomass	80.00	141.50	
BlueWater Wind	200.00	141.10	
Linden CA wind	50.00	128.20	
geothermal	50.00	127.00	
Milford CA wind	200.00	113.75	
wind onshore	50.00	102.00	
landfill gas	30.00	62.75	
VT landfill	1.60	40.60	

2  
3

4 **VIII. CAPACITY VALUE FOR FCM PURPOSES**

5 **Q. In the Deepwater rebuttal testimony, Mr. Nickerson disputes your assumption**  
6 **regarding the capacity value for the FCM that the Deepwater project will achieve.**  
7 **How do you respond?**

8 A. As stated in my response to DWW-1-10, my assumption regarding the amount of  
9 capacity that Deepwater would receive credit for in the FCM auctions was taken from the  
10 filing of Narragansett Electric Company. The Deepwater rebuttal testimony asserts that  
11 this figure is too low, and suggests an alternative, higher value. In order to determine  
12 what impact such an alternative capacity assumption would have on the comparison to  
13 other renewable projects, I re-calculated the real levelized net costs for Deepwater using

1 Mr. Nickerson's capacity value. As explained in my direct testimony, net costs are the  
2 amounts paid by ratepayers less any revenues from the sale of energy, capacity and  
3 RECs. A higher assumed value for FCM capacity will increase these revenues and  
4 decrease net costs, all else being equal. Alternative assumptions regarding FCM capacity  
5 values have no effect on real levelized gross cost per MWH, which are the costs paid by  
6 ratepayers before any market revenues are credited. Table 2 below provides the results. I  
7 have also removed the Cable costs to show the impact of that assumption. The change in  
8 FCM capacity value alone lowers the real levelized net cost per MWH by less than \$3 per  
9 MWH. Even with the combined effect of removing the Cable costs and using a higher  
10 capacity value, the ranking of the Deepwater project using real levelized net cost per  
11 MWH does not change. The only renewable technology that has a higher real levelized  
12 net cost per MWH is PV solar.

1

Table 2

real levelized net \$ per MWH (2013\$)				
PROJECT	MW	total	DWW w/o cable costs	DWW with higher FCM capacity
WMECO Solar	6.00	492.37		
NGRID MA Solar	4.88	394.29		
solar	5.00	320.84		
MA Solar	0.50	196.84		
<b>DWW as filed</b>	<b>28.80</b>	<b>192.77</b>	<b>144.98</b>	<b>142.29</b>
fuel cells	10.00	123.41		
wind offshore	100.00	76.52		
tidal	2.00	71.54		
small hydro	5.00	31.57		
Euro offshore-DPN	185.00	25.65		
BlueWater Wind	200.00	23.25		
biomass	80.00	21.40		
Linden CA wind	50.00	11.14		
geothermal	50.00	5.70		
Milford CA wind	200.00	(3.82)		
wind onshore	50.00	(15.43)		
landfill gas	30.00	(57.35)		
VT landfill	1.60	(79.13)		

2

3 **IX. COMPARATIVE RENEWABLE PROJECTS**

4 **Q. What does the Deepwater rebuttal testimony state regarding the renewable energy**  
5 **projects that you used as benchmarks for the Deepwater PPA price?**

6 A. The rebuttal testimony of Mr. Nickerson goes to great lengths in an attempt to discredit  
7 the renewable projects and their real levelized costs that I used to compare to the  
8 Deepwater PPA price. According to Mr. Nickerson, none of these projects can be  
9 compared to Deepwater. Some are too small, others are too large, while yet others are  
10 not in the right location.

11 **Q. How do you respond?**

12 A. I have tried as best as I could to identify and determine the prices that an experienced  
13 power analyst would expect to pay for each of the renewable technologies that Rhode

1 Island law defines as eligible renewable energy projects. While I acknowledge that this  
2 is a difficult task, I believe that the prices that I have provided do serve as reasonable  
3 benchmarks.

4  
5 It should be noted that Deepwater does not offer any such comparisons to justify the PPA  
6 price it proposes. The primary basis offered by Deepwater for the assertion that the  
7 Deepwater PPA price is “commercially reasonable” is a single excerpt from a 2009  
8 KEMA study<sup>1</sup> done for the California Energy Commission. In his direct testimony, Mr.  
9 Nickerson compares the installed cost of a class 5 offshore wind project from the KEMA  
10 study to the Deepwater capital cost. According to Mr. Nickerson, these two figures are  
11 relatively close in value, and therefore the PPA price is commercially reasonable.

12  
13 I have several responses to these assertions. The first is that a comparison of only capital  
14 costs does not tell the whole story, nor does it translate to a PPA price. The KEMA study  
15 provides capital costs and O&M costs for many technologies, including 13 renewable  
16 energy technologies that comport with the Rhode Island definition of eligible renewable  
17 energy projects. The data in the KEMA study for all of these technologies can be used to  
18 calculate a real levelized cost which can be compared to Deepwater’s real levelized cost.  
19 These calculations and the resulting comparison are summarized in Table 3 below. As  
20 shown in Table 3, the Deepwater real levelized cost based upon the PPA price is  
21 substantially higher than any technology, even PV solar, that is contained in the KEMA

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<sup>1</sup> See footnote 7 on page 18 of Mr. Nickerson’s direct testimony.

1 study upon which Mr. Nickerson solely relies. Thus, the data relied upon by Deepwater  
2 presents a harsher comparison than the one that I presented in my direct testimony.

Table 3

<b>RENEWABLE ENERGY COMPARISONS</b>		
Based upon KEMA 2009 Report		
technology	MW	2013\$/mwh real levelized gross cost per MWH
1 DWW with Cable Costs	28.8	310.62
2 DWW w/o Cable Costs	28.8	262.83
3 Solar PV	19.4	218.70
4 Solar Thermal	194.0	183.30
5 Offshore Wind - 5	99.9	180.50
6 Ocean Wave	39.6	145.10
7 Biomass - IGCC	29.0	103.10
8 Biomass CFB	26.3	94.10
9 Biomass Stoker	36.5	93.40
10 Onshore Wind - 3/4	50.0	74.50
11 Hydro	13.5	68.00
12 Onshore Wind - 5	99.9	66.40
13 Geothermal - Binary	14.3	61.20
14 Geothermal - Flash	28.5	56.50
15 Biomass - CoFiring	19.5	38.40

4  
5 Secondly, the O&M costs for offshore wind that are contained in the KEMA study are  
6 substantially lower than either (a) the O&M costs assumed by Deepwater or (b) my  
7 alternative O&M cost estimate. Table 4 below assesses the impact of the KEMA O&M  
8 costs in establishing a more reasonable PPA initial starting price in 2012\$, assuming the  
9 same 3.5% fixed escalation proposed by Deepwater. Thus, the supporting basis for Mr.

1 Nickerson's analysis would lead to the conclusion that a lower PPA price would still  
2 provide a reasonable return to the developer, more commensurate with the project's risk.

3 Table 4

Scenario	First Year O&M Costs (2013\$millions)	IRR at PPA Price (50/50 capital structure)	PPA initial price in 2012\$/MWH to yield a 15% IRR
DWW O&M	{confidential}	21.2%	\$196
LCA O&M	\$4.1	24.5%	\$170
KEMA O&M	\$2.8	25.9%	\$159

4  
5 In my direct testimony, I concluded that the PPA price results in a high return to the  
6 developer, and that combined with the lack of competing bids make it difficult to ensure  
7 Rhode Islanders pay no more than necessary in order for this project to go forward. I  
8 stand by that conclusion. The Deepwater criticism of that testimony is not warranted.

9 **X. NON-PRICE TERMS**

10 **Q. What does the Deepwater rebuttal testimony assert about your recommendations**  
11 **regarding the non-price terms of the PPA?**

12 A. I recommended that the assignment clause of the PPA be revised to state that the  
13 assignment of the PPA by Deepwater to another entity be subject to the approval of  
14 Narragansett Electric Company, not to be unreasonably withheld. I also recommended a  
15 Favored Nations pricing clause in the event that Deepwater installs additional turbines  
16 near the proposed eight turbines. Deepwater opposes both of these recommendations.

17 **Q. Please respond.**

18 A. In its rebuttal testimony, Deepwater claims that it needs the unencumbered right to assign  
19 the PPA to facilitate financing. I agree that the assignment of the PPA may be necessary  
20 to facilitate financing. However, if the assignment is legitimately for that purpose,

1 Narragansett Electric Company could not, under my suggested revision to the PPA,  
2 withhold approval of the assignment to a creditworthy party, as it would be unreasonable  
3 to do so. The way the PPA is written now, Deepwater or any successor can unilaterally  
4 assign this agreement even if there is a good reason to deny the assignment. My concern  
5 here is not with the financing arrangements at the start of the project, but rather several  
6 years after commercial operation. With the current language, Deepwater or any  
7 successor could assign this PPA to an entity that has no assets and no ability to operate  
8 the project. Effectively, the current holder of the PPA can basically exit the business  
9 while creating a potential adverse impact on Rhode Island ratepayers. The language that  
10 I have proposed will allow the project to be financed while protecting ratepayer interests  
11 in the long run.

12  
13 Regarding the need for a Favored Nations pricing clause, Mr. Nickerson states that  
14 Deepwater or any of its successors cannot add additional turbines under any  
15 circumstances. If this becomes a legally binding prohibition on behalf of Deepwater and  
16 its successors, I will withdraw this recommendation.

17 **XI. THE INTERNAL RATE OF RETURN ANALYSIS**

18 **Q. Please summarize the supplemental rebuttal testimony of Mr. Moore regarding the**  
19 **internal rate of return analysis in your direct testimony.**

20 **A.** In his supplemental rebuttal testimony, Mr. Moore disagrees with the internal rate of  
21 return (“IRR”) analysis contained in my direct testimony. He states that this analysis is  
22 inappropriate and contains numerous incorrect assumptions. Specifically, Mr. Moore  
23 makes the following assertions.

- 1 • A project's IRR should be based upon the unlevered rate of return (*i.e.*, the IRR with  
2 no debt and 100% equity financing).
- 3 • Deepwater's expected IRR is confidential, and its disclosure could adversely affect its  
4 negotiations with potential suppliers. Deepwater goes on to state that its IRR is in the  
5 range of high single digit to low teens.
- 6 • The benefits from the cash grant that Deepwater will likely qualify for will accrue to  
7 lenders, not equity investors.
- 8 • It is inappropriate to assume full monetization of the tax benefits from accelerated  
9 depreciation.
- 10 • Less than 100% of the Deepwater capital costs are eligible for the cash grant and  
11 accelerated depreciation.
- 12 • The alternative O&M costs in my analysis are too low.
- 13 • The IRR analysis results in unequal treatment of the Deepwater project versus the  
14 benchmark set of renewable energy projects to which it is compared.

15 **Q. Please respond.**

16 A. I will first offer two high level observations, and then address the individual points in  
17 detail. I agree with Deepwater that its pro forma financial statements and the projects  
18 expected IRR are confidential, and their disclosure might adversely affect its vendor  
19 negotiations. However, disclosing that information to the Commission, subject to the  
20 appropriate protective order, will maintain the necessary confidentiality while allowing  
21 the Commission to make an informed decision. I note that Deepwater's negotiations with  
22 potential vendors will likely be adversely affected if these vendors see an excessive rate  
23 of return. If the expected return is reasonable, these vendors will know that they must

1 provide competitive prices in order for the project to move forward. The second  
2 observation is that Deepwater has criticized my analysis, but has not offered any analysis  
3 of its own, nor has it shown that making their suggested changes would materially change  
4 the outcome. As noted earlier, there was no competitive means to ensure that the  
5 proposed PPA price is appropriate. Therefore, if the Commission does approve a PPA, it  
6 should try and find some means to ensure that the PPA price is the minimum required for  
7 the project to go forward. Deepwater has not provided such assurances for its project.

8 **Q. Do you agree with the criticism of your analysis provided in Mr. Moore's**  
9 **supplemental testimony?**

10 A. No. It is not appropriate to determine a project's expected IRR assuming 100% equity  
11 financing. In response to DIV-1-18, Deepwater has stated that it intends to use 80% debt  
12 financing. While an assumption of zero debt is too low, an assumption of 80% debt is  
13 high. A 50/50 debt equity structure, or something close to that, is a more appropriate  
14 capitalization structure, and consistent with industry developments. For example, First  
15 Wind Holdings, LLC is an affiliate of Deepwater that has developed several onshore  
16 wind projects. On December 22, 2009, First Wind Holdings, LLC filed FORM S-1/A  
17 with the Securities and Exchange Commission ("SEC"). In this filing, First Wind  
18 Holdings, LLC has reported \$854 million in debt and \$853 million of equity investment,  
19 or exactly a 50/50 capitalization structure, as of September 30, 2009. Even when  
20 accumulated deficits are included, the capitalization structure is 53% debt and 47%  
21 equity. Exhibit RSH-9 attached to this testimony provides an excerpt from First Wind

1 Holdings' SEC filing.<sup>2</sup> Clearly, it is unreasonable to assume that the Deepwater project  
2 will be financed with 100% equity, especially for the purposes of determining an  
3 expected rate of return.

4  
5 Deepwater's supplemental rebuttal testimony states that the benefits of the cash grant will  
6 accrue to lenders, not equity investors. While it is possible that lenders will attempt to  
7 secure such a provision during the negotiations of the debt covenants, there is no  
8 requirement for this to occur. Lenders will evaluate the entire project and the likelihood  
9 of the loan being repaid. If debt coverage ratios are adequate, such a covenant may not  
10 be necessary. With Deepwater's assumptions regarding capital costs and O&M cost, the  
11 debt coverage ratios for this project are very good, even at a lower PPA price. Moreover,  
12 even if the benefits of the cash grant do accrue to lenders, lower principal and interest  
13 payments will be required, improving the cash flow to equity investors. The cash grant  
14 provides value to the project, and it is appropriate to reflect that full value in the financial  
15 analysis. Similarly, it is appropriate to include the full value of accelerated depreciation  
16 in the evaluation of the Deepwater PPA price.

17  
18 The Deepwater supplemental rebuttal asserts that I have overestimated the portion of the  
19 project that is eligible for the cash grant and accelerated tax depreciation. As I noted in  
20 my direct testimony, I was able to closely reproduce the Deepwater IRR provided in the

---

<sup>2</sup> The excerpt in Exhibit RSH-9 is a single page from this filing. The full report is 261 pages, and is available at: [http://www.faqs.org/sec-filings/091222/First-Wind-Holdings-Inc\\_S-1.A/](http://www.faqs.org/sec-filings/091222/First-Wind-Holdings-Inc_S-1.A/)

1 confidential response to DIV 1-17, so I do not believe that the differences cited by  
2 Deepwater will significantly affect the results of my IRR analysis.

3  
4 Mr. Moore is critical of my alternative assumptions regarding O&M costs. As noted  
5 previously in this testimony, my alternative estimates are higher than forecasts contained  
6 in documents relied upon by Mr. Nickerson in assessing the commercial reasonableness  
7 of the PPA price. However, this is somewhat of a moot point. All of my conclusions are  
8 supportable using Deepwater's own forecast of O&M costs.

9  
10 Lastly, I strongly disagree that the IRR analysis treats Deepwater and the benchmark  
11 renewable energy projects unequally. I have used the same financial model and the same  
12 assumptions in determining the IRRs for the Deepwater project and all renewable energy  
13 projects that I compare the Deepwater project to. Such claims of unequal treatment  
14 should be dismissed.

15 **XII. CONCLUSION**

16 **Q. Does that conclude your testimony?**

17 A. At this time, yes. Should additional information become available, I will update  
18 this testimony as appropriate.

BEFORE THE  
RHODE ISLAND PUBLIC UTILITY COMMISSION

DOCKET NO. 4111  
REVIEW OF THE PROPOSED TOWN OF NEW SHOREHAM PROJECT  
PURSUANT TO R.I.G.L. § 39-26.1-7

EXHIBIT RSH-9

March 2, 2010



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[Documents](#)

[Other FAQs](#)

**First Wind Holdings Inc. - FORM S-1/A - December 22, 2009**

**Attached files**

File	Filename
<a href="#">EX-23.2 - EX-23.2 - First Wind Holdings Inc.</a>	a2195887zex-23_2.htm
<a href="#">EX-16.1 - EX-16.1 - First Wind Holdings Inc.</a>	a2195887zex-16_1.htm
<a href="#">EX-24.1 - EX-24.1 - First Wind Holdings Inc.</a>	a2195887zex-24_1.htm
<a href="#">EX-23.1 - EX-23.1 - First Wind Holdings Inc.</a>	a2195887zex-23_1.htm

**People who read this document also read:**

Document
<a href="#">SPHERIX INC - 8-K, Regulation FD Disclosure Financial Statements and Exhibits</a>
<a href="#">ATS MEDICAL INC - 8-K, Results of Operations and Financial Condition Financial Statements and Exhibits</a>

Use these links to rapidly review the document

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[INDEX TO CONSOLIDATED FINANCIAL STATEMENTS](#)

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As filed with the Securities and Exchange Commission on December 22, 2009

Registration No. 333-152671

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

Amendment No. 2  
to  
**FORM S-1**  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

**First Wind Holdings Inc.**  
(Exact Name of Registrant as Specified in Its Charter)

<b>Delaware</b> (State or Other Jurisdiction of Incorporation or Organization)	<b>4911</b> (Primary Standard Industrial Classification Code Number)	<b>26-2583290</b> (I.R.S. Employer Identification Number)
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**179 Lincoln Street, Suite 500  
Boston, MA 02111  
617-960-2888**

(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

**Paul Gaynor  
Chief Executive Officer  
First Wind Holdings Inc.  
179 Lincoln Street, Suite 500  
Boston, MA 02111  
617-960-2888**

(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent For Service)

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**CAPITALIZATION**

The following table sets forth the consolidated capitalization of:

- First Wind Holdings, LLC on an actual basis as of September 30, 2009;
- First Wind Holdings Inc. on a pro forma basis as of September 30, 2009 to give effect to all of the reorganization transactions described in "The Reorganization and Our Holding Company Structure;" and
- First Wind Holdings Inc. on a pro forma as adjusted basis as of September 30, 2009 to give further effect to our sale of shares of common stock in this offering at an assumed initial public offering price of \$            per share, the midpoint of the range set forth on the cover of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses.

You should read this table together with the information under "Unaudited Pro Forma Financial Information," "Selected Historical Financial and Operating Data," "Management's Discussion and Analysis of Financial Condition and Results of Operations," "The Reorganization and Our Holding Company Structure," "Description of Capital Stock" and in the consolidated financial statements included elsewhere in this prospectus.

	<u>As of September 30, 2009</u>		
	<u>First Wind Holdings, LLC Actual</u>	<u>First Wind Holdings Inc. Pro Forma (unaudited)</u>	<u>First Wind Holdings Inc. Pro Forma As Adjusted<sup>(2)</sup></u>
	<small>(in thousands, except share amounts)</small>		
Long-term debt, including debt with maturities less than one year <sup>(1)</sup>	\$ 854,378	\$	\$
Members' capital/stockholders' equity:			
Members' capital	853,156		—
Class A common stock, \$0.001 par value, no shares authorized, issued and outstanding, actual; shares authorized and shares issued and outstanding, pro forma; shares authorized and shares issued and outstanding, pro forma as adjusted		—	
Class B common stock, \$0.0001 par value, no shares authorized, issued and outstanding, actual; shares authorized and shares issued and outstanding pro forma; shares authorized and shares issued and outstanding, pro forma as adjusted		—	
Additional paid-in capital		—	
Accumulated deficit		(171,945 )	
Noncontrolling interests in subsidiaries		88,450	
Total members' capital/stockholders' equity	769,661		
Total capitalization	<u>\$ 1,624,039</u>	<u>\$</u>	<u>\$</u>

- (1) Approximately \$306.5 million of our outstanding indebtedness had a maturity of less than one year as of September 30, 2009 after giving effect to amounts repaid or refinanced after September 30, 2009.
- (2) A \$1.00 increase (decrease) in the assumed initial public offering price of \$            per share would increase (decrease) pro forma as adjusted stockholders' equity by \$            million, based on the assumptions set forth above. The pro forma as adjusted information set forth above is illustrative only and upon completion of this offering will be adjusted based on the actual offering price and other terms of this offering determined at pricing.