THE COST OF CONTENTIOUSNESS: A STATUS REPORT ON OFFSHORE WIND IN THE EASTERN UNITED STATES[*]

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While successful elsewhere, the offshore wind energy sector has been unable to launch off the Atlantic coast of the United States. We explore the regulatory, political, and legal factors behind the delays encountered by American offshore wind. We also provide an update on the regulatory changes that federal and state governments are adopting to overcome the barriers to the sector's emergence. We ascribe offshore wind's difficulties to a costly and contentious development cycle, which is due in part to a fragmented regulatory landscape and inconsistent political support. We see reasons for optimism, however, in the regulatory reforms being enacted at the state and federal levels. These reforms add clarity to the permitting and leasing process, and they offer various kinds of direct support to offshore wind energy developers.

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I. INTRODUCTION

In recent years, the development of renewable energy has become a topic of public concern. Much of the discussion has focused on the prospect of switching from fossil fuels to low-carbon energy technologies that can reliably and economically meet energy needs.[1] As

[1] J.P. Painuly, *Barriers to Renewable Energy Penetration; a Framework for Analysis*, 24 RENEWABLE ENERGY 73, 73–74 (2001) (Den.); Aviel Verbruggen et al., *Renewable Energy Costs, Potentials, Barriers: Conceptual Issues*, 38 ENERGY POL'Y 850, 850 (2009); U.N. DEV.

crucial as the development of new technologies might be, their successful deployment is even more important. While there are substantial technological barriers to be overcome in the continued development of renewable energy, it is crucial that planners and policymakers also pay attention to the equally challenging obstacle of deploying these technologies at scale. Recent experience and research suggest that there are serious non-technological challenges to be overcome in developing a mature renewable energy market in the United States.[2]

In this paper, we examine one particularly troubling barrier to switching to renewable energy on a large scale: the costs of contentiousness in the site selection and approval process. By this we refer to the troubling delays and legal battles that developers often face in the process of securing land on which to develop new renewable energy resources. These conflicts cost both time and money. In some cases, they can cause otherwise viable and beneficial renewable energy projects to be abandoned. We examine the costs of contentiousness in renewable energy siting and permitting efforts through the case of offshore wind energy off of the United States' Atlantic coast. We choose this area because of the long delays and repeated failures that potential developers have experienced in bringing projects to completion, and also because of the great potential for renewable energy development that awaits if planning barriers can be overcome.

We identify two categories of conflict in proposed renewable energy projects that may be mitigated. In the first, a developer proposes a project in an area that clearly is unsuitable for renewable energy development for environmental, social, or other reasons, and local opponents must expend valuable resources battling the project. In the second, a developer proposes a project in an objectively favorable location, but the pathway to approval is delayed by a regulatory process that allows the battles to be rehashed in multiple regulatory and legal arenas. Our basic contention is that in the former case—that of the "bad" project—there should be an upfront planning process in place that is able to identify areas of concern in advance and discourage their selection for new projects. In the latter case—that of the "good" project

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PROGRAMME, WORLD ENERGY ASSESSMENT: ENERGY AND THE CHALLENGE OF SUSTAINABILITY 220 (Sept. 2000).

[2] *See generally* Jeffrey Thaler, *Fiddling as the World Burns: How Climate Change Urgently Requires a Paradigm Shift in the Permitting of Renewable Energy Projects*, 42 ENVTL. L. 1101, 1104–05 (2012); Katherine Roek, *Offshore Wind Energy in the United States: A Legal and Policy Patchwork*, NAT. RESOURCES & ENV'T 24, 26 (2011); Painuly, *supra* note 1, at 75–76; Verbruggen et al., *supra* note 1, at 859–60.

with continued and unproductive opposition—there ought to be a streamlined mechanism in place to support projects and usher them through the regulatory process.

Previous authors have criticized the manner in which the United States regulates the offshore wind sector, noting the complexity of the intergovernmental relationships involved[3] and pointing out how the United States has fallen behind other nations in encouraging the construction of offshore wind generating facilities.[4] Other authors have argued for additional state-level (and less federal) oversight of offshore wind development,[5] for earlier and more structured stakeholder engagement in the offshore wind planning process,[6] and for more comprehensive marine spatial planning efforts.[7] Still others have also recommended new approaches to offshore leasing[8] and auctioning structures.[9]

Our focus is on the costs that fragmented regulatory structures and inconsistent political support have imposed on offshore wind projects. Offshore wind development today is a high-risk proposition. Developers face the risk of negative public perception and strong local opposition, the risk of dramatic shifts in political support, and the risk of long delays in securing necessary permits and permissions. Coupled with high technology costs and the difficulty of acquiring necessary

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[3] Michelle Portman et al., *Offshore Wind Energy Development in the Exclusive Economic Zone: Legal and Policy Supports and Impediments in Germany and the U.S.*, 37 ENERGY POL'Y 3596, 3597–98 (2009); Thaler, *supra* note 2, at 1130–41; Roek, *supra* note 2, at 26.

[4] Timothy H. Powell, *Revisiting Federalism Concerns in the Offshore Wind Energy Industry in Light of Continued Local Opposition to the Cape Wind Project*, 92 B.U. L. REV. 2023, 2053 (2012); Michael Burger, *Consistency Conflicts and Federalism Choice: Marine Spatial Planning Beyond the States' Territorial Seas*, 41 ENVTL. L. REP. 10602, 10605, 10610–14 (2011); Portman et al., *supra* note 3, at 3597.

[5] David Frulla et al., *The Value of Early Consultation and Collaboration with Other Ocean Users for Successful Offshore Wind Development*, 17 ROGER WILLIAMS U. L. REV. 307, 320–26 (2012); Powell, *supra* note 4, at 2046–47; Burger, *supra* note 4, at 10614.

[6] Stephen Jay, *Planners to the Rescue; Spatial Planning Facilitating the Development of Offshore Wind Energy*, 60 MARINE POLLUTION BULL. 493, 494–99 (2010); Frulla et al., *supra* note 5, at 323–24.

[7] Amardeep Dhanju & Jeremy Firestone, *Access System Framework for Regulating Offshore Wind Power in State Waters*, 37 COASTAL MGMT. 441, 461–70 (2009); Jay, *supra* note 6, at 494.

[8] *See generally* Robert Griffin, *Auction Designs for Allocating Wind Energy Leases on the U.S. Outer Continental Shelf*, 56 ENERGY POL'Y 603 (2013); Brian Snyder & Mark J. Kaiser, *Offshore Wind Power in the U.S.: Regulatory Issues and Models for Regulation*, 37 ENERGY POL'Y 4442, 4452 (2009).

[9] Griffin, *supra* note 8, at 605–07; *see generally* MARC SCHWARTZ ET AL., NAT'L RENEWABLE ENERGY LAB, U.S. DEP'T OF ENERGY, NREL/TP-500-45889, ASSESSMENT OF OFFSHORE WIND ENERGY RESOURCES FOR THE UNITED STATES 1, 56–104 (2010).

financing, these barriers have to date prevented the emergence of the American offshore wind industry.

If state and federal governments wish to encourage the expansion of renewable energy, particularly offshore wind, they must improve the regulatory review process. Specifically, they must develop structured mechanisms to select sites for offshore wind development, streamline the manner in which these sites are leased and developed, and make the approval and review process less burdensome on project developers. They must also offer firm and long-term political support for the industry's development. We believe that all these things can be accomplished without shortchanging the relevant stakeholders who have serious worries about the potential negative impacts of proposed offshore wind projects. Fortunately, both state and federal governments have begun to take steps to accomplish these ends. In this paper, we evaluate these efforts and consider whether they are well suited to address the serious barriers confronting American offshore wind.

Below, we provide a status report on offshore wind in the United States. We identify the obstacles that efforts to develop offshore wind projects have encountered to date, and we describe the policies and programs that state and federal governments have put into place to address these obstacles. We begin with a brief overview of where offshore wind currently stands, examining both proposed projects and the economic and political context of the technology. Next, we provide case studies of three states that offer particularly salient lessons on the impact of regulatory and political regimes on the prospects for development. We then catalog a range of reforms and assistance that governments have put in place to encourage offshore development. Throughout, we discuss the role that government has played in the planning process, and how it can act to reduce the costs of contentiousness in the American offshore wind industry.

II. AMERICAN OFFSHORE WIND IN CONTEXT

A. Progress to Date

Offshore wind energy is an untapped resource in the United States. The National Renewable Energy Laboratory ("NREL") estimates that America's offshore wind energy potential exceeds 4,000 gigawatts ("GW") nearly four times the total capacity of the nation's electric

power system.[10] The Atlantic coast accounts for over 1,300 GW of this potential.[11] The U.S. Department of Energy has established installation targets of 10 GW installed by 2020 at a market price of $0.10/kWh and 54 GW installed by 2030 at a price of $0.07/kWh.[12]

In the past decade, terrestrial wind energy has made a major contribution to the American renewable energy sector. From 2000–2013, over 58 GW of wind energy capacity was added to the domestic electric grid.[13] This amounts to eighty-two percent of renewable energy capacity built in that time period, and fourteen percent of all added energy capacity.[14] Despite the strong growth of the United State's wind sector, all commercial American wind energy projects have, thus far, been located onshore.[15]

Globally, the story is different. Europe boasts seventy-four offshore projects as of the end of 2014, the first of which was developed in Denmark in 1991.[16] Of the 129 GW of installed wind energy in Europe, 8 GW are located offshore.[17] The national leaders in offshore wind development are the United Kingdom (4,494 MW) and Denmark (1,271 MW).[18] Over the last five years, China has also become a player in the offshore wind sector, having developed 390 MW of capacity.[19] Japan is now attempting to enter the market as well.[20]

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10 U.S. NAT'L RENEWABLE ENERGY LAB., DEP'T OF ENERGY, DOE/NETL-2012/1536, ROLE OF ALTERNATIVE ENERGY SOURCES: WIND TECHNOLOGY ASSESSMENT 7 (2012).

11 These figures refer to the technical potential of America's offshore winds, not to the amount of capacity that would realistically be installed in any realistic scenario. They are intended only to provide a sense of the scale of the opportunity. SCHWARTZ ET AL., *supra* note 9, 3–4.

12 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, at iii (2011).

13 U.S. ENERGY INFO. ADMIN., 2013 FORM-EIA 860—SCHEDULE 3, 'GENERATOR DATA' (OPERABLE UNITS ONLY), ELECTRICITY GENERATOR DATABASE (2013), *available at* http://www.eia.gov/electricity/data/eia860/xls/eia8602013.zip.

14 *Id.*

15 As of this writing, the United States' only installed offshore wind project is a 20 KW demonstration turbine built by a consortium led by the University of Maine. Gene Russo, *Renewable Energy: Wind Energy Tests the Waters*, 513 NATURE 478, 478 (2014).

16 *See* EUR. WIND ENERGY ASS'N, THE EUROPEAN OFFSHORE WIND INDUSTRY: KEY TRENDS AND STATISTICS 2014, at 10 (2015) [hereinafter KEY TRENDS]; EUR. WIND ENERGY ASS'N, WIND IN POWER; 2014 EUROPEAN STATISTICS (2015) [hereinafter WIND IN POWER].

17 WIND IN POWER, *supra* note 16, at 3.

18 Wu Qi, *Analysis: China Unable to Achieve 5GW Offshore Wind Goal by 2015*, WIND POWER MONTHLY, June 21, 2013; KEY TRENDS, *supra* note 16, at 10; WIND IN POWER, *supra* note 16.

19 Qi, *supra* note 18.

20 Hiroko Tabuchi, *To Expand Offshore Power, Japan Builds Floating Windmills*, N.Y. TIMES, Oct. 24, 2013.

The United States has lagged behind in the development of offshore wind projects, though it has not been for lack of interest. As shown in Table 1, there have been multiple attempts up and down the Atlantic coast to develop offshore wind projects. Some states—most notably Massachusetts and Rhode Island—are close to completing projects, while others have barely begun.

Table 1. Progress Made Towards Developing an Offshore Wind Project by Atlantic States[21]

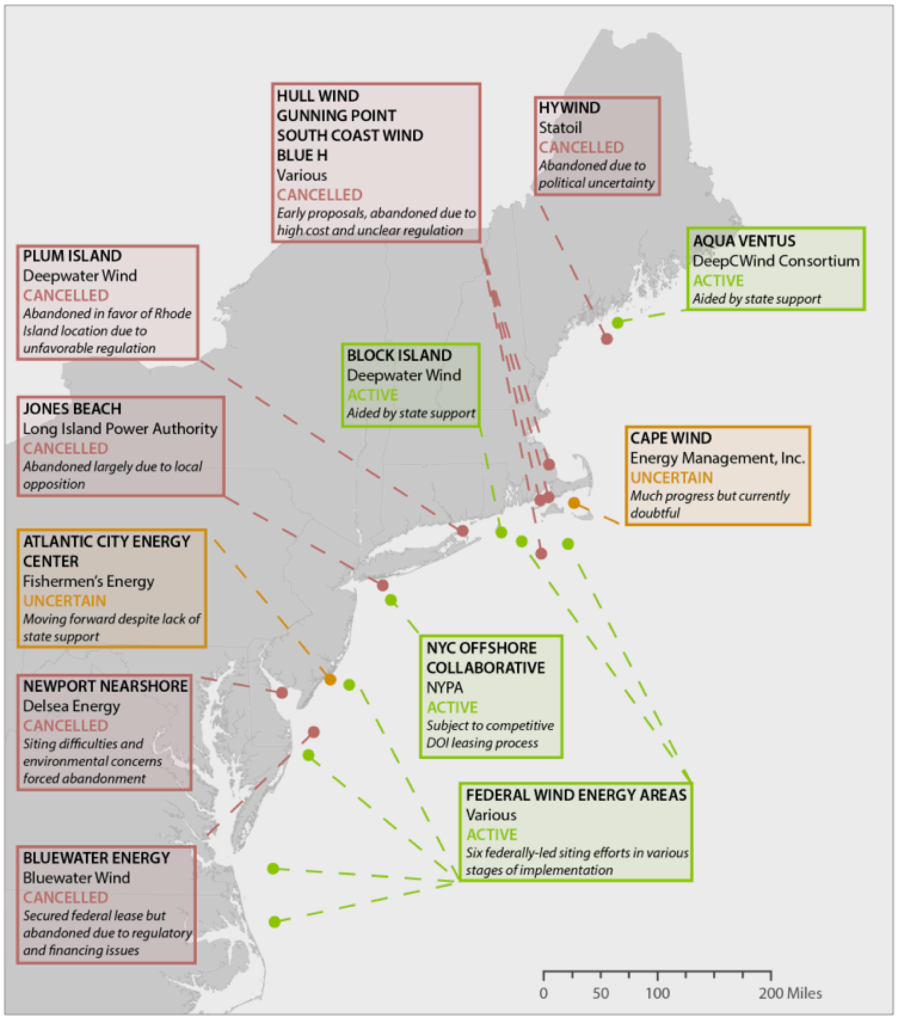
State	Project Proposed	Power Purchase Agreement Secured	Site Secured	Project Near Development	Completed Project
ME	X	X	X	X	
NH					
MA	X	X	X	X	
RI	X	X	X	X	
CT					
NY	X				
NJ	X		X		
DE	X	X	X	X	
MD	X		X		
VA	X		X		
NC	X				
SC					
GA	X				
FL					

A closer look at the list of proposed projects reveals the range of barriers that have confronted developers. Some projects have been blocked by local opponents. Others have fallen victim to state-level politics and regulatory confusion. Still others have simply been too expensive. Figure 1 shows the location of some of the more notable

[21] Table formed as a synthesis of state-by-state project data made available by the U.S. Bureau of Ocean Energy Management ("BOEM"). *State Activities*, BOEM.GOV, http://www.boem.gov/Renewable-Energy-State-Activities/ (last visited Apr. 19, 2015).

projects that have been proposed for development in the waters off of the United States' Atlantic coast.

Figure 1. Locations of Notable Past and Present Proposed Wind Energy Projects[22]



22 Information collected principally from: *State Activities*, BOEM.GOV, http://www.boem.gov/Renewable-Energy-State-Activities/ (last visited Apr. 19, 2015). Supplemented by additional information from *Wind Farms*, BUZZARDS BAY NATIONAL ESTUARY PROGRAM, http://buzzardsbay.org/windfarms.htm (last visited Apr. 19, 2015) and *North American Offshore Wind Project Information*, OFFSHOREWIND.NET http://offshorewind.net/ (last visited Apr. 19, 2015).

Despite this widespread interest on the part of developers to establish a domestic offshore wind energy sector, to date no projects have been completed at the commercial scale. As we will show, this lack of progress can be attributed to the interaction of economics, politics, policy, and regulation.

B. Policy and Economic Context

While the federal government has offered some direct financial support to large, renewable energy projects in the form of tax credits, arguably the most effective pro-renewable economic policy tools in the United States have been state-level Renewable Portfolio Standards ("RPS").[23] Eleven of the fourteen states on the Atlantic coast have enacted some form of RPS. As shown in Table 2, most states in the Northeast and Mid-Atlantic have set mandatory targets and allow regional purchasing.

In the most recent year in which data are available for each state, only half of Atlantic states with mandatory RPS policies saw their utilities fully satisfy their renewable energy requirements. Utilities in the northeast particularly—from New Hampshire to New York—have not been able to keep pace with their RPS targets.[24] As these targets continue to climb, as states final RPS deadlines approach, utilities will need to scale up their renewable production and purchasing programs. Given the current state of East Coast renewable energy generation, this is an area of potential concern. Of the fourteen Atlantic states, only Maine currently generates over ten percent of its power from non-hydro renewables, and besides Maine, no Atlantic state has generated more than three percent of its energy from wind power.[25] This means that in order to meet future RPS requirements, states will need to either aggressively expand local in-state renewable energy generation, or else rely on purchasing from out-of-state sources.

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[23] WARREN LEON, CLEAN ENERGY STATES ALLIANCE, THE STATE OF STATE RENEWABLE PORTFOLIO STANDARDS (2013). RPS legislation requires that utilities in a given state produce a certain percentage of their marketable electricity from renewable sources by a specified date (e.g. 20% of all electricity produced in 2020). Depending on the legislative language and the market structure of the electricity industry, a utility can comply by producing renewable energy on its own or by purchasing Renewable Energy Certificates ("RECs") from other producers. Some states require that all RPS-compliant generation come from within a state's geographic boundaries. Others allow utilities to purchase energy either regionally or nationally. No Atlantic states, however, allow a national REC market. U.S. NAT'L RENEWABLE ENERGY LAB., DEP'T OF ENERGY, NREL/TP-670-41409, RENEWABLE PORTFOLIO STANDARDS IN THE STATES: BALANCING GOALS AND IMPLEMENTATION STRATEGIES 8 (2007).

[24] *See infra* Table 2.

[25] *See infra* Table 2.

Table 2. Status of Renewable Portfolio Standards Among Atlantic States

State	RPS Type[26]	Project Geographic Eligibility[27]	RPS Target Amount 28	RPS Target Date 29	2013 Renewable Generation[30]		RPS Obligation Met in Latest Reporting Year[31]
					Non-Hydro[32]	Wind	
ME	Mandatory	Regional	40%	2017	35%	7.5%	100%
NH	Mandatory	Regional	24.8%	2025	9%	2.0%	72%
MA	Mandatory	Regional	22.5%[33]	2020	4%	0.62%	74%
RI	Mandatory	Regional	15%	2019	1%	0.04%	93%
CT	Mandatory	Regional	27%	2020	2%	-	90%
NY	Mandatory	State	29%	2015	4%	2.6%	48%
NJ	Mandatory	Regional	20.38%	2020	2%	0.02%	100%
DE	Mandatory	Regional	25%	2026	1%	0.06%	100%
MD	Mandatory	Regional	20%	2022	3%	0.90%	100%
VA	Voluntary	N/A	15%	2025	4%	-	N/A
NC	Mandatory	State	12.5%	2021	2%	-	100%
SC	None				2%	-	
GA	None				3%	-	
FL	None				2%	-	

[26] DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN TECH. CTR., RENEWABLE PORTFOLIO STANDARD POLICIES (2015) [hereinafter RENEWABLE PORTFOLIO STANDARD POLICIES].

[27] LEON, *supra* note 23, at 18–19.

[28] RENEWABLE PORTFOLIO STANDARD POLICIES, *supra* note 26.

[29] *Id.*

[30] *Detailed State Data: Net Generation by State by Type of Producer by Energy Source, 1990–2013*, U.S. ENERGY INFO. ADMIN. (Mar. 2015), http://www.eia.gov/electricity/data/state/.

[31] 2013 data on RPS obligations met not available for all states. 2012 data used for Maine, Massachusetts, Rhode Island, Delaware, and North Carolina. 2011 Data used for Connecticut. LAWRENCE BERKELEY NAT'L LAB., RPS COMPLIANCE SUMMARY DATA (Oct. 2014), *available at* http://emp.lbl.gov/sites/all/files/RPS%20Compliance%20Data_October%202014_0.xlsx.

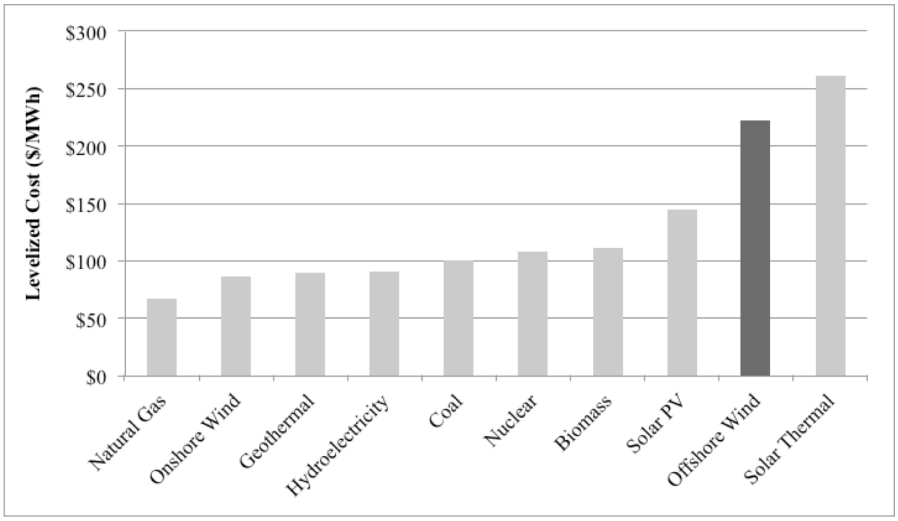
[32] RPS compliance eligibility varies from state to state based on whether large hydroelectric power is eligible, but even in areas where hydroelectricity may be used for RPS compliance, opportunities for additional large-scale hydroelectricity investments are limited.

[33] Massachusetts figure includes both Class I new resources and Class II existing resources.

Given offshore wind's considerable generation potential, it could be a valuable technology in meeting state RPS requirements. Additionally, because most states allow Renewable Energy Certificates ("RECs") to be purchased regionally, if one state is able to bring offshore wind energy to scale before its neighbors, local developers will benefit from their ability to sell credits to utilities in other states.

The financial support for renewable energy projects generated through RPS policies is vital. As shown in Figure 2, the U.S. Energy Information Administration predicts that some renewable energy technologies will be cost-competitive with traditional energy sources in the coming years. Others, including offshore wind, are projected to remain well above competitive prices for the foreseeable future due to reasons including increased engineering challenges, higher operation and management costs, and high technical and regulatory uncertainty.[34]

Figure 2. Projected Levelized $/MWh of New Energy Projects in 2018 by Fuel Type[35]



For at least the next several years, offshore wind projects will be heavily dependent on policy support to be cost-competitive, and state-level RPS policies will likely continue to be the major policy tool that encourages renewable energy development. From the perspective of

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[34] U.S. NAT'L RENEWABLE ENERGY LAB., DEP'T OF ENERGY, DOE/NETL-2012/1536, ROLE OF ALTERNATIVE ENERGY SOURCES: WIND TECHNOLOGY ASSESSMENT (2012).

[35] U.S. ENERGY INFO. ADMIN., LEVELIZED COST OF NEW GENERATION RESOURCES IN THE 2013 ANNUAL ENERGY OUTLOOK 2013, at 4 (2013).

Atlantic states that have adopted RPS policies, a strong offshore wind industry would offer a new pathway to meet their renewable generation requirements.

The combination of politics, economics, and technological development creates a number of barriers for offshore wind projects, all of which contribute to the projected high costs of the technology. For an American offshore wind energy industry to be cost-competitive without strong government subsidies, a number of improvements are necessary. One of these necessary steps, and the one on which we focus below, is the mitigation of contentiousness in the offshore planning process.

C. Overview of Offshore Wind Jurisdiction and Regulation

Jurisdiction over coastal waters in the United States is split between state and federal governments. Up to three miles offshore, coastal leasing powers belong to the relevant state.[36] Beyond this threshold, the federal government has leasing authority, though states retain oversight of transmission infrastructure located both in state waters and on land that must be built to connect projects to the existing electric grid.[37] As will be discussed below, states have also been assertive to varying degrees in engaging with and influencing federal land use decisions beyond three miles offshore. These factors combine to produce a fragmented landscape of jurisdictional control over siting decisions in which the ease of developing an offshore wind project will vary strongly depending on the governments involved. States with well-thought out regulations will offer a more attractive arena for developers than those that have not paid specific attention to offshore wind development. For a cohesive offshore wind energy sector to emerge off of the Atlantic coast, the fourteen east coast states and the federal government must improve and collaborate on policy and regulatory oversight.

These policies and regulations are still evolving, and have done so rapidly in the last decade. The potential of American offshore wind was first seriously discussed in the 1970s, but this potential was never acted on in that era and the early American wind energy industry was restricted to land-based projects. The resurgence of interest in offshore wind in the United States has come only in the last fifteen years.[38] Until

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[36] Burger, *supra* note 4, at 10602.

[37] *Id.* at 10604.

[38] James Manwell et al., *Status of Offshore Wind Energy in the United States*, IEEE POWER & ENERGY 10, 10–11 (July 31, 2001).

quite recently, there were no regulatory procedures in place to deal specifically with proposed offshore wind energy projects.

State and federal governments did not develop regulatory mechanisms for siting and permitting offshore wind until after developers had begun to propose specific projects. This meant that the early proposals faced a large amount of regulatory uncertainty as there were no defined processes for them to follow in securing necessary approvals, and government action came largely in response to the proposals of individual developers.

We assert that this developer-driven approach added substantially to the contentiousness surrounding offshore wind proposals, most famously in the case of Cape Wind, which is discussed in depth below. Opposition from multiple stakeholders, many of whom felt they were not adequately consulted and wished to consider alternatives to the proposed project, caused extensive delays. These delays have amplified the costs of project development. So far, the combination of repeated legal, administrative and political challenges to proposed projects has meant that the domestic offshore wind energy sector has been unable to establish its footing.

Fortunately, both states and the federal government have begun to reform their regulatory practices, perhaps most notably through the U.S. Department of the Interior's Smart From the Start initiative. These reforms have expanded the role of government at the front-end of the siting process with the intention of speeding up permitting, leasing and project review. Governments have also become more explicit about the direct support they will provide to approved projects.

Below, we discuss how the absence of clear and consistent regulation has doomed or delayed a number of offshore wind projects. We then detail a number of recent moves that state and federal governments have made in recent years that may reduce the high cost of contentiousness.

III. THREE CASE STUDIES IN OFFSHORE WIND ENERGY PLANNING

A. Cape Wind—The Consequences of an Ill-Defined Regulatory System

To residents of Massachusetts, controversy over offshore wind projects is nothing new. Cape Wind—proposed in 2001 by Energy Management, Inc.[39]—has been the subject of newspaper headlines for

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[39] *Cape Wind Project Timeline*, CAPE WIND, http://www.capewind.org/when/timeline (last visited Apr. 19, 2015); *The Team*, CAPE WIND, http://capewind.org/team (last visited Apr. 19, 2015).

over a decade and has cast a shadow over the offshore wind sector both regionally and nationally.

For quite some time, Cape Wind—which could meet three-quarters of the annual energy needs of Cape Cod and the surrounding islands[40]—has been well positioned to be the first offshore wind project in the United States. However, despite having received necessary state and federal approvals and repeatedly obtaining favorable court rulings, the future of Cape Wind is still uncertain due to continued litigation from project opponents.[41] We add to this a fragmented and changing system of regulatory oversight that has left the project developer with a high level of uncertainty and has provided multiple legal and regulatory avenues for critics to exploit in their opposition to the project.

Cape Wind is sited in a pocket of federal waters between Cape Cod, Martha's Vineyard, and Nantucket Island[42]—three of New England's premier vacation destinations. The prime location has solicited a strong negative reaction in some local circles. Complaints include concerns about environmental effects such as visual blight and damage to fisheries, negative impacts on tourism, and interference with tribal activity.[43] Several notable residents—including Senator Ted Kennedy, his nephew and environmental activist Robert Kennedy Jr., and Walter Cronkite[44]—have also objected to the site, claiming that it would spoil the area's natural beauty. Project supporters have dismissed this opposition as a minority view held by a number of wealthy individuals living in proximity to the proposed site.[45] On the other hand, Cape Wind

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40 *Cape Wind Frequently Asked Questions Basics*, CAPE WIND, http://capewind.org/faqs/cape-wind-basics (last visited Apr. 19, 2015). Ehren Grossens & Christopher Martin, *Cape Wind Offshore Farm Sees Lawsuits Cleared by Year-End*, BLOOMBERG (Oct. 22, 2013), http://www.bloomberg.com/news/articles/2013-10-22/cape-wind-offshore-farm-sees-lawsuits-cleared-by-year-end.

41 *Save Our Sound: The Alliance to Protect Nantucket Sound*, SAVE OUR SOUND, http://www.saveoursound.org/ (last visited Apr. 19, 2015); Grossens & Martin, *supra* note 40.

42 *Cape Wind*, BOEM.GOV, http://www.boem.gov/Renewable-Energy-Program/Studies/Cape-Wind.aspx (last visited Apr. 19, 2015).

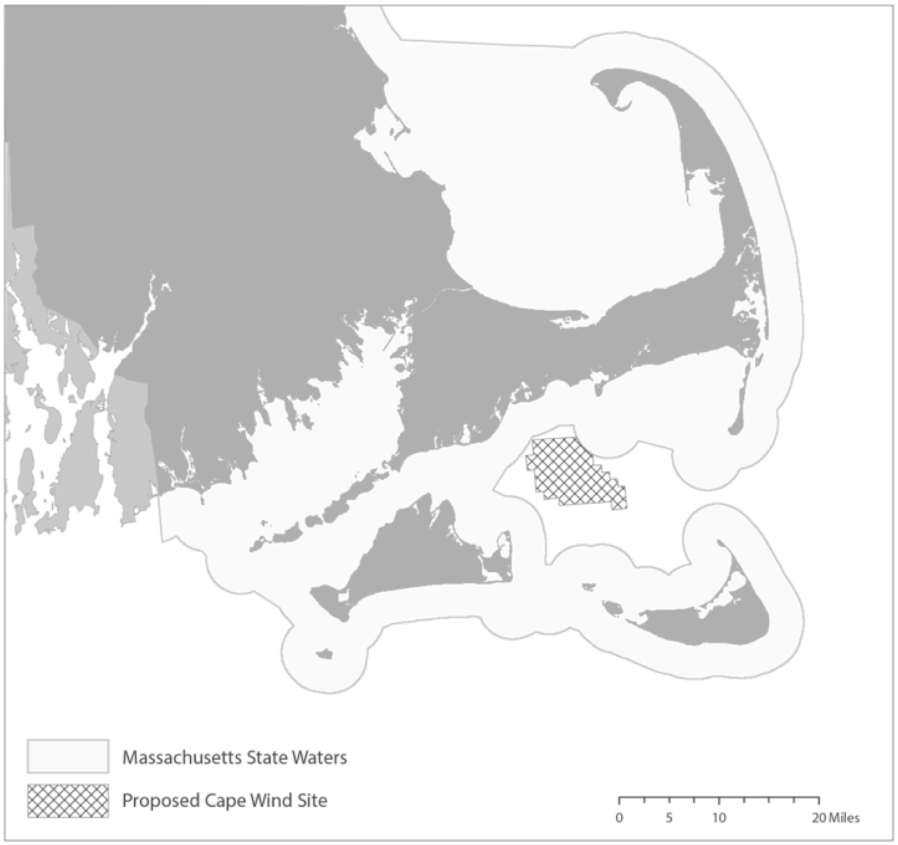
43 *Save Our Sound*, *supra* note 41.

44 Jay Fitzgerald, *Ted Kennedy Hits Cape Wind OK*, BOSTON HERALD, Jan. 17, 2009; John Leaning, *Cronkite Spins Ad for Foes of Wind Farm*, CAPE COD TIMES, Jan. 30, 2003, http://www.capecodtimes.com/article/20030130/NEWS01/301309987/0/SEARCH. Though in later years Cronkite became a supporter of the project. Mark Alan Lovewell, *Cronkite Withdraws Ad Against Turbines*, VINEYARD GAZETTES, Aug. 28, 2003, http://vineyardgazette.com/news/2003/08/29/cronkite-withdraws-ad-against-turbines?k=vg550f0ead5375b&r=1.

45 Katherine Seelye, *Koch Brother Wages 12-Year Fight Over Wind Farm*, N.Y. TIMES, Oct. 23, 2013, http://www.nytimes.com/2013/10/23/us/koch-brother-wages-12-year-fight-over-wind-farm.html?pagewanted=all&_r=0; *Cape Wind Responds to Misleading Newspaper Ad*, CAPE WIND, May 23, 2013, http://www.capewind.org/article/2013/05/23/1118-cape-wind-responds-misleading-newspaper-ad.

has enjoyed the strong and consistent support of the governor of Massachusetts, Deval Patrick.[46]

Figure 3. Location of the Proposed Cape Wind Project[47]



Part of the reason that opponents have been so effective in delaying the construction of the Cape Wind project is the lack of consistency that the federal regulatory review system has offered. For example, when the project was first proposed, there was no federal regulatory process for leasing offshore lands for wind energy projects. Energy Management Inc., along with other early potential developers, first applied for project approval to the U.S. Army Corps of Engineers ("USACE"), which has

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[46] Jim O'Sullivan, *Two Utilities Opt out of Cape Wind*, BOSTON GLOBE, Jan. 07, 2015, http://www.bostonglobe.com/metro/2015/01/06/major-setback-for-cape-wind-project/kggnYeAXRj03PyfIUn2iIM/story.html.

[47] *Cape Wind*, *supra* note 42.

general authority over the construction of new structures in offshore waters.[48]

Recognizing the possibilities for offshore renewable energy development, the 2005 Energy Policy Act authorized the Department of the Interior ("DOI") to create a process to lease federal offshore lands for wind energy and other emerging energy projects.[49] This process was akin to the way that offshore oil and gas leases were already being treated. Currently, DOI manages this authority through the Bureau of Ocean Energy Management ("BOEM").[50]

While the creation of a new federal process to deal specifically with offshore energy projects was certainly a positive step for government regulation, it did put Cape Wind and other early projects in a difficult position. As a guinea pig for offshore wind leasing and permitting, Energy Management Inc. was forced to abandon the progress it had made towards securing permits and approvals through the USACE and repeat much of the work with DOI.[51]

Beyond dealing with the changing of the federal guard, Cape Wind has also had to negotiate a complicated array of overlapping federal, state, and regional jurisdictions. While Energy Management, Inc. has enjoyed consistent state-level support from the Massachusetts government, it initially had difficulty receiving approval for an on-shore transmission connection from the Cape Cod Commission, the regional planning agency, and it was only able to move forward after obtaining a controversial "super-permit" from the Massachusetts State Energy Facilities Siting Board which overruled the objections of the commission and provided all necessary state and local approvals.[52] Cape Wind has also obtained multiple other necessary permissions from state and federal agencies, many over bitter opposition. One particularly dramatic challenge came from two area Wampanoag tribes, which objected that the proposed project interfered with the tribes' cultural

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[48] *Id.*

[49] 43 U.S.C. § 1337(p) (2012); *Regulatory Framework and Guidelines*, BOEM.GOV, http://www.boem.gov/Regulatory-Development-Policy-and-Guidelines/ (last visited Apr. 19, 2015).

[50] *Renewable Energy*, BOEM.GOV, http://www.boem.gov/Renewable-Energy/ (last visited Apr. 19, 2015). Initially, DOI designated the Minerals Management Service ("MMS") as the agency in charge of wind energy leasing. However, following the 2010 Deepwater Horizon oil spill in the Gulf of Mexico, DOI reorganized the way that offshore energy projects are regulated and separated powers across multiple new agencies, one of which was BOEM.

[51] *Cape Wind*, *supra* note 42.

[52] Patrick Cassidy, *Key Wind Farm Permits Approved*, CAPE CODE TIMES, May 22, 2009, http://www.capecodtimes.com/article/20090522/News/90522009.

practices and would violate their historic burial grounds.[53] The tribes attempted to have Nantucket Sound registered in the National Register of Historic Places, which would block the development of the project.[54] This controversy culminated in a high-profile announcement from former DOI Secretary Ken Salazar that the Obama Administration would support the Cape Wind project despite the Wampanoag's concerns.[55]

While the large number of approvals required from different agencies and levels of government would present a difficulty for Cape Wind in their own right, local opponents have proven effective at using this complex structure to cause costly delays in the project's development. With each approval that Energy Management, Inc. obtained, project opponents were afforded a fresh opportunity to contest the project. Project supporters decried the frequency with which opponents issued legal challenges as a "stall tactic."[56] One federal judge, in dismissing a 2014 appeal, wrote, "There comes a point at which the right to litigate can become a vexatious abuse of the democratic process. For that reason, I have dealt with this matter as expeditiously as possible".[57] Cape Wind's developers estimate that they have spent over seventy million dollars fighting regulatory and legal battles associated with the project.[58]

Despite these challenges, Cape Wind continued to progress towards beginning construction, and by 2014, the project seemed on the verge of being the first American commercial offshore wind project into the water.[59] Developers had received, at great cost and expense, all the regulatory approvals needed to begin construction and had overcome numerous legal challenges with courts consistently ruling in their

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53 Abby Goodnough, *For Cape Cod Wind Farm, New Hurdle Is Spiritual*, N.Y. TIMES, Jan. 4, 2010, http://www.nytimes.com/2010/01/05/science/earth/05wind.html.

54 *Id.*

55 Goodnough, *supra* note 53; U.S. Dep't of the Interior, *Secretary Salazar Announces Approval of Cape Wind Energy Project on Outer Continental Shelf Off Massachusetts* (Apr. 28, 2010), *available at* http://www.doi.gov/news/doinews/Secretary-Salazar-Announces-Approval-of-Cape-Wind-Energy-Project-on-Outer-Continental-Shelf-off-Massachusetts.cfm.

56 *Conservation Law Foundation Statement on Supreme Judicial Court Proceeding Regarding Cape Wind*, CONSERVATION L. FOUND., http://www.clf.org/newsroom/conservation-law-foundation-statement-on-supreme-judicial-court-proceeding-regarding-cape-wind/ (last visited Apr. 19, 2015).

57 Elisa Wood, *Judge Has Harsh Words for Cape Wind Foes*, RENEWABLE ENERGY WORLD (May 7, 2014), http://www.renewableenergyworld.com/rea/news/article/2014/05/judge-has-harsh-words-for-cape-wind-foes.

58 Seelye, *supra* note 45.

59 *Cape Wind*, *supra* note 42.

favor.[60] Project opponents' hopes of blocking the project relied on two final federal legal appeals.[61]

Perhaps more importantly, the project was on track financially. As the power that Cape Wind produced would be substantially more expensive than that of other power plants, its financial success depended on government policy support, which it received at both the state and federal levels. At the State of Massachusetts' direction in its 2008 Green Communities Act, Cape Wind signed Power Purchase Agreements with National Grid and NSTAR, the state's two largest electric utilities, requiring the utility companies to purchase 77.5% of Cape Wind's output at an above-market rate.[62] Cape Wind also qualified for a thirty percent federal Investment Tax Credit, which it secured by placing a manufacturing order for its turbines in December 2013, signaling the formal start of the project and ensuring that it would qualify for the tax credits that were set to expire at the end of that year.[63]

However, Cape Wind's rosy outlook did not last and just one year later the project's fortunes had reversed, and its future was in jeopardy. Delayed by the project's numerous legal battles,[64] developers had failed to meet a financial deadline at the end of 2014 spelled out in its contracts to sell electricity to the state's utilities.[65] As a result, in January 2015, the two utilities with which Cape Wind had signed a Power Purchase Agreement claimed that Cape Wind had violated the terms of its contract and terminated their agreements.[66] Without the PPA, which was structured to allow Cape Wind to sell its power at an above-market price, it is very unlikely that the project will be financially

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[60] By Cape Wind's developer's tally, the project had faced opposition in thirty-two separate court cases and administrative hearings. Twenty-six cases of these were decided in the project's favor, five were withdrawn by opponents, and one was decided in opponent's favor but made moot by subsequent decision. *Litigation History of Cape Wind*, CAPE WIND, http://www.capewind.org/sites/default/files/downloads/Litigation%20History%20of%20Cape%20Wind%20May%202%202014.pdf (last visited Apr. 19, 2015)

[61] Grossens & Martin, *supra* note 40; Jon Chesto, *DOJ Urges Court to Expedite Review of Cape Wind Appeals*, BOSTON BUS. J. (Apr. 19, 2013), http://m.bizjournals.com/boston/print-edition/2013/04/19/doj-urges-court-to-expedite-review-of.html.

[62] Eileen McNamara, *What Really Toppled Cape Wind's Plans for Nantucket Sound*, BOSTON GLOBE, Jan. 30, 2015, http://www.bostonglobe.com/magazine/2015/01/30/what-really-toppled-cape-wind-plans-for-nantucket-sound/mGJnw0PbCdfzZHtITxq1aN/story.html.

[63] Grossens & Martin, *supra* note 40; Chesto, *supra* note 61; Jay Fitzgerald, *Cape Wind Signs Agreement for Turbines*, BOSTON GLOBE, Dec. 23, 2013, http://www.bloomberg.com/news/articles/2013-10-22/cape-wind-offshore-farm-sees-lawsuits-cleared-by-year-end.

[64] *Litigation History of Cape Wind*, *supra* note 60.

[65] David Abel, *Cape Wind's Future Called into Question*, BOSTON GLOBE, Jan. 8, 2015, http://www.bostonglobe.com/metro/2015/01/08/legal-wrangling-horizon-for-cape-wind-after-major-utilities-pull-out/kIEXaT5x4lkfUplijpdtsL/story.html.

[66] O'Sullivan, *supra* note 46.

viable. As of February 2015, many observers expect that this final obstacle will ultimately keep the project from ever being built.[67]

Table 3 summarizes some of the major events that have played out in the saga of Cape Wind at the state and federal levels.

Table 3. Timeline of Cape Wind Approval Process[68]

2001	Energy Management, Inc. files initial permit applications for the Cape Wind project
2002	USACE provides a permit for meteorological testing
2004	USACE and the MA Energy Facilities Siting Board jointly release a favorable draft federal Environmental Impact Study / state Environmental Impact Report
2005	Massachusetts modifies the coastal area that it claims as state waters, Cape Wind adjusts location of proposed project to remain in federal waters
	Energy Policy Act transfers federal oversight from USACE to DOI
2007	MA State Energy Facilities Siting Board finalizes Environmental Impact Review
	Cape Cod Commission rejects Cape Wind's plan to construct a buried transmission line to shore
2008	DOI releases favorable draft Environmental Impact Study
2009	DOI finalizes Environmental Impact Study
	MA State Energy Facilities Siting Board grants Cape Wind a "super-permit," overruling the Cape Cod Commission's objections to the transmission line and providing necessary state, regional, and local approvals
2010	MA Supreme Court affirms the Energy Facility Siting Board's authority to overrule the Cape Cod Commission
	DOI Secretary Ken Salazar announces federal support for project, overruling concerns about infringements on tribal practices and lands
	DOI finalizes ruling of no significant project impacts
	DOI grants Cape Wind the first commercial lease for an offshore wind energy project
	Cape Wind negotiates a Power Purchase Agreement with National Grid

[67] *Id.*; Editorial, *Offshore Wind Can Still Rise Despite Cape Wind's Fall*, BOSTON GLOBE, Jan. 17, 2015, http://www.bostonglobe.com/opinion/editorials/2015/01/16/offshore-wind-can-still-rise-despite-cape-wind-fall/uncplLrJ0F8pThmYathBtO/story.html.

[68] *Cape Wind Project Timeline*, *supra* note 39.

	for 50% of project output
2011	DOI approves Cape Wind's Construction and Operations Plan
	National Grid Power Purchase Agreement survives legal challenge from project opponents in MA Supreme Court
2012	Cape Wind reaches Power Purchase Agreement with NSTAR for 27.5% of project output
	DOI approves Avian and Bat Monitoring Plan
	FAA provides notice of no hazard to aviation
2013	Cape Wind places manufacturing order for turbines, meeting end-of-year deadline to begin construction to qualify for tax benefits.
2015	NSTAR and National Grid terminate PPAs with Cape Wind for delays in meeting contractual financial targets.

For the last fifteen years, the developers behind the Cape Wind project have struggled to move forward with America's first offshore wind project, and have continually been confronted with and forced to overcome regulatory and legal obstacles. It is rare for a project developer to have the financial capacity and will to persevere for this long, and it appears that Energy Management, Inc. has only been able to do so because its CEO, Jim Gordon, has staked much of his personal fortune on the project's success.[69] In the end however, it appears that project opponents may have been able to delay the project long enough to finally force a breaking point—the termination of Cape Wind's utility Power Purchase Agreements.

As the first project to go through a new regulatory process, it is reasonable to expect that the experience of Cape Wind would be more difficult than those of later projects. It also must be noted that the project's delay was caused partially by the formation of a new regulatory process designed specifically to make offshore wind development easier. To that end, Cape Wind's experience of being caught in the middle of a changing regulatory regime will not be the case for other projects. However, it has been a decade since the reassignment of permitting authority to DOI and five years since Secretary Salazar's major policy announcement of the Obama Administration's support of Cape Wind.[70] Simply put, America's

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[69] Seelye, *supra* note 45.

[70] *Cape Wind*, *supra* note 42; *Secretary Salazar Announces Approval of Cape Wind Energy Project on Outer Continental Shelf Off Massachusetts*, U.S. DEP'T INTERIOR (Apr. 28, 2010), *available at* http://www.doi.gov/news/doinews/Secretary-Salazar-Announces-Approval-of-Cape-Wind-Energy-Project-on-Outer-Continental-Shelf-off-Massachusetts.cfm.

offshore wind industry will never reach its potential if this project approval timeline is not dramatically shortened.

Cape Wind's prolonged development process is a cautionary tale that demonstrates the need for a fair, predictable, and efficient manner of structuring offshore wind siting and permitting. Major infrastructure projects such as a large offshore wind development must be thoroughly vetted and undergo a rigorous public approval process to ensure that they are well-sited and are truly in the best interest of the public. However, developers should also have the benefit of a well defined, transparent, and consistent approval process, and they should not be forced to fight the same battle on multiple fronts. The proposed Cape Wind project has operated in the absence of such a process, which has strongly contributed to the project's long wait for approval and, potentially, its ultimate failure.

B. Maine—The Harm of Political Inconsistency

Though it has been the most notorious, Cape Wind has not been the only offshore wind project caught up in a contentious approval process. Maine's experience offers a cautionary tale of a different sort. Halfway through 2013, Maine boasted a clear set of state planning requirements, two viable and federally funded projects under development and an installed and grid-connected prototype of a floating offshore wind turbine.[71] With this progress, the state could be considered a success story for offshore wind oversight. However, a shift in state support for one of the projects led the developer to pull out of the state, and may have shaken the private sector's confidence in the area in the long term.

Taking advantage of grant funding from the U.S. Department of Energy's Wind and Water Power Technologies Office,[72] developers announced two projects in 2012 that proposed to build relatively small demonstration projects that would deploy new floating offshore turbine technology.[73] The first was the Aqua Ventus project proposed by the

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[71] *Maine Project Launches First Grid-Connected Offshore Wind Turbine in the U.S.*, ENERGY.GOV (May 31, 2013, 11:00 AM), http://energy.gov/articles/maine-project-launches-first-grid-connected-offshore-wind-turbine-us.

[72] U.S. DEP'T OF ENERGY, WIND & WATER POWER TECH. OFFICE, OFFSHORE WIND PROJECTS 2006–2012 (2012).

[73] Though not yet ready to be deployed at large scale, floating offshore wind turbines may eventually be able to offer a technological solution to the costs of contentiousness, as they would allow projects to be sited further from shore where visual impacts are minimal and where conflicts with competing commercial and recreational uses can be reduced. Placing turbines farther seaward could also offer operational and economic benefits as wind speeds tend to be stronger farther from shore. U.S. NAT'L RENEWABLE ENERGY LAB., LARGE-SCALE OFFSHORE

DeepCwind Consortium—a coalition of organizations led by the University of Maine—which planned to build a 12 MW, two-turbine installation.[74] The second project was proposed by Statoil, a Norwegian multinational oil and gas corporation with experience developing offshore wind projects in the North Sea.[75] Statoil's project involved four turbines and would also have produced 12 MW of power.[76] As projects using technology targeting eventual deployment at deep water locations, both projects received four million dollars for research, development, and demonstration purposes from the US Department of Energy.[77] The two developers used opposite tactics in choosing a location. The DeepCWind project chose a location in state waters off of Monhegan Island, while Statoil opted for a site further from shore in federal waters and requested a lease from BOEM.[78]

Two key acts of the Maine state legislature played a role in enabling these two projects. The first, passed in 2009, required state agencies to identify up to five pre-approved demonstration sites for innovative offshore wind energy projects.[79] This was augmented by the second, the 2010 Ocean Energy Act, which set statewide targets of 300 MW of installed offshore wind capacity by 2020 and 5,000 MW by 2030.[80] It also spelled out permitting and leasing requirements.[81] As a result of this legislation, three suitable sites for offshore wind testing in state waters were identified off of Monhegan Island, Boon Island, and Damariscove

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WIND POWER IN THE UNITED STATES (2010). Floating turbines are already in use in Europe, where there are two commercial floating wind projects (the first of which was developed by Statoil in 2009 off of Norway) and four experimental projects. EUR. WIND ENERGY ASS'N, DEEP WATER: THE NEXT STEP FOR OFFSHORE WIND ENERGY (2013). In November 2013, Japanese developers began operating a commercial floating turbine off the coast of Fukushima, with plans to expand. Chisaki Watanabe, *Fukushima Floating Offshore Wind Turbine Starts Generating*, BLOOMBERG (Nov. 11, 2013, 12:59 AM), http://www.bloomberg.com/news/articles/2013-11-11/fukushima-floating-offshore-wind-turbine-starts-generating-power. Despite this progress, floating turbines remain a small part of the offshore wind market and there is a great deal of uncertainty as to when the technology will be ready to scale.

74 *Our Projects*, AQUA VENTUS MAINE, http://maineaquaventus.com/index.php/our-projects (last visited Apr. 19, 2015).

75 Potential Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Maine; Request for Interest, 77 Fed. Reg. 47877 (Aug. 10, 2012); STATOIL, http://www.statoil.com/en/Pages/default.aspx (last visited Apr. 19, 2015).

76 Potential Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Maine; Request for Interest, 77 Fed. Reg. 47877 (Aug. 10, 2012).

77 U.S. DEP'T OF ENERGY, WIND AND WATER POWER TECHNOLOGIES OFFICE FUNDING IN THE UNITED STATES: OFFSHORE WIND PROJECTS, FISCAL YEARS 2006–2014 (2014).

78 *Our Projects*, *supra* note 74; *Maine Activities*, BOEM.GOV, http://www.boem.gov/State-Activities-Maine/ (last visited Apr. 19, 2015).

79 2009 Me. Laws 799 (codified at ME. REV. STAT. ANN. tit. 12, § 1868 (2014)).

80 2010 Me. Laws 2000 (codified at ME. REV. STAT. ANN. tit. 35-A, § 3404 (2014)).

81 ME. REV. STAT. ANN. tit. 12, § 1862 (2014).

Island.[82] The selection of these sites resulted from the Maine Department of Conservation's assessment of various locations in terms of wind characteristics, water depth, minimized conflicts with other uses, ease of transmission line construction, and other criteria.[83] One site, located off of Monhegan Island, was designated as an official research center to be managed by the University of Maine consortium.[84] The other sites have been left for private developers to request approval to build in.[85]

Another feature of the Ocean Energy Act was that it directed the Maine Public Utilities Commission ("PUC") to procure up to 25 MW of offshore wind energy through a competitively won power purchase agreement ("PPA").[86] As Statoil was the only project able to respond to the PUC's Request For Proposals at the time, it seemed that Statoil would secure the PPA. Indeed, the PUC approved Statoil's term sheet for a $270/MWh contract in early 2013 after which the two began to negotiate on the details of a PPA.[87]

However, by this point the political winds in Maine had shifted, as the state's pro-wind Democratic Governor John Baldacci was succeeded by Republican Paul LePage, a Tea Party favorite.[88] LePage cited his concerns about the high cost of the potential PPA, and with his support, the Maine state senate passed new legislation that directed the PUC to cease negotiations and reissue an RFP.[89] By this point, Aqua Ventus was prepared to offer competition to Statoil and answered the RFP,[90] raising questions about the future of the Statoil project.[91]

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[82] Richard A. Kessler, *Maine Picks Three Offshore Wind Turbine Test Locations*, RECHARGE NEWS (Dec. 16, 2009), http://www.rechargenews.com/wind/article1283122.ece.

[83] ME. REV. STAT. ANN. tit. 12, § 1868 (2014).

[84] *Our Projects*, *supra* note 74.

[85] Todd Griset, *Monhegan's Maine Waters as Offshore Wind Test Site?* RENEWABLE ENERGY WORLD, Nov. 16, 2010, http://www.renewableenergyworld.com/rea/blog/post/2010/11/monhegans-maine-waters-as-offshore-wind-test-site.

[86] 2009 Me. Laws 2000.

[87] Mark Del Franco, *Statoil Abandons Offshore Wind Pilot Amid Main's Choppy Regulatory Waters*, N. AM. WINDPOWER (Oct. 17, 2013), http://www.nawindpower.com/e107_plugins/content/content.php?content.12166; Tux Turkel, *Pioneering Maine Wind Projects Passes 'Biggest Hurdle'*, PORTLAND PRESS HERALD, Jan. 24, 2013, http://www.pressherald.com/2013/01/24/puc-approves-maine-statoil-wind-turbine-offshore-deepwater/.

[88] Glenn Adams, Associated Press, *Paul LePage Wins Maine Governor's Race with Tea Party Help*, HUFFINGTON POST (Nov. 3, 2010, 12:36 PM), http://www.huffingtonpost.com/2010/11/03/paul-lepage-maine-governor_n_778311.html.

[89] Tux Turkel, *Statoil Leaving Maine for More Certain Climate*, PORTLAND PRESS HERALD, Oct. 15, 2013, http://www.pressherald.com/2013/10/15/statoil_pulling_out_of_maine_/; 2013 Me. Laws 936.

[90] Turkel, *supra* note 89. By 2013 the DeepCWind Consortium's project had progressed substantially, and the consortium had constructed a 20 KW prototype of its floating wind turbine

While it may have been financially prudent for the state to reconsider the Statoil PPA and attempt to secure a more competitive price for power, from the perspective of Statoil the state's action undermined its confidence in Maine as a partner in offshore development. Unwilling to restart negotiations, Statoil suspended operations indefinitely in Maine and has since refocused its energies on a European project off the coast of Scotland.[92] In a letter written July 3, 2013 to the Maine Public Utilities Commission, Statoil Vice President Lars Johannes Nordli wrote:

Statoil is considering several locations for building a pilot park based on the Hywind floating concept, in addition to Maine, and cannot continue to spend its resources on this project without certainty that a contract for the project output will be finalized.[93]

While reopening the PPA solicitation may in the short term produce a lower contract price for Maine ratepayers, in the long term this move could dramatically harm the prospects for future wind projects in Maine.[94] Not only has the political inconsistency with which Maine has approached offshore wind driven an experienced developer away from

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technology—the first grid-connected offshore wind installation in the United States. *USA: First US Floating Offshore Wind Turbine DeepCWind Connected to the Grid in Maine*, WIND POWER INTELLIGENCE (Jun. 5, 2013, 1:58 PM), http://www.windpowerintelligence.com/article/gEj6IKDn5xI/2013/06/05/usa_first_us_floating_offshore_wind_turbine_deepcwind_connec/.

91 Del Franco, *supra* note 87.

92 Paul Danko, *Maine Loses Offshore Wind Chance*, SALON (Oct. 17, 2013), http://www.salon.com/2013/10/17/maine_loses_statoil_offshore_wind_chance_newscre/.

93 Letter from Lars Johannes Nordii, Vice President, Statoil ASA, to Harry Lanphear, Admin. Dir., Me. Pub. Utils. Comm'n (July 3, 2013); Christopher Cousins & Whit Richardson, *Offshore Wind Project Put on Hold After Political Battle Over Energy Bill*, BANGOR DAILY NEWS, July 3, 2013, http://bangordailynews.com/2013/07/03/politics/offshore-wind-project-put-on-hold-after-political-battle-over-energy-bill/.

94 Meanwhile, Maine's remaining proposed offshore wind project, that of the University of Maine-led DeepCWind consortium, has run into its own difficulties. The project has struggled to obtain financing for a commercial version of its prototype. Jay Field, *Report: Maine Losing Ground to Other States in Offshore Wind Power Development*, MPBN NEWS (July 10, 2014), http://news.mpbn.net/post/report-maine-losing-ground-other-states-offshore-wind-power-development; Chris Facchini, *Maine Offshore Wind Project Dealt a Blow in This Round of Federal Grants*, WCSH6 (May 7, 2014, 9:00 AM), http://www.wcsh6.com/story/news/local/2014/05/07/umaine-led-offshore-wind-project-loses-key-grant/8809327/. It has become a target for the state's fishing industry, which has expressed concerns that the undersea cables that bring the project's electricity to shore would interfere with shrimp draggers and other fishing activities. J.W. Oliver, *Bristol Votes Overwhelmingly to Deny UMaine Offshore Wind Project Access to Power Grid in Town*, BANGOR DAILY NEWS, Oct. 8, 2014, http://bangordailynews.com/2014/10/08/news/midcoast/bristol-votes-overwhelmingly-to-deny-umaine-offshore-wind-project-access-to-power-grid-in-town/; Stephen Betts, *Fishing Community Expresses Concerns About Offshore Wind Turbine Proposal*, BANGOR DAILY NEWS, Nov. 12, 2013, http://bangordailynews.com/2013/11/12/news/midcoast/fishing-community-expresses-concerns-about-offshore-wind-turbine-proposal/.

the state, it may also lower the confidence of future investors in the state's willingness to partner on offshore projects and thereby act as a deterrent for additional proposals.[95]

Unlike the case of Cape Wind, where much of the difficulty can be attributed to a fractured and evolving regulatory process that invites conflict, the case of Statoil demonstrates the impact that a different kind of contentiousness—changes in political environment—can have on the offshore wind industry. As an emerging technology, wind energy projects will require strong policy support in the short term from state and federal governments to survive. The story in Maine demonstrates that, when states opt to support offshore projects as a matter of policy, their assistance may only be as durable as the tenure of current political power-holders.

C. Deepwater Wind—A Dark Horse from the Ocean State

While projects in Massachusetts and Maine have struggled due to fragmented regulatory powers and inconsistent political support, another New England state has provided a more positive example of the impact that well-managed regulation can have on offshore wind development.

In April 2008, the state of Rhode Island issued an RFP seeking a developer to pursue an offshore wind project in state waters.[96] The state government had previously conducted a survey of potential sites and—based on the combination of wind levels, sea depths, and competing commercial uses—identified a site within state waters south of Block Island as a potentially advantageous location for offshore wind production.[97]

The RFP was won by Deepwater Wind, a company known for its early efforts to develop offshore sites in the Atlantic under its previous name, Winergy.[98] Since winning the RFP, Deepwater Wind has pursued

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[95] Whit Richardson, *Expert: LePage Intervention in Offshore Wind Deal May Hurt Main's Image in Global Energy Market*, BANGOR DAILY NEWS, Sept. 23, 2013, https://bangordailynews.com/2013/09/23/business/business-consultant-lepage-intervention-in-statoil-deal-could-damage-maines-image-in-global-energy-market/.

[96] RHODE ISLAND DEPARTMENT OF ADMINISTRATION & RHODE ISLAND OFFICE OF ENERGY RESOURCES, RFP # 7067847, RHODE ISLAND ENERGY INDEPENDENCE 1 PROJECT (2008).

[97] APPLIED TECH. MGMT., INC. ET AL., FINAL REPORT RI WINDS PHASE I: WIND ENERGY SITING STUDY, REPORT TO RHODE ISLAND STATE GOVERNMENT (2007) [hereinafter RI WINDS PHASE I], *available at* http://sbe.umaine.edu/avian/Assets/Monitoring%20Network%20PDFs/ReportsPDFs/RIWINDSReport_2007.pdf.

[98] Dhanju & Firestone, *supra* note 7, at 452.

the construction of a five-turbine, 30 MW wind project south of Block Island.[99]

Like Cape Cod and the surrounding islands, Block Island is a popular vacation and recreation destination, albeit on a smaller scale. However, while location was a liability for Cape Wind, for Deepwater Wind the Block Island location was a positive. The town of New Shoreham (which is coterminous with Block Island) is the only Rhode Island town not connected to the mainland electric grid. Instead, the island's electricity is provided by diesel fuel that is shipped from the mainland by boat. This reliance on diesel has made electricity costs on the island both very high and very volatile, approaching 40 cents/kWh as of early 2012,[100] compared to a statewide average of just over 12 cents/kWh.[101] Because the proposed project would include the construction of a transmission line connecting Block Island to both the offshore wind farm and the mainland grid, the town of New Shoreham believes that the Block Island project will reduce its electricity costs by thirty percent.[102]

While Deepwater Wind's Block Island proposal has not been without its share of difficulties,[103] the intensity of the conflict has been nowhere near that of the political firestorm that enveloped Cape Wind. In a public hearing held on Block Island in May 2013, the number of local residents speaking out in favor of the project outnumbered opponents two-to-one, and the New Shoreham city council supported the project by a vote of three to two.[104] As with Cape Wind, courts have consistently ruled against complaints brought by local opponents, and in

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99 *Block Island Wind Farm*, DEEPWATER WIND, http://dwwind.com/block-island/block-island-project-overview (last visited Apr. 19, 2015).

100 TOWN OF NEW SHOREHAM, BLOCK ISLAND ELECTRICITY COSTS, BLOCK ISLAND ENERGY FORUM 2 (2012).

101 U.S. ENERGY INFO. ADMIN., ELECTRIC POWER MONTHLY WITH DATA FOR AUGUST 2013, at 118 (2013).

102 TOWN OF NEW SHOREHAM PLANNING BOARD, NEW SHOREHAM ENERGY PLAN 9 (2012). This advantage is not shared by the Cape Wind project, as the islands of Martha's Vineyard and Nantucket in Massachusetts are already connected to the mainland electric grid via undersea cable.

103 Alex Kuffner, *Judge Denies Intervenor Status to Block Island Wind Farm Opponents*, PROVIDENCE J., Oct. 2, 2013, http://www.providencejournal.com/breaking-news/content/20131003-judge-denies-intervenor-status-to-opponents-of-proposed-wind-farm-off-block-island.ece?template=printart; Shaun Campbell, *Setback for Deepwater Wind's Block Island Project*, WIND POWER OFFSHORE (Aug. 6, 2013), http://www.windpoweroffshore.com/article/1194228/setback-deepwater-winds-block-island-project.

104 Judy Benson, *Block Island Gets First Chance to Weigh in on Wind Turbines*, HARTFORD COURANT, May 10, 2013, http://articles.courant.com/2013-05-10/business/hc-block-island-deepwater-wind-project-20130510_1_wind-turbines-deepwater-wind-small-step.

January 2015 the Rhode Island State Supreme Court threw out the final legal challenge to the pilot project.[105] When asked to discuss Cape Wind's recent difficulty with project financing in the context of Deepwater's own Block Island project, Deepwater CEO Jeff Grybowski stated, "We're well past that stage. We're in construction now. . . . You'll see vessels off the shore of Block Island this summer."[106] Construction is currently slated to begin in the summer of 2015, and the project is scheduled to be operational in the fall of 2016.[107]

Much of the credit for the public support the project has received must go to the state of Rhode Island, which identified a site where offshore wind development would be seen as a positive rather than a negative and provided consistent state support to the project. Deepwater Wind's ability to work with stakeholder groups has also been a contributing factor, as demonstrated by the developer's commitment to avoid construction in early spring, when the endangered Right Whale migrates through the region.[108] Finally, the location of the project in state waters has advantages, as the decidedly pro-development Rhode Island state government has led the permitting process.[109]

Rhode Island has continued both its commitment to proactive site selection and its relationship with Deepwater Wind beyond the Block Island proposal. As will be discussed below, in 2010 the state completed a massive evaluation of coastal waters in state and federal jurisdiction and identified a site suitable for large-scale wind energy development.[110]

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105 Alex Kuffner, *R.I. Supreme Court Will Not Hear Appeal to Deepwater Wind Permit*, PROVIDENCE J., Jan. 16, 2015, http://www.providencejournal.com/news/courts/20150116-r.i.-supreme-court-will-not-hear-appeal-to-deepwater-wind-permit.ece.

106 Karl-Erik Stromsta, *Deepwater on Cape Wind Troubles: 'We're Well Past That Stage'*, RECHARGE NEWS (Jan. 15, 2015), http://www.rechargenews.com/wind/1388850/deepwater-on-cape-wind-troubles-were-well-past-that-stage.

107 Alex Kuffner, *Deepwater Wind Forecasts More Power From Turbines Off Block Island*, PROVIDENCE J., Jan. 14, 2015, http://www.providencejournal.com/article/20150114/News/301149991; Stromsta, *supra* note 106.

108 *Deepwater Wind, Conservation Law Foundation Reach Agreement to Protect Right Whales During Block Island Wind Farm Construction*, CONSERVATION L. FOUND. (Feb. 4, 2013), http://www.clf.org/newsroom/deepwater-wind-conservation-law-foundation-reach-agreement-to-protect-right-whales-during-block-island-wind-farm-construction/.

109 Both BOEM and USACE must still approve Deepwater Wind's plans and environmental documents, particularly as the transmission project will pass through federal waters, but are involved in a smaller capacity than in the Cape Wind project and other proposals in Federal waters.

110 JENNIFER MCCANN, UNIVERSITY OF RHODE ISLAND COASTAL RESOURCES CENTER ET AL., RHODE ISLAND OCEAN SPECIAL AREA MANAGEMENT PLAN: VOLUME 1, at ch. 1 (2010).

Following the site identification process, the state has worked with Deepwater Wind to pursue a lease and develop a project in the area.[111]

For the initial Block Island project, Deepwater Wind has submitted its final state and federal applications for permission to begin construction and has signed contracts with a manufacturer for the construction of its turbines.[112] While the Block Island project was first proposed seven years after Cape Wind, it is now likely that Deepwater Wind's Block Island project will be the first across the finish line, and will become America's first commercial offshore wind power plant.

IV. OVERCOMING THE COSTS OF CONTENTIOUSNESS

The cases of Massachusetts, Maine, and Rhode Island illustrate the impacts that regulatory and political risks can have on the experience (and interest) of potential offshore wind developers. Fragmented decision-making powers and inconsistent political support lead to costly and contentious delays in the implementation process, but there are opportunities for governments to act to mitigate these barriers.

Rhode Island's actions in the case of the Block Island project demonstrate some best practices for the role of government in offshore wind energy development, but it is not alone in its efforts. Up and down the Atlantic coast, state and federal governments have rolled out a wide variety of pro-development regulatory and policy approaches. This trend offers hope for improving the regulatory and permitting process for offshore wind energy projects and for reducing the cost of contentiousness that these projects face. We identify two broad categories that encompass these strategies:

1. *Proactive government-led spatial planning and site selection efforts*. If implemented well, such efforts could mitigate opposition from groups arguing that other sites would be more suitable for development than those proposed.
2. *Tangible support for individual developers*. This refers to direct state support for projects that are intended not to minimize

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111 JOINT DEVELOPMENT AGREEMENT BETWEEN THE STATE OF RHODE ISLAND AND DEEPWATER WIND RHODE ISLAND, LLC (Jan. 2, 2009).

112 Mark Del Franco, *Deepwater Wind Moves Into 'Execution Mode' for Demo Block Island Wind Project*, N. AM. WINDPOWER (Oct. 24, 2013), http://www.nawindpower.com/naw/e107_plugins/content/content.php?content.12194; Alex Kuffner, *Deepwater Wind Buying Turbines for Block Island Wind Farm From French Supplier*, PROVIDENCE J., Feb. 10, 2014, http://www.providencejournal.com/business/content/20140210-deepwater-wind-to-buy-turbines-for-block-island-wind-farm-from-french-supplier.ece?template=printart.

project opposition, but rather to help developers cover front-end costs.

These reforms have occurred at both the state and federal levels, with the federal government's activities falling primarily in the first category. The approaches that states have taken have varied widely. We display the general strategies deployed by state governments in the Atlantic states in Table 4, and examine these strategies in turn below.

Table 4. Summary of State-Level Activities to Encourage Offshore Wind

State	Governmental Leadership		Tangible Support		
	Spatial Planning	Regional Collaboration	Project Partner-ships	State-Directed PPAs	Revised RPS Rules
ME	X		X	X	
NH					
MA	X	X		X	
RI	X	X	X	X	
CT					
NY	X		X		
NJ			X		X
DE		X		X	X
MD		X			X
VA		X			X
NC					
SC					
GA					
FL					

V. GOVERNMENT LEADERSHIP

A. The Federal Role

Perhaps the most significant government action related to offshore wind in recent years has been the definition of a transparent and comprehensive federal process for overseeing development. At the time when Cape Wind and other early proposed projects were first applying for federal permits, there was a great deal of uncertainty as to how the leasing and approval process would play out because there was no defined regulatory mechanism to deal with offshore wind energy

projects. The clarity that the federal government has offered to the industry in recent years has substantially improved the outlook for offshore wind projects in the United States.

As noted above, federal responsibility for the siting, permitting, and leasing of offshore wind energy projects was originally granted to the Army Corps of Engineers, but was shifted by the 2005 Energy Policy Act to the Department of the Interior and is now managed by DOI's Bureau of Ocean Energy Management ("BOEM").[113] Even after 2005, though, there was considerable confusion over the overlapping authorities of DOI and the Federal Energy Regulatory Commission ("FERC") over the regulation of offshore wind energy projects. In 2009, DOI and FERC reached a Memorandum of Understanding that granted DOI primary regulatory authority,[114] and the same year the Minerals Management Service (BOEM's predecessor) unveiled a comprehensive set of regulations governing the issuance of leases for offshore wind energy production.[115]

The next year, DOI unveiled a new approach to offshore wind siting, leasing, and permitting. Now managed through BOEM and termed "Smart From the Start", the new approach was developed to offer a better way of identifying areas suitable for offshore wind development.[116] Smart From the Start alters the federal government's role. Rather than acting primarily as a referee or judge in a developer-driven permitting process (as in the case of Cape Wind), the new arrangement gives the federal government a more proactive and facilitative function.

As shown in Figure 4, BOEM's competitive leasing process begins with the creation of an intergovernmental working group of state and federal agencies. With input from public comments, this group identifies areas that are suitable—and perhaps more importantly, not suitable—for commercial offshore wind development.[117] BOEM then

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[113] *Cape Wind*, *supra* note 42.

[114] Memorandum of Understanding Between the U.S. Department of the Interior and the Federal Energy Regulatory Commission (Apr. 9, 2009) *available at* http://www.ferc.gov/legal/mou/mou-doi.pdf.

[115] Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,638, 19,638 (Apr. 9, 2009) (codified at 30 C.F.R. pts. 250, 285, 290).

[116] Press Release, U.S. Dep't of the Interior, Salazar Launches 'Smart From the Start' Initiative to Speed Offshore Wind Energy Development Off the Atlantic Coast (Nov. 23, 2010), *available at* http://www.doi.gov/news/pressreleases/Salazar-Launches-Smart-from-the-Start-Initiative-to-Speed-Offshore-Wind-Energy-Development-off-the-Atlantic-Coast.cfm.

[117] Alternatively, developers are also permitted to propose a site by submitting an unsolicited request for an offshore lease. BOEM then establishes whether there is competitive interest in the

solicits an indication of developer interest in quality sites. The working group is responsible for identifying conflicting commercial or recreational priorities as well as sensitive ecological areas and then for designating a Wind Energy Area ("WEA") within which commercial energy generation may occur. This designation is then subject to another round of public comment and government-led environmental review. If no substantial issues are uncovered, BOEM will conduct a competitive leasing auction. The winning bidder has the right to pursue non-competitive development within the Wind Energy Area. This includes submitting a Construction and Operations Plan as well as a project-specific Environmental Impact Assessment. After a final round of public comment, commercial development may begin.

While still involving numerous steps, this approach offers several advantages over a developer-driven regulatory review.[118] First, it clarifies and streamlines the project development cycle without sacrificing opportunities for public input. Second, it locates offshore renewable energy development within the broader context of marine spatial planning. Ideally, this will maximize economic benefits while minimizing social and environmental costs. Third, it aims to reduce the likely level of contentiousness in the development process by:

- Avoiding areas where conflicting uses or environmental concerns are likely to elicit strong opposition;

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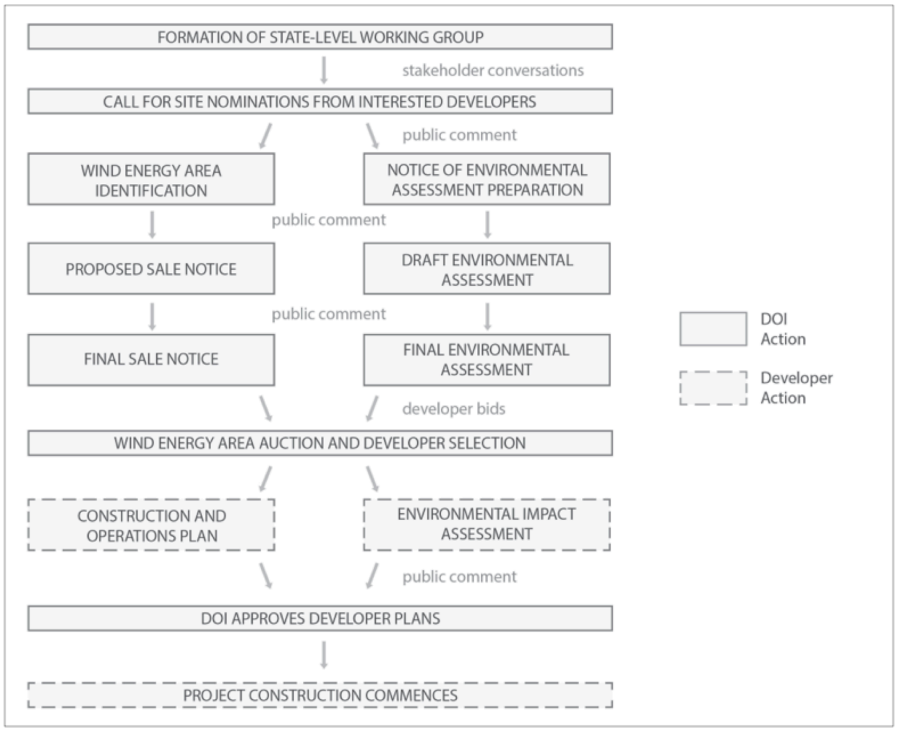
site and, if so, pursues the leasing of the site through the competitive process described here. If there is no competitive interest, the development may non-competitively negotiate a lease with BOEM. Bureau of Ocean Energy Mgmt., *Wind Energy Commercial Leasing Process*, BOEM.GOV, http://www.boem.gov/RE-Commercial-Leasing-Process-Fact-Sheet/ (last visited Apr. 19, 2015).

[118] Under the Obama Administration, DOI's Bureau of Land Management has also made considerable efforts to use comprehensive spatial planning methods for solar projects. Through its Western Solar Plan, BLM conducted a programmatic (as opposed to project-specific) Environmental Impact Study in six western states and identified seventeen viable Solar Energy Zones. U.S. BUREAU OF LAND MGMT. & U.S. DEP'T OF ENERGY, DOE/EIS-0403, FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT (PEIS) FOR SOLAR ENERGY DEVELOPMENT IN SIX SOUTHWESTERN STATES (2012), *available at* http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&pageid=310791. We have cited this elsewhere as an excellent example of government leadership in achieving renewable energy objectives while minimizing unavoidable environmental and social impacts. Radio Interview by Flora Lichtman, Host, NPR Science Friday, with Larry Susskind, Professor, MIT (Oct. 19, 2012). Additionally, in January 2012, President Obama issued Executive Order 13604, which encouraged federal agencies to simplify and collaborate on permitting processes for large infrastructure projects in general. Exec. Order No. 13604, 77 Fed. Reg. 18,887 (Mar. 22, 2012). While this is an encouraging trend, it must be noted that internal agency decisions and executive orders are not permanent, and come with no guarantee of lasting beyond the current administration.

- Bringing opposing voices into the planning process early, and granting them an opportunity to have their concerns recognized when Wind Energy Areas are identified; and
- Increasing developer confidence by providing a transparent and consistent process for leasing offshore lands for wind energy generation.

Figure 4. Steps in BOEM's Competitive Solicitation of Offshore Wind Leases[119]



Smart From the Start is intended to identify and address conflicts of the sort that have plagued Cape Wind while there is still time to react. For example, in the designation of a Wind Energy Area off the coasts of Massachusetts and Rhode Island, BOEM discovered that the proposed site contained high-value fishing grounds that loomed as a potential source of contention. When the final Wind Energy Area was announced,

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[119] Based on: Bureau of Ocean Energy Mgmt., *Wind Energy Commercial Leasing Process*, BOEM.GOV, http://www.boem.gov/RE-Commercial-Leasing-Process-Fact-Sheet/ (last visited Apr. 19, 2015).

BOEM had considered stakeholder concerns and excluded these fishing grounds from the final area for lease.[120]

BOEM has made slow but steady progress in implementing Smart From the Start. It has established state-level working groups in eleven of the fourteen Atlantic states, is working to lease six Wind Energy Areas, and has conducted four leasing auctions. The milestones that have been reached in the six identified Atlantic WEAs are shown in the table below.

Table 5. Status of DOI Offshore Wind Auctions as of February 2014[121]

Milestone	MA WEA	RI / MA WEA	NJ WEA	MD WEA	VA WEA	NC WEA	Regional Mid-Atlantic EA[122]
Request for Interest / Draft Call for Nominations	Dec. 2010	Apr. 2011	N/A	Nov. 2010	N/A	N/A	N/A
Call for Info. and Nominations	Feb. 2012	Aug. 2011	Apr. 2011	Feb. 2012	Feb. 2012	Dec. 2012	N/A
Notice of Intent to Perform an	Feb. 2012	Aug. 2011	Regional EA	Regional EA	Regional EA	Dec. 2012	Feb. 2011

120 Shannon Young, *Mass., RI Wind Area Closer to Development*, BOSTON.COM (July 2, 2012), http://www.boston.com/news/local/massachusetts/articles/2012/07/02/mass_ri_wind_area_review_to_aid_new_projects/; Press Release, U.S. Bureau of Ocean Energy Mgmt., BOEM Identifies Wind Energy Area Offshore Rhode Island and Massachusetts (Feb. 24, 2012), http://www.boem.gov/BOEM-Newsroom/Press-Releases/2012/press02242012.aspx. While the reduction of the joint MA/RI WEA is presented by BOEM as an example of the process at work, others have expressed dismay that these areas—prime scalloping grounds—were included in the initially proposed area at all, noting that local commercial fisheries were not included in the site identification process. David E. Frulla et al., *Found in the Wind: The Value of Early Consultation and Collaboration with Other Ocean Users for Successful Offshore Wind Development*, 17 ROGER WILLIAMS U. L. REV. 307, 320–21 (2012).

121 *State Activities*, BOEM.GOV, http://www.boem.gov/Renewable-Energy-State-Activities/ (last visited Apr. 19, 2015).

122 BOEM opted to conduct a single Environmental Assessment for WEAs in Delaware, New Jersey, Maryland, and Virginia. BUREAU OF OCEAN ENERGY MGMT., DEP'T OF THE INTERIOR, BOEM 2012-03, COMMERCIAL WIND LEASE ISSUANCE AND SITE ASSESSMENT ACTIVITIES ON THE ATLANTIC OUTER CONTINENTAL SHELF OFFSHORE NEW JERSEY, DELAWARE, MARYLAND, AND VIRGINIA: FINAL ENVIRONMENTAL ASSESSMENT (2012).

Envtl. Assessment							
WEA Identificat-ion	May 2012	Feb. 2012	Regional EA	Regional EA	Regional EA	Aug. 2014	N/A
Availability of Draft Envtl. Assessment	Nov. 2012	July 2012	Regional EA	Regional EA	Regional EA	Dec. 2012	July 2011
Proposed Sale Notice	June 2014	Dec. 2012	July 2014	Dec 2013	Dec 2012		N/A
Availability of Final Envtl. Assessment	June 2014	June 2013	Regional EA	Regional EA	Regional EA		Feb. 2012
Final Sale Notice	Nov. 2014	June 2013		July 2014	July 2013		N/A
Auction Held	Jan. 2015	July 2013		Aug. 2014	Sept. 2013		N/A
Lease Executed		Sept. 2013		Dec. 2014	Oct. 2013		N/A

Early auction-based lease sales in Rhode Island, Massachusetts, Virginia, and Maryland have inspired both hope and concern. Results of these early auctions are summarized below in Table 6.

The first auction, held in June 2013 for the right to develop in the joint Rhode Island/Massachusetts Wind Energy Area, was won by Deepwater Wind (also the developer of the nearby Block Island project). The second, held a month later for the Virginia WEA, was won by Dominion Virginia, a major electric utility. Many industry observers do not expect Dominion to seriously pursue development of the site under current market conditions,[123] even though in early 2015 Dominion

[123] Elizabeth Harball, *Offshore Wind: Tricky Political Tides Challenge East Coast Projects*, E&E PUBLISHING (Apr. 29, 2014), http://www.eenews.net/stories/1059998596; Robert McCartney, *Dominion Virginia Power Won't Build Offshore Wind Farm on Tract It Leased Unless Cost Drops*, WASH. POST, Sept. 14, 2013, http://www.washingtonpost.com/local/dominion-virginia-power-wont-build-offshore-wind-farm-on-tract-it-leased-unless-cost-drops/2013/09/14/4b11661e-1cc8-11e3-82ef-a059e54c49d0_story.html.

announced that it would begin the process of developing a pilot project in the area using DOE grant funding.[124]

Table 6. Summary of Early Auction-based Lease Sales in Rhode Island, Massachusetts, Virginia and Maryland[125]

Wind Energy Area	Date of Auction	Acres Auctioned	Average Sale Price per Acre	Number of Bidders	Winning Bidder(s)
RI/MA	July 2013	164,750	$23.30	3	Deepwater Wind
VA	Sept. 2013	112,799	$14.18	2	Dominion Energy
MD	Aug. 2014	79,707	$109.16	4	US Wind, Inc.
MA	Jan. 2015	354,409	$1.26	2	Offshore MW LLC, Res America Developments Inc.

In Maryland, high competition between four interested developers led to a robust auction with a final price per acre over five times what had been seen previously.[126] However, the most recent auction in Massachusetts resulted in a substantially lower winning bid price than previous auctions, leading some observers to conclude that the market for offshore wind has collapsed due to falling oil prices and a general wariness in the industry because of Cape Wind's continued

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[124] Richard Kessler, *Dominion to Seek Virginia Offshore Pilot Project Approval*, RECHARGE NEWS (Jan. 5, 2015), http://www.rechargenews.com/wind/1390894/dominion-to-seek-virginia-offshore-pilot-project-approval.

[125] *Maryland Activities*, BOEM.GOV, http://www.boem.gov/state-activities-maryland/ (last visited Apr. 19, 2015); *Commercial Lease Sale for Wind Energy Offshore Virginia*, BOEM.GOV, http://www.boem.gov/Renewable-Energy-Program/State-Activities/VA/Commercial-Lease-for-Wind-Energy-Offshore-Virginia.aspx (last visited Apr. 19, 2015); *Commercial Wind Leasing Offshore Massachusetts*, BOEM.GOV, http://www.boem.gov/Commercial-Wind-Leasing-Offshore-Massachusetts/ (last visited Apr. 19, 2015); *Commercial Wind Lease for the Wind Energy Area Offshore Rhode Island and Massachusetts*, BOEM.GOV, http://www.boem.gov/Commercial-Wind-Lease-Rhode-Island-and-Massachusetts/ (last visited Apr. 19, 2015).

[126] Bureau of Ocean Energy Mgmt., *Dep't of the Interior, Bids Received for Lease Sale ATLW-3 Offshore Maryland*, BOEM.GOV (Aug. 19, 2014), http://www.boem.gov/MD-Sale-Result-Summary-08192014/; Alan Neuhauser, *Offshore Wind Auction Rakes in Record Bid Amount*, U.S. NEWS (Aug. 21, 2014, 11:30 AM), http://www.usnews.com/news/articles/2014/08/21/offshore-wind-auction-for-parcels-off-maryland-rakes-in-record-bid; *see supra* Table 6 (final price per acre comparison).

difficulties.[127] Others however, including BOEM, note that the bids for this auction were expected to be lower than others due to the remote location of the Massachusetts WEA, the associated higher costs of construction, and the absence of a guaranteed power purchaser for this particular site.[128]

Smart From the Start promises a better means of identifying sites for offshore wind projects, and offers the hope that a formal process for designating appropriate sites will lead to less local resistance and smoother progress for developers. This concept will be put to the test as the winning developers from BOEM's auctions enter the next, developer-led, stages of the regulatory review process. These include submitting a Construction and Operations Plan and an Environmental Impact Assessment and pursuing necessary state-level permits.[129]

The effectiveness of the past decade of stakeholder working groups and careful DOI-led negotiation will be borne out by the reaction that these projects elicit in terms of public comment and litigation in the months and years ahead.

B. The State Role

1. State Planning Efforts

In addition to federal agencies, state governments have also played an important role in providing regulatory leadership in the offshore wind energy sector in recent years, which is crucial in light of the state government's role in approving projects and determining the uses of coastal waters. In addition to their authority over leasing waters up to three miles offshore, states have a powerful voice in determining how offshore areas under both state and federal leasing jurisdictions are used.

Through NOAA's Coastal Zone Management Program ("CZMP"), states are provided the opportunity to develop and submit to the federal government comprehensive plans for the management of offshore areas, which includes the designation of whether and where different uses of

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127 Dan Adams, *Wind Power Auction Draws Limited Interest*, BOSTON GLOBE, Jan. 30, 2015, http://www.bostonglobe.com/business/2015/01/30/wind-power-auction-draws-limited-interest/Kqo0zv1VglRaacz0glTvbJ/story.html.

128 Adams, *supra* note 127; Joyce Rowley, *Four Offshore Wind Projects; Four Different Tracks*, ECORI NEWS (Feb. 1, 2015), http://www.ecori.org/renewable-energy/2015/2/1/four-offshore-wind-projects-four-different-tracks.

129 *See supra* Table 4.

coastal waters (such as energy production) will be permitted.[130] The federal government is also bound by state coastal management plans.[131] After a plan has been submitted, NOAA will oversee a process of "consistency review" where federal decisions in coastal areas are checked for consistency with the planning decisions made by states to ensure that federal actions are in keeping with state policy to the extent practicable.[132] In instances where federal actions are inconsistent with state priorities, states may be granted a rare ability to overrule the decisions of the federal government.[133]

In practice, CZMP provides an important mechanism for states to ensure that their priorities are reflected in decisions made regarding the use of coastal waters, including those made by the federal government. Several states have begun using this mechanism to influence planning for offshore wind projects. Rhode Island has been a leader in this area, though Massachusetts, Maine, and New York have also accommodated offshore wind projects into marine spatial planning processes.

Rhode Island expanded its coastal management programs to include ocean energy production through the Special Area Management Plan ("SAMP") adopted by the state's Coastal Resources Management Council in late 2010.[134] Rhode Island's SAMP is notable for two reasons. First, unlike other state coastal management programs, it explicitly incorporates offshore renewable energy production into marine spatial planning efforts.[135] Second, the area covered by the SAMP extends to federal as well as state waters.[136] The SAMP includes a Renewable Energy Zone in state waters off of Block Island (the location where Deepwater Wind is pursuing its demonstration project) as well as an Area of Mutual Interest in federal waters where Rhode Island and Massachusetts are interested in pursuing a joint wind energy

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130 *About the National Coastal Zone Management Program*, COAST.NOAA.GOV, http://coast.noaa.gov/czm/about/ (last visited Apr. 19, 2015); Coastal Zone Management Act, 16 U.S.C. §§ 1451–65 (2012).

131 16 U.S.C. § 1456 (2012).

132 *Applying Federal Consistency*, COAST.NOAA.GOV, http://coast.noaa.gov/czm/consistency/applying/ (last visited Apr. 19, 2015).

133 16 U.S.C. § 1456 (2012).

134 The process was started in 2008 and was not used to inform the siting of the Block Island wind project (which was identified as a viable site by a separately commissioned study). MCCANN, *supra* note 110, at ch. 1; RI WINDS PHASE I, *supra* note 97. NOAA approved Rhode Island's SAMP in July 2011. Nat'l Oceanic and Atmospheric Admin., U.S. Dep't of Commerce, *NOAA Approves Rhode Island Plan for Offshore Energy Development, Job Creation and Ocean Stewardship*, NOAA (July 22, 2011), http://www.noaanews.noaa.gov/stories2011/20110722_rhodeisland.html.

135 MCCANN, *supra* note 110, at ch. 8.

136 *Id.*

project.[137] Figure 5 shows the location of the two relevant areas off the coast of Rhode Island.

The expansion of state planning authority into federal waters is a significant departure from normal practice under the CZMA.[138] NOAA was receptive to the SAMP and accepted it as part of the CZMA, while Administrator Jane Lubchenko has encouraged other states to follow Rhode Island's lead.[139] Rhode Island's proactive planning has apparently succeeded in guiding federal decision-making, as the area in federal waters that the SAMP identified as suitable for wind energy production was formalized by BOEM as the Rhode Island/Massachusetts Wind Energy Area and leased to Deepwater Wind in a competitive auction in 2013.[140] This provides a powerful example of the influence that a forward-thinking coastal management planning process can have in determining the future of a state's offshore wind industry.

Outside of Rhode Island, Massachusetts, Maine, and New York have also undertaken comprehensive efforts to identify areas suitable for offshore wind development. These efforts have not been as aggressive as Rhode Island's SAMP, insofar as none expand the state's authority under the Coastal Zone Management Act to apply to potential offshore wind projects in federal waters.

Massachusetts's effort began with the 2008 Oceans Act.[141] Until its passage, offshore wind projects in state waters were prohibited under the 1970 Ocean Sanctuaries Act.[142] The Oceans Act directed the state's office of Energy and Environmental Affairs to develop a Massachusetts Ocean Management Plan ("OMP"), which was completed in 2009.[143]

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137 *Id.*; *see infra* p. 244.

138 Nat'l Oceanic and Atmospheric Admin., *supra* note 134.

139 *NOAA Approves Rhode Island Plan for Offshore Energy Development, Job Creation and Ocean Stewardship*, NOAA NEWS (July 22, 2011), http://www.noaanews.noaa.gov/stories2011/20110722_rhodeisland.html.

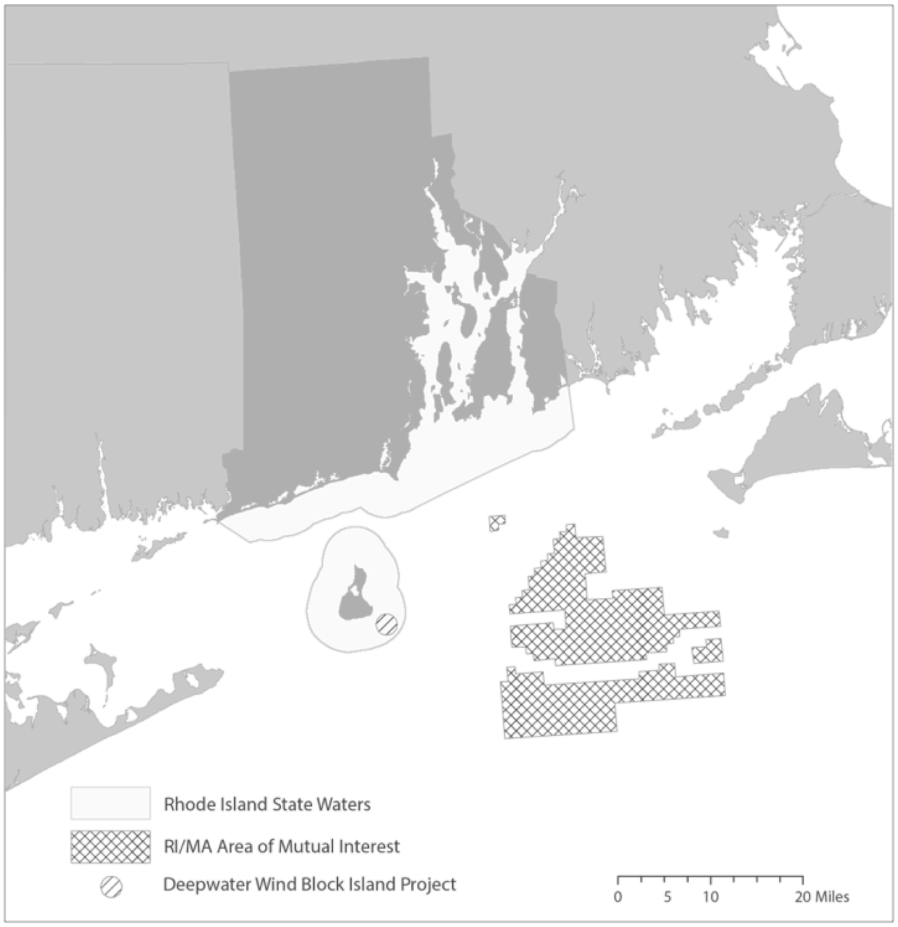
140 *Commercial Wind Lease for the Wind Energy Area Offshore Rhode Island and Massachusetts*, BOEM.GOV, http://www.boem.gov/Commercial-Wind-Lease-Rhode-Island-and-Massachusetts/ (last visited Apr. 19, 2015).

141 MASS. GEN. LAWS ANN. ch. 21A, § 4C (West 2012).

142 1970 MASS. ACTS 397; MASS. GEN. LAWS ANN. ch. 132A, § 13 (West 2012). Two other offshore wind projects were proposed in Massachusetts state waters around the same time as Cape Wind, one by Patriot Renewables and another by Winergy. This regulatory restriction eventually led developers to abandon both projects. It also influenced Energy Management, Inc.'s decision to locate Cape Wind in federal waters, going so far as to modify the proposed area to stay in federal waters when the state expanded its jurisdiction claims in Nantucket Sound in 2005.

143 MASS. OFFICE OF ENERGY & ENVTL. AFFAIRS, MASSACHUSETTS OCEAN MANAGEMENT PLAN (2009).

Figure 5. Location of Proposed Deepwater Wind Projects off of Rhode Island[144]



Unlike the Rhode Island SAMP, the Massachusetts OMP's jurisdiction is restricted to state waters.[145] The plan identifies two small areas, southwest of Martha's Vineyard and the Elizabeth Islands near the three-mile jurisdictional boundary, suitable for offshore wind

144 *Rhode Island Activities*, BOEM.GOV, http://www.boem.gov/State-Activities-Rhode-Island/ (last visited Apr. 19, 2015), *Block Island Wind Farm*, DEEPWATER WIND, http://dwwind.com/block-island/block-island-project-overview (last visited Apr. 19, 2015).

145 MASS. OFFICE OF ENERGY & ENVTL. AFFAIRS, *supra* note 143.

development.[146] To date, neither the state of Massachusetts nor any private developer has proposed wind development in these areas.

In Maine, the incorporation of offshore wind energy into coastal management efforts was based on the aforementioned legislation designating specific sites for offshore wind development.[147] Passed at the urging of the Governor's Ocean Energy Task Force, this legislation directed the state Department of Conservation to identify a number of areas for offshore wind energy demonstration projects.[148] The agency selected three sites, all of which were located in state waters.[149]

Of these three sites, the University of Maine-led DeepCWind consortium has selected the site off of Monhegan Island in which to pursue their Aqua Ventus project.[150] The proposed Statoil site was to be located in federal waters, and specific projects have not yet been proposed for the other two designated sites, off of Boon Island and Damariscove Island. Despite the state of Maine's designation of the Monhegan Island site as an area appropriate for development, the project has nonetheless come under fire from local residents, primarily out of concern for its possible interference with the state's fishing industry.[151] This offers a preliminary but discouraging hint at the effectiveness of future government-led planning efforts to mitigate conflict over site identification.

New York has also pursued coastal zone management efforts regarding offshore wind, but has not progressed as far as other states. In July of 2013 the New York Department of State finalized a two-year study of wind energy potential and competing coastal uses that will

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146 *Id.* (Figure 2-1). The majority of coastal waters are designated as "multi-use" and closed to commercial development by the OMP. *Id.* at 2-3 to 2-4. However, these areas may still host community-scale offshore wind energy projects, which are required to demonstrate community benefits and demonstrate the support of a municipal host community. MASS. OFFICE OF ENERGY & ENVTL. AFFAIRS, MASSACHUSETTS OCEAN MANAGEMENT PLAN (2009). The town of Hull—which had previously developed two onshore wind turbines—briefly considered developing an offshore wind project in state waters but abandoned the idea due to unfavorable project economics. Neal Simpson, *Hull's Offshore Wind Farm Project in Jeopardy*, PATRIOT LEDGER, Nov. 17, 2012, http://www.patriotledger.com/article/20121117/News/311179744.

147 *See supra* pp. 225–226.

148 *Maine's Ocean Energy Task Force and Ocean Energy Demonstration Areas*, NOAA: COASTAL & MARINE SPATIAL PLANNING, http://www.msp.noaa.gov/activities/maine.html.

149 MAINE DEP'T OF CONSERVATION, DESIGNATION OF OFFSHORE WIND ENERGY TEST AREAS (2009).

150 *Our Projects*, *supra* note 74.

151 Stephen Betts, *Fishing Community Expresses Concerns About Offshore Wind Turbine Proposal*, BANGOR DAILY NEWS (Nov. 12, 2013, 9:22 PM), http://bangordailynews.com/2013/11/12/news/midcoast/fishing-community-expresses-concerns-about-offshore-wind-turbine-proposal/.

provide the foundation for the determination of sites appropriate for wind development.[152] This study has not yet led to an official designation of areas that the state deems viable for offshore energy production, though as described below, two state agencies are currently pursuing a project in federal waters near New York City. However, New York appears to be on track to follow in the footsteps of the New England states by using spatial planning efforts to identify areas suitable and unsuitable for offshore wind development.

State-level marine spatial planning provides a useful framework for states to advocate for specific uses (including renewable energy production) of coastal waters. These efforts parallel many important elements of the DOI Smart From the Start process on a smaller, state-specific scale. Several Atlantic states have used their formal authorities under the Coastal Zone Management Act to identify areas that would be suitable (and not suitable) for wind energy development, providing valuable information to developers and potentially avoiding costly opposition that would be otherwise encountered from local stakeholders. Rhode Island has gone one step further by extending its planning efforts into federal waters and successfully influencing the federal leasing process.

2. Increasing Regional Collaboration

Another strategy that state governments are adopting to improve regulatory oversight of offshore wind development is regional collaboration. Political boundaries are not aligned with the limits of either natural systems or electricity grids, and so it is appropriate for governments to collaborate on larger regional approaches to offshore wind energy.

The Atlantic Wind Connection ("AWC"), a proposed mega-transmission project partially sponsored by Google that would loop together offshore wind projects stretching from Virginia to New Jersey, exemplifies the importance of regional collaboration.[153] The AWC would provide significant economies of scale by creating a common transmission resource that would allow multiple developers in the Mid-Atlantic to bring generated electricity to shore.[154] Significant

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[152] N.Y DEP'T OF STATE, NEW YORK DEPARTMENT OF STATE OFFSHORE ATLANTIC OCEAN STUDY (2013).

[153] Martin LaMonica, *Offshore Wind Backbone Project Moves Ahead*, MIT TECH. REV., Jan. 17, 2013, http://www.technologyreview.com/view/510026/offshore-wind-backbone-project-moves-ahead/.

[154] *Id.*

cooperation among four states and the federal government will be required to complete the necessary regulatory reviews.

A pair of inter-state partnerships suggests that governments have begun to work towards regional collaboration in offshore wind energy planning efforts. In both New England and the Mid-Atlantic, states have begun to lay the groundwork for collaborative oversight of offshore projects. The more advanced of these two interstate efforts is a product of a 2010 Memorandum of Understanding between the governors of Massachusetts and Rhode Island which declares an Area of Mutual Interest ("AMI") in federal waters off the two states in an area identified as beneficial for wind energy generation by Rhode Island's SAMP.[155] The states agreed they would pursue the development of an offshore wind site in tandem. According to the agreement, both states must approve any proposed project but Rhode Island will take the lead in proactively encouraging development through its partnership with Deepwater Wind.[156] The states' agreement also contributed to BOEM's designation of the site as a Wind Energy Area and the eventual competitive sale of a lease to Deepwater Wind.[157]

In the Mid-Atlantic, the governors of Delaware, Maryland, and Virginia signed an earlier MOU in 2009 in which they pledged to identify mutually beneficial approaches to transmission planning and interaction with federal agencies.[158] Unlike the Rhode Island-Massachusetts partnership, however, there has been no further action taken on a potential collaboration.

In the cramped confines of the Northeast and Mid-Atlantic United States, some degree of inter-state collaboration on offshore wind development will be necessary to encourage the emerging industry. However, states may be unwilling to share economic, energy, and environmental benefits with their neighbors. Fortunately, early action by east coast states—and particularly the partnership between Rhode Island and Massachusetts—indicates that they may be able to work together in the pursuit of regional projects.

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155 Memorandum of Understanding between State of Rhode Island and the Commonwealth of Massachusetts (July 26, 2010) [hereinafter RI and MA Memorandum] (designating an Area of Mutual Interest and coordinating the development of offshore wind energy).

156 *Id.* at 2–3.

157 Commercial Leasing for Wind Power on the Outer Continental Shelf (OCS) Offshore Rhode Island and Massachusetts—Call for Information and Nominations (Call), 76 Fed. Reg. 51383 (Aug. 18, 2011).

158 Memorandum of Understanding between the States of Delaware and Maryland and the Commonwealth of Virginia Related to Common Interests Associated with Offshore Wind Energy Development (Nov. 9, 2009).

C. Tangible Support for Project Developers

1. State-Developer Partnerships

Many state governments also provide more direct assistance for offshore wind projects. The most significant step that governments have taken has been to establish formal partnerships with individual developers. By conferring legitimacy on a specific project, state sponsorship can simplify the experience of obtaining necessary project approvals.

These partnerships have emerged in two distinct ways. The first way is through a competitive process in which a state selects a preferred developer to pursue an offshore wind project. The second way is for state agencies to act directly as the developer of a project, often in collaboration with a private-sector partner, which may provide benefits to the project as it seeks to obtain the various approvals needed for development.

Rhode Island's relationship with Deepwater Wind—discussed above—is an example of the first type. Here, the state took the initiative of identifying both the Block Island site and a larger area in federal waters that appear to be suitable for offshore wind production, and then solicited bids for a private firm to develop commercial projects in these areas. The state selected Deepwater Wind as its preferred developer, and in 2009 reached a Joint Development Agreement ("JDA") that specified the responsibilities of both parties in pursuing the two projects.[159]

Because of this agreement, the MOU for joint offshore wind development between Rhode Island and Massachusetts specified that Deepwater Wind would be the preferred developer in the Area of Mutual Interest.[160] While the MOU did not guarantee that Deepwater Wind would be able to secure a lease through BOEM's competitive process, BOEM proposed offering a ten percent bid credit to developers that had been chosen by a state to pursue a project and held a JDA. This bonus credit was later raised to twenty percent in response to public comments provided by Rhode Island Governor Lincoln Chafee, among others.[161] Deepwater Wind received this credit when it won the auction.

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159 JOINT DEVELOPMENT AGREEMENT, *supra* note 111.

160 RI and MA Memorandum, *supra* note 155.

161 BUREAU OF OCEAN ENERGY MGMT., DEP'T OF THE INTERIOR, RESPONSE TO COMMENTS AND EXPLANATION OF CHANGES FROM THE RHODE ISLAND AND MASSACHUSETTS PROPOSED SALE NOTICE TO THE FINAL SALE NOTICE 1–2 (Jul. 25, 2013); Letter from Lincoln Chafee, Governor of R.I. to Tommy Beaudreau, Dir., Bureau of Ocean Energy Mgmt. (Jan. 31, 2013) (regarding the Proposed Sale Notice for Rhode Island-Massachusetts Wind Energy Area).

Delaware's government used a similar competitive process to identify a preferred project developer, although its leaders did not initially envision partnering with a wind energy company. In 2006, the Delaware state legislature passed an act intended to stabilize long-term energy prices and increase in-state electrical generation by requiring Delmarva Power—the state's dominant electric utility—to solicit contracts for long-term, in-state power on a competitive basis.[162] Three bidders responded to the RFP. The first was submitted by Delmarva's sister company Conectiv, and contemplated a gas-fired power plant.[163] The second was a proposal by energy giant NRG seeking to build a coal-fired plant.[164] The third was from a largely unknown company, Bluewater Wind, which proposed to meet the state's needs by constructing a large offshore wind plant in federal waters off the coast of Delaware.[165]

The state Public Service Commission was granted the authority to select the winning bid, and—despite a strong negative advertising campaign conducted by both NRG and Delmarva[166]—selected Bluewater Wind in an effort to create a balanced energy portfolio.[167] This came as a shock to many local observers.[168] State support gave Bluewater Wind the leverage it needed to negotiate a Power Purchase Agreement with Delmarva, though it was later forced to abandon its efforts to make the project a reality.[169] Without the aforementioned state

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[162] H.B. 6, 148 Gen. Assemb., Reg. Sess. (Del. 2006).

[163] DEL. PUB. SERV. COMM'N, PSC STAFF REVIEW AND RECOMMENDATIONS ON GENERATION BID PROPOSALS (2007).

[164] *Id.*

[165] *Id.*

[166] Mark Svenvold, *Wind-Power Politics*, N.Y. TIMES, Nov. 12, 2008, http://www.nytimes.com/2008/09/14/magazine/14wind-t.html?pagewanted=all&_r=0; Katherine Ellison, *Gone with the Wind*, SALON (Mar. 28, 2007), http://www.salon.com/2007/03/28/wind_4/.

[167] DEL. PUB. SERV. COMM'N, *supra* note 163.

[168] Svenvold, *supra* note 166.

[169] POWER PURCHASE AGREEMENT BETWEEN DELMARVA POWER & LIGHT COMPANY AND BLUEWATER WIND DELAWARE, LLC (2008). For some time, Bluewater Wind's Delaware project looked likely to be the first completed offshore wind project in the United States and was making progress towards an offshore lease in the same developer-driven regulatory process as Cape Wind. However, Bluewater Wind (which was later purchased by NRG) experienced financing difficulties that it attributed to inconsistencies in federal incentives and suspended the project in 2010. James Quilter, *NRG Halts Bluewater Wind Delaware Offshore Project*, WIND POWER MONTHLY (Dec. 13, 2011), http://www.windpowermonthly.com/article/1108978/nrg-halts-bluewater-wind-delaware-offshore-project. Ironically, shortly thereafter BOEM approved Bluewater Wind's request for an offshore lease, making it the second project (after Cape Wind) to receive such a lease. Press Release, Dep't of the Interior, Interior Announces Commercial Lease for Renewable Energy Offshore Delaware (Oct. 23, 2012), *available at* www.doi.gov/news/pressreleases/Interior-Announces-Commercial-Lease-for-Renewable-Energy-Offshore-Delaware.cfm.

support, it is very unlikely that the Bluewater Wind proposal would ever have been seriously considered in Delaware.

The second form of state-developer partnership—in which the government takes an active role in project development rather than merely appointing a preferred developer—has been deployed in Maine and New York.

While the Statoil project formerly under development in Maine reveals the state's inconsistent political support for offshore wind energy, the rival Aqua Ventus project has benefitted from strong and consistent state backing. Because the University of Maine has been the primary actor in pursuing the project, Aqua Ventus has enjoyed preferred status as the state's official Offshore Wind Energy Research Center and now appears positioned to secure the competitive PPA that was previously being negotiated between the Maine PUC and Statoil.[170]

In New York, state agencies have twice attempted to pursue offshore wind projects in partnership with a private developer. In 2005, the quasi-public Long Island Power Authority ("LIPA") partnered with FPL Energy to propose a 140 MW project off of Jones Beach on Long Island.[171] High costs and stiff resistance from local opponents[172] eventually resulted in the project's cancellation in 2007.

More recently, LIPA, along with the New York Power Authority ("NYPA")—another quasi-public state organization—and local utility ConEdison have proposed a second project near New York City. The 350 MW proposed project, termed the Long Island-New York City Offshore Wind Collaborative, would be located in federal waters.[173] The collaborative submitted an unsolicited request to BOEM for a commercial lease in September 2011.[174]

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[170] Paul Williamson, *With Statoil Gone, Maine Needs to Rally Around Aqua Ventus*, BANGOR DAILY NEWS, Nov. 3, 2013, http://bangordailynews.com/2013/11/03/opinion/with-statoil-gone-maine-needs-to-rally-around-aqua-ventus/; Mario Moretto, *Details Released About UMaine's Politically Charged Offshore Wind Project*, BANGOR DAILY NEWS, Nov. 6, 2013, http://bangordailynews.com/2013/11/06/business/details-released-about-umaines-politically-charged-offshore-wind-project/.

[171] Dep't of Energy, *Long Island Power, FLP Energy Apply to Build an Offshore Wind Plant*, EERE NEWS, May 4, 2005, http://apps1.eere.energy.gov/news/news_detail.cfm/news_id=9027.

[172] *$700M Wind Power Project Scrapped in NYC Area*, ABC NEWS (Aug. 24, 2007), http://abcnews.go.com/Business/story?id=3524530; John Rather, *When NIMBY Extends Offshore*, N.Y. TIMES, Jan. 29, 2006, http://www.nytimes.com/2006/01/29/nyregion/nyregionspecial2/29liwind.html?pagewanted=print.

[173] *Welcome*, LONG ISLAND N.Y. CITY OFFSHORE WIND, http://www.linycoffshorewind.com/ (last visited Apr. 19, 2015).

[174] *New York Activities*, BOEM.GOV, http://www.boem.gov/State-Activities-New-York/ (last visited Apr. 19, 2015). As part of the Smart From the Start process, BOEM will accept unsolicited lease requests but will administer these through the competitive WEA process if there

2. Power Purchase Agreements

A second and somewhat related way that states have provided tangible assistance to offshore wind projects has been by guaranteeing the long-term purchase of the electricity they produce. This can be accomplished with Power Purchase Agreements ("PPAs"), which are fairly common in the electric power industry. Essentially, these are contracts that offer a long-term promise to buy energy at a pre-set price. For both the power generator and the electricity purchaser, PPAs can be a useful hedge against shifting market energy prices.

PPAs can also be used to guarantee an above-market price for projects that are preferable for policy reasons. For offshore wind projects, PPAs have been used to lock in prices that are well above market rates. PPAs negotiated for these projects in New England have guaranteed between 18.7 and 27 cents/kWh for bundled energy, capacity, and renewable energy certificate products.[175] As shown in Figure 6, these prices are far above normal energy costs in the New England market.

To offshore wind developers, PPAs provide stable and certain prices. To state and utility counterparties, higher prices in the present are partially offset by the long-term stability of these prices. Paying these rates, however, imposes higher electricity costs on ratepayers in the short term. As a result, each of these contracts has met with resistance from project opponents and concerned stakeholders.[176] The delicacy of

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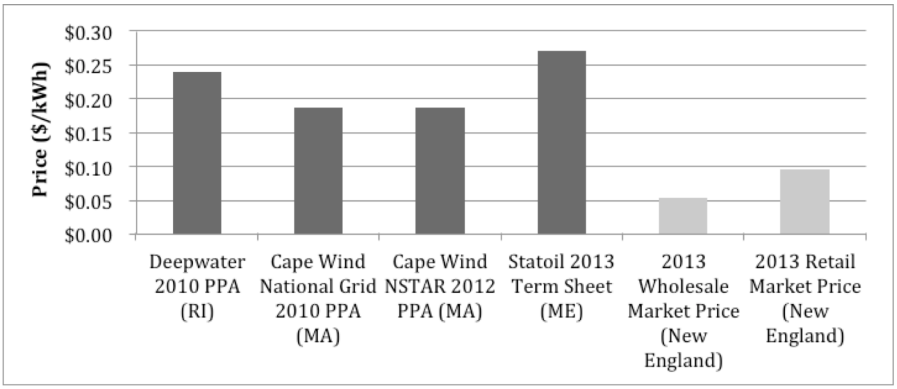
are multiple developers interested in the site. In the case of the proposed New York project, two other developers—including Energy Management, Inc., the developer behind Cape Wind—expressed interest in the area. *Id.* As a result, BOEM has begun the process of leasing the project competitively. *Id.* Next, BOEM will develop a proposed sale notice and call for information. It is unclear what, if any, advantage the LI-NYC Collaborative will have in the competitive leasing process resulting from its close ties to the New York state government.

[175] *See infra* Figure 6. In a wholesale energy market like New England's, energy, capacity, and RECs are three individual products that may be exchanged separately or together. A "bundled" contract includes all three products, and the contract may be structured so that all three are considered in $/MWh terms. For further explanation, see MARK BOLINGER, LAWRENCE BERKELEY NAT'L LAB., U.S. DEP'T OF ENERGY, REVISITING THE LONG-TERM HEDGE VALUE OF WIND POWER IN AN ERA OF LOW NATURAL GAS PRICES 6 (2013).

[176] *Litigation History of Cape Wind*, *supra* note 60; James Quilter, *RI Attorney General Makes Supreme Court Appeal Over Deepwater Wind*, WIND POWER MONTHLY (Aug. 24, 2010), http://www.windpowermonthly.com/article/1023992/ri-attorney-general-makes-supreme-court-appeal-deepwater-wind; Richardson, *supra* note 95. Project proponents counter these objections by noting the relatively small increase in typical monthly residential electric bills as a result of the PPA, which in the case of the Deepwater Wind PPA is less than $2 per household per month. *RI Supreme Court Upholds Block Island Wind Farm Power Contract*, DEEPWATER WIND (July 1, 2011), http://dwwind.com/news/ri-supreme-court-upholds-block-island-wind-farm-power-contract. A 2010 analysis of the regional power markets found that the integration of power from Cape Wind would, in the long run, lower annual energy costs in New England by $185 million per

above-market-rate PPAs reflects the balance that policymakers must strike between providing low-cost energy in the short term and securing financial support for new technologies that will provide carbon benefits in the long term.

Figure 6. Comparison of Offshore Wind PPA Prices to Prevailing Market Price of Renewable Energy[177]



PPAs for offshore wind projects have been signed or term sheets agreed to for the Cape Wind project (separately with National Grid and NSTAR), Deepwater Wind's Block Island project, Bluewater Wind's now-abandoned project in Delaware, and the Statoil project in Maine.

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year. CHARLES RIVER ASSOCS., ANALYSIS OF THE IMPACT OF CAPE WIND ON NEW ENGLAND ENERGY PRICES (2010).

177 POWER PURCHASE AGREEMENT BETWEEN NARRAGANSETT ELECTRIC COMPANY D/B/A NATIONAL GRID AND DEEPWATER WIND BLOCK ISLAND, LLC (2010). POWER PURCHASE AGREEMENT BETWEEN MASSACHUSETTS ELECTRIC COMPANY AND NANTUCKET ELECTRIC COMPANY D/B/A NATIONAL GRID AND CAPE WIND ASSOCIATES, LLC (2010). STATOIL NORTH AMERICA, INC. PROPOSED TERM SHEET (2012). These PPA prices reflect the first-year price of each contract and include the bundled commodities of energy, capacity, and RECs in terms of $/kWh output. A fifth PPA, signed by Bluewater Wind with Delmarva Power in Delaware, is not included in this figure as the contract included separate $/kWh and $/kW prices for energy and capacity, making a direct comparison difficult. Wholesale market prices are the weighted average hourly spot market price for energy in the ISO-New England market. ISO NEW ENGLAND, WHOLESALE LOAD COST REPORT OCTOBER (Nov. 13, 2013). Retail market prices are the weighted average tariffed rates charged by New England utilities, put on a per-kWh basis. *US EIA Form 861, 2012 Electric Power Sales, Revenue, and Energy Efficiency*, U.S. ENERGY INFO. ADMIN. (Dec. 9, 2013), http://www.eia.gov/electricity/data/eia861/. Neither market price is perfectly analogous to the products sold through the PPAs: the wholesale market price does not include capacity or RECs and is adjusted on an hourly basis rather than being a fixed long-term contract, and the retail price reflects the price paid at the end user level and includes bundled transmission and distribution costs. However, providing this comparison lends a sense of scale to the above-market prices that have been established by offshore wind PPAs to date.

These PPAs have been signed mostly as a matter of state policy. In Massachusetts, for example, Cape Wind's PPAs with both National Grid and NSTAR were influenced by the 2008 Green Communities Act.[178] Although Delmarva Utilities was initially opposed to the Bluewater Wind project in Delaware, the company was forced to negotiate a contract by the state's Public Service Commission. In Maine, Central Maine Power was also an unwilling partner to the initial PPA with Statoil, though it was forced by state law to negotiate—a requirement that was reinforced by the Maine Public Utilities Commission.

In Rhode Island, Deepwater Wind's PPA with National Grid was strongly supported by both the governor and the state legislature, although it was rejected by the state Public Utility Commission for reasons of high cost. The governor and legislative leaders quickly passed legislation directing the PUC to consider environmental and other factors in their determination as well, which was adequate to secure PUC approval of the PPA in August 2010.[179]

Wary of increased electricity rates on mainland Rhode Island, several local manufacturers as well as the state Attorney General (which is an elected office in Rhode Island able to act independent of the governor and other policymakers) appealed to the state Supreme Court.[180] After expressing wariness about costs, the Court ruled that the process by which the PUC had responded to state legislation in approving the agreement was lawful, clearing the way for Deepwater Wind and National Grid to sign their PPA.[181]

In cases where states do not use their authority to secure PPA agreements between developers and utilities, offshore wind project financing becomes substantially more difficult. Cape Wind provides proof of this, as the termination of its PPA has been widely interpreted as sounding the project's death knell. The lack of a Massachusetts law requiring a PPA for new offshore wind projects has also been seen as a major reason for the unusually low bids for the Massachusetts Wind

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178 News Release, National Grid and Cape Wind Sign Power Purchase Contract (May 7, 2010), *available at* https://www.nationalgridus.com/aboutus/a3-1_news2.asp?document=5163; Press Release, Mass. Office of Energy & Envtl. Affairs, Department Of Public Utilities Approves NSTAR Contract For Offshore Wind Power (Nov. 26, 2012).

179 Mary Ann Christopher & Tom Mullooly, *Early Offshore Wind PPAs Have Influential Supporters*, N. AM. WINDPOWER, Oct. 25, 2010, *available at* http://www.foley.com/files/Publication/47048032-008a-4299-b518-e84319b8d411/Presentation/PublicationAttachment/326a16cd-1f4d-47c2-ba07-ebb6776cc055/NAW1010.pdf.

180 Quilter, *supra* note 176.

181 *In re* Review of Proposed Town of New Shoreham Project, 25 A.3d 482 (R.I. 2011).

Energy Area, although such a law has recently been proposed in the Massachusetts state legislature.[182]

To date, PPAs for offshore wind have ensured both the guaranteed purchase of power as well as an above-market price. This provides important and tangible support for would-be offshore wind developers. However, the benefits of a PPA come at a political price. Strong and steady state support is required to overcome taxpayer opposition (whether external or, in the case of Rhode Island, from within state government) because initial prices are likely to be higher than electricity produced from conventional fuel sources. However, in consideration of the need to encourage new energy technologies, as well as the more direct advantages of long-term price stability and the reduction of environmental externalities, several states have utilized PPAs for the purposes of encouraging new offshore wind energy projects.

3. Revised RPS Rules

A final way that states are supporting offshore wind projects is through changes in state RPS rules. Under most RPS policies, utilities must demonstrate that they have procured the required amount of renewable energy by obtaining Renewable Energy Certificates ("RECs"). To comply, utilities may produce or purchase power directly from renewable energy sources. Alternatively, utilities may purchase RECs in a secondary market.[183]

In the past five years, both New Jersey and Maryland have enacted special legislation that carve out a portion of the state's RPS

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182 Rowley, *supra* note 128.

183 When a renewable energy generator produces electricity, a REC is created which certifies that the MWh amount of energy has been generated. This REC represents the renewable or environmental qualities of that energy. The generator may then sell the energy that it produces and the REC that represents the environmental qualities of that energy as two separate products, though they may also be bundled into a single transaction. Utilities must track the RECs that they obtain—either by producing renewable energy, by procuring bundled renewable energy contracts, or by purchasing RECs alone—and report them to authorities each year. This creates a regulation-driven market specifically for renewable forms of energy that confers a monetary value onto RECs that is distinct from the value of the electricity that a renewable generator produces. Unbundled power from a renewable generator, for the purposes of compliance with an RPS, is no different than energy produced from nonrenewable sources. Detaching the sale of RECs from the sale of electricity improves market efficiency as it gives utilities more options in the purchasing decisions they make to satisfy customer demand, rather than being forced to purchase the power of a renewable energy generator solely to obtain the RECs. For further information, see GREEN POWER P'SHIP, U.S. ENVTL. PROT. AGENCY, RENEWABLE ENERGY CERTIFICATES (2008), http://www.epa.gov/greenpower/documents/gpp_basics-recs.pdf.

requirement and reserves it for offshore wind resources.[184] These Offshore Wind Renewable Energy Certificates ("ORECs") create a guaranteed market-based revenue stream for qualifying projects, which must be approved by state regulators as eligible for the ORECs.[185] The first developer to attempt to secure status as an OREC project is Fishermen's Energy, which is currently pursuing a small project in state waters off of Atlantic City, New Jersey.[186] Fishermens' Energy has found itself mired in the uncoordinated relationship between the state's Bureau of Public Utilities ("BPU") and the federal government. Concerned about the high cost of the project, BPU has balked at approving its OREC status without the guarantee of federal tax credits and DOE grant funding for which the project is under consideration.[187] Pending approval to participate in the OREC program, however, Fishermen's Energy has been barred from receiving the incentive payments that were intended by the state legislature to support the expensive and risky initial forays into offshore wind.[188] BPU's delay in approving Fisherman's Energy for the project meant that it was forced to make the initial financial commitments needed to qualify for the federal tax credit without knowing if it would ever receive payments through the OREC program. In December 2014, the developer made a gamble of its own in Atlantic City by breaking ground on onshore facilities that would eventually be needed to support the offshore energy center despite its continued financial limbo.[189]

Virginia and Delaware are also tweaking RPS rules to provide an additional incentive for offshore wind. Instead of reserving a set amount

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184 2010 N.J. Laws 898 (codified at N.J. STAT. ANN. § 48:3-87 (West Supp. 2014)); 2013 Md. Laws 18 (codified at MD. CODE ANN, PUB. UTIL. COS. § 7-704.2 (West Supp. 2014).

185 Kimberly Diamond, *New Jersey ORECs to Spur Offshore Wind Development*, N. AM. WINDPOWER (Oct. 14, 2010), *available at* http://www.lowenstein.com/files/Publication/0504c350-9190-4905-82a1-541e5e6a705e/Presentation/PublicationAttachment/e058e8fb-2263-421b8eb6-5c95c058d03c/New%20Jersey%20ORECs%20to%20Spur%20Offshore%20Wind%20Development.pdf.

186 Richard Kessler, *Fishermen's Starts Onshore Work to Qualify for Federal ITC*, RECHARGE, Dec. 29, 2014, http://www.rechargenews.com/wind/1387628/Fishermens-starts-onshore-work-to-qualify-for-federal-ITC.

187 *Id.*

188 Richard Kessler, *BOEM Seeks to Align Interests for NJ Offshore Lease Sale*, RECHARGE, Feb. 27, 2014, http://www.rechargenews.com/wind/1393109/boem-seeks-to-align-interests-for-nj-offshore-lease-sale.

189 John Santore, *Fishermen's Energy Breaks Ground in A.C. on Delayed Wind Project*, PRESS ATLANTIC CITY, Dec. 24, 2014, http://www.pressofatlanticcity.com/news/breaking/fishermen-s-energy-breaks-ground-in-a-c-on-delayed/article_d95edb34-8ac4-11e4-b2e9-6bd5981e1382.html; Andrew George, *BPU Again Rejects Fishermen's Energy Project*, NJBIZ, Nov. 21, 2014, http://www.njbiz.com/article/20141121/NJBIZ01/141129926/BPU-again-rejects-Fishermen%27s-Energy-project.

of capacity for offshore wind, these states allow these projects to claim a bonus multiplier on the renewable energy they produce for compliance purposes. Virginia's voluntary RPS allows offshore wind producers to claim three times the credit of other renewable sources, and Delaware provides a 350 percent multiplier.[190] This means that offshore wind generators can obtain higher payments from utilities for their output.

By adjusting the details of state-level markets for Renewable Energy Certificates, several states have both endorsed wind energy development in their coastal waters and have offered an additional revenue stream for offshore projects.

VI. PROSPECTS FOR AMERICAN OFFSHORE WIND

To date, America's offshore wind energy sector has been restrained in several ways. Beyond simply being a relatively expensive technology in the short term, the prospects for offshore wind are weakened by a presently contentious planning process. Offshore wind projects are a new concept for local stakeholders to adjust to, are in conflict with existing uses of coastal waters, are facing a still-evolving regulatory process, and are subject to dramatic swings in political support. All of these factors add to the cost and difficulty of project development.

In this paper, we provide an overview of the challenges facing the American offshore wind industry, as well as an update on the policy and regulatory strategies being deployed at the state and federal level to encourage offshore wind development. Several of these strategies appear promising, though they also reveal the broad range of government action that is required for the offshore wind industry to be successful. State and federal governments must be proactive in collaborating to designate areas for offshore energy production, and in providing direct support to developers that face high costs and risks. Governments must also be consistent in their political and policy support for offshore projects, and work to streamline a fragmented regulatory framework.

Certain leaders have emerged among Atlantic states in their efforts to address this need for government leadership. Perhaps the most prominent has been Rhode Island, which has been proactive in encouraging offshore wind development on a number of fronts,

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190 N.C. Clean Tech. Ctr., *Virginia Voluntary Renewable Energy Portfolio Goal*, DISREUSA.ORG, http://programs.dsireusa.org/system/program/detail/2528 (last updated Feb. 8, 2015); N.C. Clean Tech. Ctr., *Delaware Renewables Portfolio Standard*, DISREUSA.ORG, http://programs.dsireusa.org/system/program/detail/1231 (last updated Feb. 11, 2015).

including its marine spatial planning efforts, its durable partnership with a preferred developer, and its willingness to collaborate with neighboring states and influence the planning decisions of the federal government.

As of early 2015, the difficulties that have obstructed the emergence of the American offshore wind sector have not gone away. The most recent obstacles encountered by Cape Wind in Massachusetts may finally signal the end of the nation's highest-profile project. However, other projects appear to finally be moving forward, most notably Deepwater's pilot project off of Rhode Island, and the federal Smart From the Start process, which is encouraging the development of even more projects. Projects like these continue to expand across the nation:

- In Maine, the DeepCWind Consortium is celebrating its operational prototype turbine and is working towards developing a full project, though financing difficulties and local opposition have presented difficulties.
- In Massachusetts, the termination of Cape Wind's PPA pose either a significant drawback or a final deathblow to the project. A recent federal auction resulted in two leases in deep water far offshore, though the sites' remote location and the lack of a guaranteed PPA pose substantial complications.
- In Rhode Island, Deepwater Wind is making progress towards beginning construction on its Block Island pilot project this year, and is also moving forward on a larger facility sited in federal waters as the first project to be leased through Smart From the Start.
- In New York, NYPA is overseeing an effort to bring offshore wind energy to the front door of America's largest city, though efforts are only in the preliminary stages.
- In New Jersey, Fishermen's energy has secured the necessary permits for a project in state waters but has met with considerable financing difficulties. Nevertheless, they have moved forward with the construction of onshore support facilities.
- In Maryland, US Wind LLC recently won a very competitive federal auction, and is in the process of developing a construction and operations plan for its site.
- In Virginia, Dominion Energy has also won a federal auction, but has signaled that it does not intend to develop the site under current market conditions.

Even if the United States soon launched its first offshore wind project, it would only be the beginning, not the end, of a long effort.

State and federal governments still have much to do, and much to learn from each other, if they are to enable a domestic offshore wind industry. In reviewing the efforts of the industry to date, one concludes that developers are forced to assume a substantial amount of risk, much of it the result of inconsistent government policy and a lack of full-fledged planning support from state and federal agencies. Governments have adopted a variety of regulatory approaches designed to unlock the enormous energy potential in the United States' Atlantic coastal waters. But the success or failure of the current cohort of proposed projects will be the final measure of the effectiveness of those regulatory approaches, and the key evidence about whether government efforts can mitigate the costs of contentiousness in American offshore wind.