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OFFSHORE WINDFARMING IN NEW JERSEY

I. Introduction

In his 2011 State of the Union Address, President Barack Obama relayed his vision that 80% of the nation’s electricity will be generated from clean energy sources, including wind, by the year 2035.¹ One method of generating electricity from clean energy sources is by utilizing erected turbines to harness the power of the wind – “windfarming.” Common sense dictates that windfarming is a powerful technology that can help save this Earth: it generates energy without depleting any of the Earth’s natural resources, all without emitting harmful gasses. Windfarms can be constructed on land, but the most effective windfarms can be constructed “offshore,” which can take advantage of offshore wind that blows stronger and more uniformly than on land.² Windfarming – particularly, offshore windfarming – seems to be a panacea to some of the Earth’s environmental ills.³

With such power and potential that can be realized through offshore windfarming, one would think that its industry would be booming throughout the United States. In theory, offshore windfarming is a no-brainer – it generates energy by using a non-depletable natural resource without detrimental environmental side effects. The reality, however, is that offshore windfarming development is still in its infancy, where its technology, market, and policy remain uncertain.

¹ *Remarks by the President in 2011 State of Union Address*, January 25, 2011, <http://www.whitehouse.gov/the-press-office/2011/01/25/remarks-president-state-union-address> (last accessed Nov. 17, 2013).

² U.S. Dep’t. of Energy & U.S. Dep’t. of the Interior, *A National Offshore Wind Strategy: Creating an Offshore Wind Energy Industry in the United States*, p. 6 (Feb. 2011), available at http://www1.eere.energy.gov/wind/pdfs/national_offshore_wind_strategy.pdf (hereinafter “*A National Offshore Wind Strategy*”).

³ U.S. Dep’t. of Energy, *A Framework for Offshore Wind Energy Development in the United States*, Energy Efficiency and Renewable Energy (Sept. 2005), available at http://www.usowc.org/pdfs/final_09_20.pdf. (hereinafter “*A Framework for Offshore Wind Energy Development in the United States*”).

This paper briefly summarizes a global overview of offshore windfarming; describes the current status of offshore windfarming in New Jersey; and provides an overview of the laws governing offshore windfarming in New Jersey. The paper then identifies two obstacles facing offshore windfarming in New Jersey: (1) the complexity of the language of the law governing offshore wind energy and (2) the political motivations inherently created by the legislation, both impede the development of the offshore wind industry. The paper then proposes solutions to such obstacles: (1) providing an official State guide that the industry can rely upon and (2) removing the subsidy program that is the source of the political influence, can alleviate these respective obstructions on the State's offshore windfarm industry.

II. Overview of Offshore Windfarming

An offshore windfarm is made up of an array of multiple turbines located in bodies of water, where the array of turbines are connected as a group to harness the wind and export electricity to a terrestrial grid network. Undersea cables connect the offshore turbines together and to a transformer that converts the electricity to a high voltage. Offshore windfarms tend to be more efficient and productive than their land-based counterparts: offshore winds generally blow more strongly and consistently than onshore winds, which allows offshore wind turbines to operate at higher capacity than land-based wind turbines.⁴

“There are approximately 5.3 gigawatts (GW) of offshore wind installations worldwide,” with the majority located in northwestern Europe.⁵ Last year (2012) saw a surge of more than 1,100 megawatts (MW) of wind power capacity, with the United Kingdom alone accounting for

⁴ *National Offshore Wind Strategy*, *supra*, note 2.

⁵ U.S. Dep't. of Energy, *Offshore Wind Market and Economic Analysis Report 2013*, (Oct. 17, 2013), available at http://www1.eere.energy.gov/wind/pdfs/offshore_wind_market_and_economic_analysis_10_2013.pdf (hereinafter “*Offshore Wind Market and Economic Analysis Report 2013*”).

756 MW. Historically, the European market is the leader in offshore windfarming, and it will continue to grow rapidly.⁶

A single gigawatt of installed offshore wind power capacity can create 3.4 million megawatt-hours of energy.⁷ That same amount of energy would take “1.7 million tons of coal or 27.6 billion cubic feet of natural gas and would emit 2.7 million tons of carbon dioxide equivalent (CO₂e) annually.”⁸ Every year the United States emits 6 billion metric tons of carbon dioxide into the air. Wind energy, on the other hand, is one of the cleanest and most environmentally friendly energy sources available.⁹

While the United States is more than a decade behind, it has now realized that offshore windfarming can provide much of the country's energy needs. In 2008, the U.S. Department of Energy issued a report that found that the United States could generate 20% of its electricity from wind energy by 2030, with offshore wind playing a significant role in supplying up to 54 GW of capacity.¹⁰ As the United States recently entered the foray, it has set goals for its offshore windfarming program, broadly defined as “promoting the development and deployment of offshore wind energy systems at competitive prices while aiming to maximize the MW capacity of manufacturing production in the United States, resulting in more factories and jobs.”¹¹ The development of offshore windfarms could create approximately 20.7 direct jobs per annual megawatt installed in U.S. waters.¹² “Installing 54 GW of offshore wind capacity in U.S. waters

⁶ *Id.*

⁷ *Id.*

⁸ *National Offshore Wind Strategy*, *supra*, note 2.

⁹ U.S. Dep't. of Energy, *20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply 208* (July 2008), available at <http://www1.eere.energy.gov/wind/pdfs/41869.pdf> (hereinafter *20% Wind Energy by 2030*).

¹⁰ *20% Wind Energy by 2030*, *supra*, note 9.

¹¹ *Offshore Wind Market and Economic Analysis Report 2013*, *supra*, note 5.

¹² *National Offshore Wind Strategy*, *supra*, note 2.

would create more than 43,000 permanent operations and maintenance (O&M) jobs and would require more than 1.1 million job-years to manufacture and install the turbines.”¹³

III. Offshore Windfarm Financing

Offshore windfarming is still a “new kid on the block” when it comes to renewable energy, particularly with respect to regulations and policies. While policies for offshore oil and gas development are well established, offshore wind energy development is unprecedented in the U.S. and therefore is unfamiliar ground for the regulatory and policy arenas. In its infancy, federal and state agencies had previously been using existing regulatory frameworks to permit proposed offshore wind projects.¹⁴ To date, the United States does not yet have a completed commercial-scale offshore wind project.¹⁵

As one can imagine, various state and federal entities have authority over siting, permitting, and installation of offshore wind facilities. The Department of Interior (DOI), through the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE), is the lead agency in permitting offshore wind energy.¹⁶ The U.S. Army Corps of Engineers (USACE) is the lead federal agency in permitting offshore wind in state waters. The Environmental Protection Agency (EPA), Fish and Wildlife Service (FWS), National Park Service (NPS), Department of Commerce’s National Oceanic and Atmospheric Administration (NOAA), NOAA’s National Marine Fisheries Service (NMFS), Federal Aviation Administration (FAA), Department of Defense (DOD), U.S.

¹³ *Id.*

¹⁴ *A Framework for Offshore Wind Energy Development in the United States*, *supra*, note 3.

¹⁵ *Offshore Wind Market and Economic Analysis Report 2013*, *supra*, note 5.

¹⁶ *National Offshore Wind Strategy*, *supra*, note 2.

Coast Guard (USCG), and the Federal Energy Regulatory Commission (FERC) all also have to be consulted regarding certain aspects of offshore wind projects.¹⁷

Despite the challenges presented by the complexity of getting siting, permitting, and installation approvals, perhaps the biggest obstacle is the high financing costs for offshore wind projects, which naturally impede the interests of investors and construction companies. However, several projects across the nation have been in development, stimulated by federal financial incentives. For example, the DOE has allocated more than \$90M in grants to qualified offshore wind research and test facilities through the American Reinvestment and Recovery Act of 2009 (ARRA).¹⁸ In 2010, \$70M in ARRA funds supported the development of large-scale wind turbine test facilities for offshore wind energy projects.¹⁹

Additionally, qualified offshore wind energy companies can apply for either the Renewable Electricity Production Tax Credit (PTC) or the Business Energy Investment Tax Credit (ITC), where the ITC refunds to the company a 30% credit of initial capital cost, and the PTC compensates the company approximately \$23/MWh for the first 10 years of operation.²⁰ These federal financial incentives are critical to establishing and stimulating the Nation's offshore wind energy industry. However, the different financial incentives that individual States have created provide the most incentives for individual offshore wind energy manufacturers.

IV. Offshore Windfarming in New Jersey

In 2005, New Jersey convened a Blue Ribbon Panel on Development of Wind Turbine Facilities in Coastal Waters ("Blue Ribbon Panel") to perform studies on offshore wind energy.

¹⁷ *National Offshore Wind Strategy*, *supra*, note 2.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *Offshore Wind Market and Economic Analysis Report 2013*, *supra*, note 5.

The Blue Ribbon Panel concluded that offshore wind energy could be beneficial to the State, and that a “test project” was recommended because “much can be learned from constructing such a facility.”²¹ This common sense proposition cautions that while the State can greatly benefit from offshore wind development, incremental growth of such a new and still undeveloped industry was prudent. Consequently, the State Legislature codified Section 4 of the Offshore Wind Economic Development Act (OWEDA), giving birth to New Jersey’s offshore wind program and endorsing small-scale, pilot offshore wind projects of up to 25 MW.²²

A. The Legislative Goal

In 2011, Governor Chris Christie initiated the State’s 2011 Energy Master Plan, which states that “offshore wind has been supported by the Christie Administration for a number of reasons,” and that “the Christie Administration intends that the OWEDA will incentivize the development of offshore wind manufacturing and construction companies in New Jersey.”²³ The Legislature intended OWEDA to “spur economic growth in the Garden State through the development of renewable energy resources and the creation of green jobs.”²⁴

OWEDA established “an offshore wind renewable energy certificate program (OREC) and will make available financial assistance and tax credits from existing programs for businesses that construct manufacturing, assemblage and water access facilities to support the development of

²¹ Blue Ribbon Panel on Development of Wind Turbine facilities in Coastal Waters, *Final Report to Governor Jon S. Corzine*, p. 14 (Apr. 2006), available at <http://www.nj.gov/njwindpanel/docs/finalwindpanelreport.pdf>.

²² *N.J.S.A. 48:3-87.2*, et seq.

²³ NEW JERSEY ENERGY MASTER PLAN, p.101 (Dec. 6, 2011), available at http://www.nj.gov/emp/docs/pdf/2011_Final_Energy_Master_Plan.pdf

²⁴ State of New Jersey, *Governor Christie Signs Offshore Wind Economic Development Act to Spur Economic Growth, Encourage Energy as Industry*, (Aug. 19, 2010), <http://www.state.nj.us/governor/news/news/552010/approved/20100819a.html> (last accessed Nov. 17, 2013) (hereinafter “*Governor Christie Signs OWEDA*”).

qualified offshore wind projects.”²⁵ OWEDA authorizes the state to provide up to \$100 million in tax credits for qualified projects in addition to other established federal and state subsidies.²⁶ The OREC program allows developers to offset the costs of development and production by passing costs on to electricity customers.²⁷ Electric power suppliers or basic generation service providers (i.e. electric companies) purchase these ORECs, which represent 1 MWh of offshore wind power generation.²⁸ OWEDA requires energy providers to certify that a pre-determined percentage of their power sold in New Jersey will come from offshore wind sources once the offshore wind projects become operational.²⁹ The energy providers would then pass the added costs assumed from purchasing offshore wind credits onto the ratepayers (i.e. electricity consumers).³⁰

These ORECs are essentially subsidies provided to qualified offshore wind energy manufacturers, and as will be discussed further, the chief financial incentive that induces these manufacturers to build offshore windfarming projects. Presently, the costs for offshore wind projects are too steep, even with Federal grants and tax breaks, and must be lowered in order to truly establish a viable offshore wind industry in New Jersey.³¹ Simply put, without these ORECs, offshore wind projects are unaffordable.

Unfortunately, however, it seems that ORECs have become the primary motivation for these offshore windfarm projects, where manufacturers have lost sight of the spirit of OWEDA. To make matters worse, the complexity of OWEDA’s language concerning exactly how offshore windfarm companies can receive these ORECs naturally attracts and commands much of the

²⁵ *Id.*

²⁶ *Id.*

²⁷ *N.J.S.A. 48:3-87, et seq.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ *National Offshore Wind Strategy, supra, note 2.*

companies' attention, unnecessarily diverting attention away from the true purpose of the legislation: the development and implementation of offshore wind technology in the State.

B. The Law and Application

Pursuant to Section 4 of OWEDA,

The [New Jersey Board of Public Utilities] may approve, subject to the project obtaining the necessary permits, approvals, and authorizations from the Department of Environmental Protection, a qualified wind energy project located in territorial waters offshore of a municipality in which casino gaming is authorized, and authorize offshore wind renewable energy certificates for that project. Any such project shall be a nominal 20 megawatts and no more than 25 megawatts in nameplate capacity and comply with the requirements set forth in section 3 of [OWEDA].³²

This provision authorizes the construction of pilot offshore wind projects within the State, designed to provide valuable information to the New Jersey Board of Public Utilities (BPU), State and Federal agencies, and even the offshore wind energy companies themselves, as to the inherent environmental and economic benefits to the State and its citizens. Just as the Blue Ribbon Panel once concluded, much can be learned from pilot projects regarding the benefits of offshore wind energy.

Before the BPU may approve a pilot offshore wind project (which has already received the necessary permits, approvals, and authorizations) to receive ORECs, the project must first be eligible as a qualified offshore wind project. One of the more important factors that determines whether an offshore wind project qualifies under OWEDA is the financing mechanism that the company proposes to fund their project, which includes a proposal for the price of the ORECs. The availability of these ORECs has become the crucial “carrot on the stick” that incentivizes an offshore wind company to invest in the construction of an offshore wind project.

³² N.J.S.A. 48:3-87.2

Pursuant to OWEDA, the financing mechanism proposed by the company must satisfy certain criteria, relevant portions of which are outlined below. The financing mechanism must, *inter alia*:

- (1) Not propose that any OREC be paid before electricity is produced;³³
- (2) Propose that ORECs be paid based on the actual electric output of the project that is delivered into the transmission system of the State;³⁴
- (3) Hold taxpayers and the State harmless for any cost overruns associated with the project;³⁵
- (4) Pass along tax credits or other governmental benefits to ratepayers;³⁶
- (5) Demonstrate positive economic and environmental net benefits to the State;³⁷
- (6) Demonstrate that the wind technology is viable;³⁸
- (7) Fairly balance the risks and rewards of the project between ratepayers and shareholders, and ensure that any costs of non-performance, in either the construction or operational phase of the project, shall be borne by shareholders;³⁹
- (8) Demonstrate the company's financial integrity and sufficient access to capital to allow for a reasonable expectation of completion of construction of the project;⁴⁰ and
- (9) Demonstrate that the company has applicable experience in projects of the size and scope proposed.⁴¹

³³ N.J.S.A. 48:3-87.1(c)(1).

³⁴ N.J.S.A. 48:3-87.1(c)(2).

³⁵ N.J.S.A. 48:3-87.1(c)(3).

³⁶ N.J.A.C. 14:8-6.5(a)(5)(iv).

³⁷ N.J.S.A. 48:3-87.1(b)(1)(b).

³⁸ N.J.A.C. 14:8-6.5(a)(2)(i).

³⁹ N.J.S.A. 48:3-87.1(b)(1)(c).

⁴⁰ N.J.S.A. 48:3-87.1(b)(1)(d).

⁴¹ N.J.A.C. 14:8-6.5(a)(2)(i)(1).

The regulations for proposing OREC pricing require companies to specify:

- (1) Total equipment, construction, operation, and maintenance costs of the project;
 - (2) Tax credits, subsidies, or grants the project will qualify for;
 - (3) Debt service costs and return on equity assumptions;
 - (4) Taxes and depreciation assumptions;
 - (5) The nameplate capacity of the project;
 - (6) The expected energy output of the project;
 - (7) The assumed capacity factor and the number of ORECs to be produced by the project;
- and
- (8) The price per OREC (megawatt hours (MWh)) necessary to make the project commercially viable.⁴²

The regulations simply state that “[a]ll applications must be consistent with [BPU] application standards...,”⁴³ that the BPU can accept, modify, or reject the OREC pricing proposal,⁴⁴ and that “[i]f the pricing proposal satisfies the cost-benefit standards set forth in the statute and the [BPU's] regulations, the BPU may approve the application subject to the application satisfying other required conditions.”⁴⁵

In short, companies seeking ORECs must present a price proposal to the BPU for the ORECs, as well as comprehensive net benefits analysis of the offshore wind projects. However, not only is the language complex and ambiguous, a reading of these statutes and regulations seems to indicate that the fight to construct and develop offshore windfarms will give way to a fight over the ORECs.

⁴² *N.J.A.C.* 14:8-6.5(a)(12)(viii)

⁴³ *N.J.A.C.* 14:8-6.3(e)

⁴⁴ *N.J.A.C.* 14:8-6.5(a)(12)(iii)

⁴⁵ *N.J.A.C.* 14:8-6.5(a)(12)(v)

V. Obstacles and Proposed Solutions Regarding Offshore Windfarming in New Jersey

OWEDA tasked the BPU “to develop an offshore renewable energy certificate program that calls for a percentage of electricity sold in the state to be from offshore wind energy,”⁴⁶ giving the BPU complete oversight and authority over offshore wind projects and the disbursement of ORECs. In order for the BPU to approve a proposed offshore wind project to receive ORECs, the BPU Board members must be satisfied that the financing mechanisms comport with OWEDA’s statutes and regulations outlined above. However, the language of OWEDA is terribly complex and to some extent ambiguous, which is an obstacle that unnecessarily hinders the application process for offshore windfarm projects. A simple solution would be for the State to create and publish an official, comprehensive explanatory guide of OWEDA that both the companies and the BPU can rely upon for guidance.

Further, as the sole arbiter of the offshore windfarm project application process, the BPU wields tremendous power as to whether New Jersey will ever initiate, much less succeed, with its offshore wind industry. The BPU’s seemingly excessive power, compounded with the uncertainties and complexities concerning the OWEDA legislation, present an additional obstacle, political in nature, that impedes the development of offshore windfarms in New Jersey. The solution is to remove (or severely limit) the political machinations by eliminating the OREC subsidy program altogether and redirecting the attention towards the investment in offshore wind energy technology.

⁴⁶ *Governor Christie Signs OWEDA, supra*, note 19.

A. Complexity of OWEDA

(1) Obstacle: OWEDA is a new language

Despite all of the potential benefits of offshore windfarming, uncertainties concerning the offshore wind industry and its regulatory structure are major obstacles that adversely impact its development. For one, offshore windfarming is a new concept within the State, and indeed in the Nation as a whole. The interface between the statutes and regulations is incredibly complex, with hardly any guidance or precedents to follow. It has been the experience of lawyers within the offshore wind industry that confusion and uncertainty befuddles not only the companies presenting their proposed offshore wind projects, but also the BPU and its staff themselves.

Further, OWEDA imposes rigorous demands upon the companies proposing their projects. As outlined below, one need not look any further than OWEDA's language concerning the financing mechanism proposal criteria – one of the more critical and important considerations regarding offshore wind projects – to see just how complex and demanding OWEDA can be. The rigorous demands upon the companies may be reasonably justified so as to protect against the waste of money on spurious projects. However, as demanding and strict as OWEDA already seems to be, the complexity of its language does nothing more than enhance the difficulties and obstacles that companies are faced with in implementing the offshore windfarming program and developing the industry.

(a) Not propose that any OREC be paid before electricity is produced;⁴⁷ and propose that ORECs be paid based on the actual electric output of the project that is delivered into the transmission system of the State;⁴⁸

⁴⁷ N.J.S.A. 48:3-87.1(c)(1).

⁴⁸ N.J.S.A. 48:3-87.1(c)(2).

Pursuant to OWEDA, no OREC shall be paid until electricity is produced by the qualified offshore wind project, and the ORECs must be paid based upon the actual amount of electricity produced. As mentioned several times, receiving these ORECs has become the impetus for offshore wind projects, where companies heavily rely upon the receipt of ORECs to justify expending enormous amounts of upfront capital for such projects. However, a plain reading of this language seems to suggest the very real possibility that companies may never receive ORECs even after completing construction of offshore windfarms and after having spent millions of dollars.

To put it another way, it appears that a company proposing a project must promise to spend many years and millions of dollars to build a fully-operational offshore windfarm that perfectly generates electricity. Only then, it seems, will the company begin to recoup its investments through ORECs, but only in an amount based on the actual output of electricity generated by the windfarms. In other words, if the offshore windfarm does not produce as expected, a company may never be paid at all. Such a reading of this language would certainly discourage companies from even considering applying in the first place.

(b) Hold taxpayers and the State harmless for any cost overruns associated with the project;⁴⁹ pass along tax credits or other governmental benefits to ratepayers;⁵⁰ and fairly balance the risks and rewards of the project between ratepayers and shareholders, and ensure that any costs of non-performance, in either the construction or operational phase of the project, shall be borne by shareholders;⁵¹

Even worse, OWEDA does not seem to offer any assistance or saving-grace to a company should an offshore wind project prove to be futile. On the contrary, companies are required to hold taxpayers and the State harmless for any cost overruns associated with the project; pass along the

⁴⁹ N.J.S.A. 48:3-87.1(c)(3).

⁵⁰ N.J.A.C. 14:8-6.5(a)(5)(iv).

⁵¹ N.J.S.A. 48:3-87.1(b)(1)(c).

tax credits or other governmental benefits to ratepayers; and fairly balance the risks and rewards of the project between ratepayers and shareholders, and ensure that any costs of non-performance, in either the construction or operational phase of the project, shall be borne by shareholders. This language seems to indicate that companies proposing offshore wind projects will bear all the risks associated with such a new and untested industry, and such a reading does not bode well for the offshore wind industry.

(c) Demonstrate positive economic and environmental net benefits to the State;⁵² demonstrate that the wind technology is viable;⁵³ demonstrate that the company has applicable experience in projects of the size and scope proposed;⁵⁴ and demonstrate the company’s financial integrity and sufficient access to capital to allow for a reasonable expectation of completion of construction of the project.⁵⁵

The offshore windfarming industry in New Jersey is in its infancy. In fact, in the Nation as a whole, there are no operational commercial offshore windfarms. As such, there is limited concrete data that can be used to demonstrate positive economic and environmental net benefits to the State. Consequently, OWEDA authorizes companies to use theoretical economic models to calculate such net benefits.⁵⁶ For example, a company seeking to demonstrate net benefits may use the “R/ECON” model created by the Rutgers University Bloustein School of Planning and Public Policy.⁵⁷

The R/ECON is a comprehensive econometric model, incorporating numerous interrelated factors to compute the total impact a given project will have on the New Jersey economy.⁵⁸ Given

⁵² *N.J.S.A.* 48:3-87.1(b)(1)(b).

⁵³ *N.J.A.C.* 14:8-6.5(a)(2)(i).

⁵⁴ *N.J.A.C.* 14:8-6.5(a)(2)(i)(1).

⁵⁵ *N.J.S.A.* 48:3-87.1(b)(1)(d).

⁵⁶ *N.J.A.C.* 14:8-6.5(a)(11)(i)(1)(A).

⁵⁷ *Id.*

⁵⁸ <http://policy.rutgers.edu/cupr/recon>

a set of inputs consisting of the project's total economic activity, the R/ECON forecasts the overall increase to in-State activity from construction, operations and maintenance, and equipment purchases, which include, among other things, (i) the number of jobs created by the project; (ii) total wage increase from the project; (iii) indirect business taxes; and (iii) the sales and services realized from offshore wind projects.⁵⁹ While the R/ECON model may be intuitive and quite possibly serves its purpose, it nonetheless is an academic model that computes a theoretical net benefit based upon data inputted by a company who is obviously motivated to present a favorable model that would demonstrate positive economic and environmental net benefits to the State. By its very definition, it is a model that projects hypothetical scenarios based on data computed by a company seeking approval.

What is even more problematic is the fact that the BPU has the sole power in evaluating the credibility of these asserted net benefits.⁶⁰ As the agency tasked with sole authority in determining whether a proposed offshore wind project meets OWEDA's criteria, the BPU is the ultimate judge and jury as to whether a project will come to fruition. Thus, the BPU has unfettered discretion to reach its conclusions with no apparent limitations from the language of OWEDA. One can only presume that the absence of language purporting to limit or govern the BPU's reviewing powers is due to the trusting nature of the legislature to give broad discretion to the agencies that the legislature created to interpret the laws that it assigned to the agencies to implement.

Similarly, demonstrating a company's applicable experience in offshore wind projects and demonstrating a company's financial integrity and sufficient access to capital are subject to the BPU's unrestrained analysis and assessment. Similar to the net benefits calculation above, such

⁵⁹ *N.J.A.C. 14:8-6.5(a)(11)(v)*

⁶⁰ *N.J.A.C. 14:8-6.5(a)(11)(vii)*.

demonstrations are theoretical endeavors that are heavily dependent upon the data provided by a company seeking approval, and the BPU is seemingly free to disregard or devalue a company's promulgated data.

The language of OWEDA seems to indicate that a heavy burden is placed upon a company who proposes an offshore windfarm project. A plain language interpretation of OWEDA insinuates that offshore wind projects are too risky and not worth the risk, and could discourage many competent companies from helping New Jersey develop its offshore wind energy industry. Furthermore, OWEDA's language, or the lack thereof, allows the BPU to govern the application process unfettered, seemingly leaving companies at the mercy of the BPU. The only recourse, it would seem, would be to seek relief with the judiciary with the hopes of proving the BPU's actions were unfair, arbitrary, and capricious. However, Chevron⁶¹ deference dictates that judicial recourse is not in the best interest of the companies. The rigorous demands of OWEDA coupled with its complex and seemingly ambiguous language creates an obstacle for the companies seeking to establish the State's offshore wind energy industry.

(2) Solution: Publish an explanatory guide of OWEDA

One way to enhance and further the intent of OWEDA is by promulgating a comprehensive guide. The State and its brain trust can assimilate all of OWEDA's statutes, rules, and regulations and conceive an authoritative guide that the offshore windfarming industry can rely upon. This guide can make it easier for companies to understand all the requirements and conditions for an

⁶¹ *Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984) (Judicial deference is accorded to an agency's construction of a statutory scheme that it is entrusted to administer.).

offshore windfarm project, which in turn leads to efficiency and the eradication of many uncertainties and apprehension within the industry.

The guide can also help streamline the offshore wind project application process by controlling the BPU's evaluation and administration powers. For example, the guide can establish baseline findings that would constitute net benefits to the State, and the BPU can simply adhere to such findings when assessing whether a proposed wind farm project satisfies that criteria. Currently, the BPU is treading uncharted waters in making its assessments of offshore windfarm projects, with no starting point on which it could compare its purported findings and assessments. The guide can serve as a compass that can steer the BPU towards the right course during its deliberations, which in turn reins in any previously unregulated power and eliminates, or at least severely limits, any arbitrary or capricious decision-making.

A New Jersey State guide can emulate the website that the Energy Efficiency & Renewable Energy ("EERE") division of the DOE currently maintains, which gives visitors invaluable guidance as to the Federal grant and funding process for offshore wind energy projects.⁶² Another example is the Internal Revenue Services' comprehensive guide regarding the application for energy project credits.⁶³ These examples are specific and detailed, listing the applicable statutes, rules, and regulations and providing commentary as to what they really mean. There is a "Frequently Asked Questions" section that contains pages of specific and particular questions and answers. These guides in effect set brightline rules that their users can comprehend and attempt to comport with.

⁶² Dep't. of Energy, Energy Efficiency & Renewable Energy, "Funding Opportunity Exchange; Frequently Asked Section," <https://eere-exchange.energy.gov/FAQ.aspx?FoaId=5bfa6fc8-0b9b-4983-868d-5ec8537a585a> (last accessed Nov. 17, 2013).

⁶³ Internal Revenue Service, *IRS Notice 2013-12*, available at <http://www.irs.gov/pub/irs-drop/n-13-12.pdf>.

A similar guiding document or website from a New Jersey authority will serve the offshore windfarming industry well by eliminating many uncertainties and boosting the confidence of potential investors. The industry would no longer merely need to put its fate in the hands of the BPU with the hopes that the agency does not act arbitrarily or capriciously, comports with the clarified rules and regulations, and performs in the way it was intended. This would be a step in the right direction and could help nurture the nascent offshore windfarming industry.

(B) Political Machinations

(1) Obstacle: Politics dictate the success or failure of OWEDA

As previously discussed, OWEDA tasked the BPU with establishing the State's OREC program to finance the State's offshore wind program. Energy providers are required to purchase ORECs, guaranteeing that a certain fixed percentage of their output derive from offshore wind generation. While the ORECs are paid to the offshore windfarm companies, any additional costs borne by the energy providers are passed on to ratepayers (i.e. the citizens of the State). Despite the admirable goals of OWEDA in providing clean, renewable energy to help alleviate environmental ills, the ratepayers (i.e. the taxpayers) naturally will have some qualms with the process.

Disconcerted taxpaying voters make politicians uneasy. While a politician's intentions may truly be altruistic, common knowledge dictates that a politician's end-game is reelection. OWEDA is so new that its true effects have yet to be measured, so perhaps it is too early to discount the offshore windfarming industry as a deal breaker for the citizens of the State. Nonetheless, imagine a scenario where a company was approved to receive ORECs for an offshore windfarm project, and this project fails to sufficiently generate energy to deliver to the energy service providers who

have agreed to purchase their required percentage of power from the offshore windfarms. Unsurprisingly, the BPU will shoulder much of the blame for approving that failed project.

In turn, the BPU is a reflection on the State's administration. The BPU, a quasi-judicial body⁶⁴ composed of five Commissioners appointed by the Governor⁶⁵, is subject to the whims of the politicians. After all, the BPU is a creature of statute and must obey its master, and to this day, the popular vote still wields a powerful influence on the government. To avoid uncertainties with its constituency, it is easier for a politician to distance him/herself from OWEDA rather than attempt to justify the growing pains of the State's inefficient or expensive offshore wind project. This perpetuates a cycle by creating a trickle-down effect to the BPU, where the presiding administration dictates the course of direction of the agency.

What suffers the most due to these political machinations are the offshore windfarm companies and the industry itself. An offshore windfarm project that has minimal to zero support from an authoritative politician within the State has little to no influence on the BPU's decision making as to whether to qualify the project as OREC-worthy. It is easier for the BPU to deny an application for OREC funding than to suffer the wrath of an angry politician who has in his/her administration a costly and voter-unfriendly offshore windfarm project. This collective political process has created an undue influence on the offshore wind industry that has impeded its development.

(2) Solution: Eliminate the OREC subsidy program altogether

One theory is to remove in its entirety the OREC subsidy program for the offshore wind program. "A system of zero subsidies that accounts for externalities will encourage competition

⁶⁴ <http://www.state.nj.us/bpu/about/index.html>

⁶⁵ <http://www.state.nj.us/bpu/about/commissioners>

across all sectors and will lead to innovation that is impossible without unrestrained economic signals.”⁶⁶ This theory explains how certain wind energy companies, who are dependent upon subsidies in order to operate profitably, cite the uncertainty over the future of subsidies as the cause for laying off its workers in anticipation of reduced future projects.⁶⁷ Discarding subsidies eliminates the flaw in the system where “companies over-invest when the subsidy is robust, and under-invest when the subsidy is threatened.”⁶⁸

Instead of providing government subsidies, a novel alternative is to mandate an activity to steer the behavior of the market in a certain direction.⁶⁹ For example, to encourage the development of renewable energy, “a tax on carbon would raise the price on the fossil fuel technologies without artificially picking a winner among the other technologies.”⁷⁰ Such an approach could lead to innovation by encouraging companies to invest in developing the technology for renewable energy lest they be incur increased taxes on their carbon emissions.

As applied to New Jersey’s offshore wind industry, eliminating the OREC program would force companies to collaborate on developing the offshore wind industry instead of wasting time griping and clamoring over subsidies. Companies will divert their energy towards developing their renewable energy technology to avoid paying taxes on their carbon emissions. Although the companies’ short term goal may be to avoid paying these taxes, the development of the technology undoubtedly creates the framework for the industry and inherently benefits the future of offshore wind energy. This would effectively shift offshore wind energy to a policy-driven industry with

⁶⁶ Rokeach, D., Schatz, G., *From Subsidies to Markets: Pursuing A More Effective American Energy Policy*, 3 RENEWABLE ENERGY L. & POL’Y REV. 187, 192 (2012).

⁶⁷ *Id.*, at 193.

⁶⁸ *Id.*

⁶⁹ *Id.*, at 192.

⁷⁰ *Id.*

long-term and time-based goals similar to the successful European experience with its offshore wind industry.⁷¹

While forcing companies to internalize the costs for developing renewable energy would likely result in the companies passing the added costs on to the consumers, the increase in cost will be dictated by market demand rather than by the political whims of a fickle government. A market demand for renewable energy would more accurately reflect the true cost and price of renewable energy, rather than an industry demand for subsidies that skews the true costs.

As the offshore wind technology develops over time and its market demand increases, the costs that the companies have been forced to internalize will surely decrease. In turn, these companies will decrease passing its internalized costs to the consumers, resulting in even further drops in prices and the revaluation of market prices. In short, removing the OREC subsidy program would create a market-drive demand for offshore wind energy that is more predictable, manageable, and controllable than the political agendas inherently created by subsidy programs.

VI. Conclusion

As the world has come to realize the need to conserve the Earth, the development of renewable energy technology has become crucial. One such renewable energy source is offshore windfarming, which harnesses the seemingly unlimited power of a non-depletable natural resource. While Europe has for more than a decade reaped the rewards of offshore windfarming, this technology is still in its infancy in the United States. As such, the Nation is still in the process of ironing out the kinks before it can fully implement its offshore wind program.

⁷¹ *A Framework for Offshore Wind Energy Development in the United States*, *supra*, note 3.

Despite the overwhelming benefits that can be harnessed from offshore windfarms, certain barriers and obstacles naturally impede its development. But not to despair: there are solutions that may mitigate the problems facing the industry. The enormously complex regulations governing offshore wind projects can be distilled into authoritative documents that can provide guidance regarding the industry and can streamline the process for implementing the program. Certain undue and inhibitive influences can be diminished by shifting the focus away from politics and towards innovation and the development of renewable energy technology.

Realistically, there is no baseline model to gauge whether offshore windfarming technology works in the United States. The industry should be allowed to mature from its infancy stage in order to make a reliable determination as to its capabilities and whether this technology can truly be one of the Earth's saviors.