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Comment

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I. INTRODUCTION

The aftermath of the April 2010 explosion of the Deepwater Horizon oil-drilling rig in the Gulf of Mexico has caused the United States to reevaluate its energy production.[1] In the wake of the tragic oil spill, now known to be the worst environmental disaster in the nation's history,[2] a new source of energy has gained momentum; offshore wind

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1. *See* Alexandria Sagge & Tom Doggett, *U.S. Issues New Offshore Oil Drilling Ban*, REUTERS (July 12, 2010, 7:57 PM), http://www.reuters.com/article/idUSTRE65O5TA20100712 ("I am basing my decision [to issue a moratorium on deepwater oil drilling] on evidence that grows every day of the industry's inability in the deepwater to contain a catastrophic blowout, respond to an oil spill and to operate safely." (quoting the Sec'y of the Interior)); *see also* Press Release, Bureau Ocean Energy Mgmt. Reg. & Enforcement, Fact Sheet Regarding Halt on Permits to Drill New Wells (May 17, 2010), http://www.boemre.gov/ooc/pdfs/DOI_pressrelease/FactSheetonOCSOperations.pdf (detailing the conditions and terms of the ban on existing oil well production, new well exploration, and permit applications that followed the Deepwater Horizon explosion).

2. *See* SIMON MAHAN ET AL., OCEANA, UNTAPPED WEALTH: OFFSHORE WIND CAN DELIVER CLEANER, MORE AFFORDABLE ENERGY AND MORE JOBS THAN OFFSHORE OIL 2 (2010), *available at* http://na.oceana.org/sites/default/files/Offshore_Wind_Report.pdf (describing the oil spill as the "worst environmental disaster in U.S. history"); *see also* Eric Lichtblau, *Records Show Concerns About Another BP Rig*, N.Y. TIMES, Dec. 17, 2010, at A26 (discussing Department of Interior documents related to the Deepwater Horizon oil spill that were released to the public, and describing the oil spill as "one of the worst environmental disasters in American history"); *cf.* Margaret Cronin Fisk & Allen Johnson, Jr., *BP Actions Caused Worst U.S. Oil Spill, Lawsuit Says*, BLOOMBERG BUSINESSWEEK (Dec. 15, 2010, 9:53 PM), http://www.businessweek.com/news/2010-12-15/bp-actions-caused-worst-u-s-oil-spill-lawsuit-says.html (terming the Deepwater Horizon incident as merely the "largest offshore oil spill in U.S. history").

technology is taking hold.[3] On October 6, 2010, the U.S. Secretary of the Interior issued the first offshore renewable energy lease in United States history to Cape Wind Associates, signaling the beginning of a new era in domestic electricity production.[4] While this first lease has sparked a race among states to be the first to implement offshore wind technology,[5] the legal framework that enabled the issuance of the lease remains problematic in one key respect: it applies only to federal bottomlands and therefore fails to provide prospective offshore wind farm developers with access to bottomlands under state control.[6] While this may prove to be only a minor speed bump in an otherwise streamlined process for states on the coasts, it leaves states in the Great Lakes region at a severe disadvantage.[7] Because all land within the Great Lakes is controlled by the surrounding states, the leasing process that allows offshore wind development on the coasts does not apply within the Great Lakes, leaving a gray area in the law.[8] While the Great Lakes region is home to enormous wind resources and political drive for renewable energy,[9] the implementation of offshore wind technology in the region will likely be hampered or significantly delayed due to the

3. Willie Drye, *First Offshore Wind Power Project Approved*, NAT'L GEOGRAPHIC NEWS (Apr. 28, 2010), http://news.nationalgeographic.com/news/2010/04/100428-energy-first-offshore-wind-project-approved/ (noting that as of April 2010, there were at least twelve offshore wind farms proposed in the United States). By January 2011, at least twenty offshore wind energy projects were proposed across the United States. OFFSHOREWIND.NET, http://offshorewind.net/ (last visited Jan. 7, 2011).

4. *See generally* U.S. Dep't of Interior, Bureau of Energy Mgmt. Regulation & Enforcement, Commercial Lease of Submerged Lands for Renewable Energy Development on the Outer Continental Shelf, Lease No. OCS-A 0478 (Nov. 1, 2010) [hereinafter Cape Wind Lease], *available at* http://www.boemre.gov/offshore/RenewableEnergy/PDFs/CapeWind_signed_lease.pdf (stating the terms of the lease agreement between Cape Wind Associates, LLC and the Bureau of Energy Management, Regulation and Enforcement ("BOEMRE")).

5. William Pentland, *Turn Baby, Turn—Offshore Wind Power Poised for Major Growth in U.S.*, FORBES (Nov. 8, 2010, 10:24 PM), http://blogs.forbes.com/williampentland/2010/11/08/offshore-wind-power-poised-for-major-growth-in-u-s/ (reporting that at least twenty offshore wind projects were in the planning or permitting stages in November 2010). Jim Suydam, spokesman for the Texas General Land Office, commented, "We're number one on onshore wind and we expect that we'll be first on offshore wind because we're easy to do business with . . . . Well, we're Texas, of course we want to be first. We said we'd be first five years ago and we still think we'll be first . . . ." Andrew Restuccia, *Texas Fighting to Be First on Offshore Wind*, WASH. INDEP. (Oct. 8, 2010, 5:23 PM), http://washingtonindependent.com/100210/texas-fighting-to-be-first-on-offshore-wind.

6. *See infra* Part IV (discussing the law's failure to consider state-controlled lands).

7. *See infra* Part IV.B.3 (discussing the disincentives to development that are associated with litigation).

8. *See infra* Part III.A.1 (describing the inherent geographic limitation in the federal regulatory scheme).

9. *See infra* Part IV (discussing the reasons that states control all land in the Great Lakes and the existing regulatory initiatives that encourage development).

regulatory confusion that remains in the absence of an established permitting process.[10]

In light of this shortcoming in the federal statute, this Comment analyzes the potential for successful implementation of offshore wind farms in the Great Lakes given the current state-level regulatory framework, and proposes that the Great Lakes states join in multi-state action to establish a streamlined permitting process and attract offshore wind development to the region. In order to provide adequate perspective on the matter, Part II provides a broad overview of the state and federal regulatory incentives established to encourage development of renewable energy and examines the legal claims that have operated as disincentives to the implementation of offshore wind technology.[11] Part III then discusses the federal procedures for issuing offshore renewable energy leases, and describes the geographic and regulatory limitations that confine these procedures to the coasts.[12] Next, Part IV uses Illinois as an example to analyze the extent and causes of the regulatory uncertainty that remains at the state level, and specifically in the Great Lakes region, concluding that, when faced with the threat of costly and time-consuming litigation, prospective developers will avoid siting projects in the Great Lakes.[13] Finally, Part V proposes that the states in the Great Lakes region join together in multi-state action to remedy the shortcoming in the federal law by establishing a permitting process applicable to the state-controlled bottomlands in the Great Lakes.[14]

II. BACKGROUND

This Part will provide an overview of the offshore wind energy industry in the United States. It will begin by highlighting the economic, environmental, and human health benefits associated with wind-generated electricity,[15] and will discuss the federal and state incentives for wind power production that have emerged in light of

10. *See generally infra* Part IV (explaining how regulatory uncertainty generates disincentives for offshore wind technology implementation).

11. *See infra* Part II (providing a general overview of the wind energy industry in the United States).

12. *See infra* Part III (examining the BOEMRE regulations issued under the amended Outer Continental Shelf Lands Act ("OCSLA")).

13. *See infra* Part IV (using Illinois as an example to highlight the shortcomings in the current statutory framework in the Great Lakes states).

14. *See infra* Part V (proposing a dual-phase regulatory procedure to enable the Great Lakes states to take full advantage of their offshore wind energy resources).

15. *See infra* Part II.A (describing in detail the advantages of producing electricity using wind power as opposed to traditional electricity sources such as coal, petroleum, and nuclear power).

these benefits.[16] Next, this Part will review the technical and practical advantages of offshore wind turbines, as compared to wind turbines located on land.[17] Finally, this Part will examine the legal claims that several advocacy groups have used to hamper the development of offshore wind power in the United States.[18]

A. Wind Power, Generally

Wind power is touted by many as a panacea, capable of simultaneously curing a range of societal ills including global warming, various human health issues, dependence on foreign fuel imports, high and volatile electricity prices, fossil fuel extraction disasters, and environmental justice concerns.[19] Perhaps the best way to illustrate why wind power has generated such enthusiasm is to explain how wind is used to generate electricity. Wind is essentially a conversion of solar energy that occurs when air, warmed by the sun, rises, and cooler air is drawn in to fill the area of low pressure left behind.[20] When wind encounters a wind turbine, it turns the turbine's propeller blades, which spin a generator, which converts kinetic energy into electricity.[21] Thus,

16. *See infra* Part II.B (examining the federal Production Tax Credit ("PTC") and providing a general overview of Renewable Portfolio Standards ("RPSs"), a popular type of state-level incentive for the production of renewable energy).

17. *See infra* Part II.C (explaining that wind turbines located offshore have the potential to produce significantly more electricity than those located onshore).

18. *See infra* Part II.D (discussing the claims filed against Cape Wind Associates after the organization proposed to build the nation's first offshore wind farm in Nantucket Sound).

19. *See, e.g.*, NAT'L RENEWABLE ENERGY LAB., WIND ENERGY BENEFITS: WIND POWERING AMERICA FACT SHEET SERIES 1–2 (2005) [hereinafter WIND ENERGY BENEFITS], *available at* http://www.nrel.gov/docs/fy05osti/37602.pdf (listing ten benefits of wind power, including increased national security as a result of decreased dependence on foreign fossil fuel imports and reduced risk as a result of less volatile electricity prices); U.S. DEP'T OF ENERGY, 20% WIND ENERGY BY 2030: INCREASING WIND ENERGY'S CONTRIBUTION TO U.S. ELECTRICITY SUPPLY 107–10 (2008) [hereinafter 20% WIND ENERGY BY 2030], *available at* http://www.20percentwind.org/20percent_wind_energy_report_revOct08.pdf (providing a scientific and technical explanation of wind power's ability to reduce carbon emissions and mitigate climate change, reduce air pollutants, improve human health, and conserve water). *But see, e.g.*, Ed Hiserodt, *Wind Power II: The Wind-Farm Eruption*, NEW AM. (Oct. 28, 2010), http://www.thenewamerican.com/index.php/tech-mainmenu-30/energy/4983-wind-power-ii-the-wind-farm-eruption (describing opposition to wind power from environmental groups, citizens, and utility companies, and advocating for increased adoption of nuclear power).

20. Ronald H. Rosenberg, *Making Renewable Energy a Reality—Finding Ways to Site Wind Power Facilities*, 32 WM. & MARY ENVTL. L. & POL'Y REV. 635, 649 (2008); Wind & Water Power Program, *Advantages and Challenges of Wind Energy*, U.S. DEP'T ENERGY, http://www.eere.energy.gov/windandhydro/wind_ad.html (last updated June 16, 2010).

21. Wind & Water Power Program, *How Does a Wind Turbine Work?*, U.S. DEP'T ENERGY, http://www.eere.energy.gov/windandhydro/wind_animation.html (last updated Sept. 14, 2005).

after a wind turbine is installed, free and naturally-occurring wind is the only fuel input required.[22]

The economic, environmental, and human health benefits championed by proponents of wind power are a direct result of wind power's independence from fuel inputs.[23] The economic benefits of wind-generated electricity stem primarily from the increased stability in the price of electricity that is associated with minimal reliance on fuel.[24] Unlike wind-generated electricity, the price of electricity produced using coal, oil, and natural gas is volatile because it is dependent on the price of the relevant fuel input—a price that tends to fluctuate dramatically over time.[25] Price volatility creates uncertainty and concern for consumers, and leads to inefficient long-term resource allocations by electricity producers.[26] Conversely, because wind turbines do not require fuel inputs, wind-generated electricity costs may be estimated over the lifespan of the turbines, allowing long-term price stability.[27]

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22. Rosenberg, *supra* note 20, at 660. Of course, some fuel must be expended in the manufacture and installation of the turbines. 20% WIND ENERGY BY 2030, *supra* note 19, at 108. However, studies have found that the greenhouse gas emissions associated with the manufacture and installation of wind turbines are minimal over the life cycle of the wind turbine. *Id.* For example, substituting wind power for electricity generated by coal reduces carbon dioxide emissions by 99 percent per unit of electricity generated when considered over the lifetime of the wind turbine. *Id.*

23. MAHAN ET AL., *supra* note 2, at 11 ("[W]ind is a fuel that, unlike fossil fuels and nuclear power, is cost free in every sense. There are no costs to drill, mine, transport or dispose of wind. There are no costs to using wind—no smog, no acid rain, no climate change, no ocean acidification. In comparison to the environmental costs of these traditional forms of energy, offshore wind energy is indeed 'free as the wind.'").

24. Because wind turbines require no fuel inputs, the cost of fuel is irrelevant to the cost of wind-produced electricity; therefore, consumer prices for wind-produced electricity tend to remain constant over time. *Id.* Economic benefits may also be associated with diminished need to rely on foreign fuel imports. WIND ENERGY BENEFITS, *supra* note 19, at 1–2.

25. *See* BRUCE HENNING ET AL., AM. GAS FOUND., NATURAL GAS AND ENERGY PRICE VOLATILITY SF-1 (2003), *available at* http://files.harc.edu/Sites/GulfCoastCHP/Publications/NaturalGasEnergyPriceVolatility.pdf ("Over the last five years, price volatility has become the most significant issue facing the natural gas industry and its customers. Natural gas, electricity, crude oil and oil product markets have all exhibited extreme price volatility for some portion of the period. But the volatility of natural gas and electricity prices increased more dramatically than the rest. The increase in price volatility has contributed to a climate of uncertainty for energy companies and investors and a climate of distrust among consumers, regulators, and legislators.").

26. *Id.*; *see also* MARK BOLLINGER ET AL., QUANTIFYING THE VALUE THAT WIND POWER PROVIDES AS A HEDGE AGAINST VOLATILE NATURAL GAS PRICES 2–3 (2002), *available at* http://www.osti.gov/bridge/product.biblio.jsp?osti_id=827949 (blaming a sharp and unexpected spike in natural gas prices for the 2000 California electricity crisis, which forced the state's largest public utility company into bankruptcy, and stating that renewable resources have no comparable fuel price risk).

27. MAHAN ET AL., *supra* note 2, at 11. The lifespan of a wind turbine ranges from twenty to twenty-five years for turbines located on land, while turbines located offshore are designed to last

The environmental benefits associated with independence from fuel inputs are also significant. First, unlike fossil fuel-generated electricity, wind power does not require fuel extraction by mining or drilling, so there are no oil spills, and no mining wastes or disasters.[28] Second, wind power allows conservation of water that might otherwise be used to cool generators burning fossil fuels.[29] Third, unlike nuclear energy, wind power does not require the disposal of hazardous spent fuel,[30] and does not pose the threat of nuclear reactor meltdown.[31] Fourth, wind energy production does not emit greenhouse gases or other pollutants into the air or water.[32] In contrast, fossil fuel-fired power plants emit sulfur oxide and nitrogen oxide, which contribute to acid rain;[33] carbon dioxide, which is thought to contribute to climate change;[34] and particulate matter and heavy metals, which have adverse effects on human health.[35] Because wind-generated electricity does not require

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up to fifty years. Carolyn S. Kaplan, *Congress, the Courts, and the Army Corps: Siting the First Offshore Wind Farm in the United States*, 31 B.C. ENVTL. AFF. L. REV. 177, 191 (2004). Offshore wind turbines last longer because the wind offshore is less turbulent, causing less wear-and-tear on turbine components. *Id.*

28. Rosenberg, *supra* note 20, at 662.

29. 20% WIND ENERGY BY 2030, *supra* note 19, at 108; *see also* Rosenberg, *supra* note 20, at 661 ("[T]hermoelectric power plants use nearly as much freshwater in the United States as does agricultural irrigation.").

30. Dorothy W. Bisbee, *NEPA Review of Offshore Wind Farms: Ensuring Emission Reduction Benefits Outweigh Visual Impacts*, 31 B.C. ENVTL. AFF. L. REV. 349, 350 (2004).

31. MAHAN ET AL., *supra* note 2, at 11.

32. Bisbee, *supra* note 30, at 350; *see also* 20% WIND ENERGY BY 2030, *supra* note 19, at 107–08 (describing the reductions in emissions of carbon dioxide and other pollutants that are associated with implementation of wind power).

33. *What is Acid Rain?*, U.S. ENVTL. PROTECTION AGENCY, http://www.epa.gov/acidrain/what/index.html (last updated June 8, 2007) ("'Acid rain' is a broad term referring to a mixture of wet and dry deposition from the atmosphere containing higher than normal amounts of nitric and sulfuric acids. The precursors, or chemical forerunners, of acid rain formation result from both natural sources, such as volcanoes and decaying vegetation, and man-made sources, primarily emissions of sulfur dioxide and nitrogen oxides resulting from fossil fuel combustion. In the United States, roughly 2/3 of all [sulfur dioxide] and 1/4 of all [nitrogen oxides] come from electric power generation that relies on burning fossil fuels, like coal.").

34. *Climate Change Science*, U.S. ENVTL. PROTECTION AGENCY, http://www.epa.gov/climatechange/science/index.html (last updated Aug. 19, 2010) ("During the past century humans have substantially added to the amount of greenhouse gases in the atmosphere by burning fossil fuels such as coal, natural gas, oil and gasoline to power our cars, factories, utilities and appliances. The added gases—primarily carbon dioxide and methane—are enhancing the natural greenhouse effect, and likely contributing to an increase in global average temperature and related climate changes.").

35. 20% WIND ENERGY BY 2030, *supra* note 19, at 107–08. Toxic heavy metals include arsenic, lead, mercury, and others. Howard Hu, *Human Health and Heavy Metals Exposure*, *in* LIFE SUPPORT: THE ENVIRONMENT AND HUMAN HEALTH 65, 65 (Michael McCally ed., 2002). These metals occur naturally and are essential to life, but are toxic in large amounts. *Id.* For instance, mercury exposure causes harm to the brain, heart, kidneys, lungs, and immune system,

fuel inputs, it avoids the adverse environmental and human health effects that result from production of electricity using traditional sources.[36]

B. Legal Incentives for Wind Power

In light of the substantial economic and environmental benefits described in the preceding subsection, a strong policy drive for alternative energy, and specifically for wind power, has developed at both the state and federal levels,[37] taking the form of regulatory and tax-based incentives designed to spur growth in the renewable energy and energy efficiency sectors.[38] This subsection will examine the federal- and state-level legal incentives for wind power development.

1. Federal Incentives

The Production Tax Credit ("PTC") is the primary federal incentive for renewable energy.[39] The PTC is a tax credit given to producers of

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while lead can cause neurodevelopmental defects in children as well as cardiovascular and reproductive problems. Arsenic has been linked to several types of cancers. *See generally* Lars Jarup, *Hazards of Heavy Metal Contamination*, 68 BRIT. MED. BULL., no. 1, 2003 at 167, 167 (analyzing the results of studies on heavy metals and human health). "Particulate matter is a complex mixture of extremely small particles and liquid droplets," which can enter the lungs, causing respiratory problems such as asthma and bronchitis. *Health and Environment*, U.S. ENVTL. PROTECTION AGENCY, http://www.epa.gov/pm/health.html (last updated Sept. 30, 2010). Heavy metals and particulates are produced in a variety of industrial processes and as byproducts of coal-burning electricity generation. *Arsenic in Drinking Water*, U.S. ENVTL. PROTECTION AGENCY, http://water.epa.gov/lawsregs/rulesregs/sdwa/arsenic/index.cfm (last updated Sept. 7, 2010).

36. MAHAN ET AL., *supra* note 2, at 11. *But see, e.g.*, Simon Clarke, *Balancing Environmental and Cultural Impact Against the Strategic Need for Wind Power*, 15 INT'L J. HERITAGE STUD. 175, 178–84 (2009) (explaining that wind farms can be detrimental because the best sites for wind farms are often culturally and aesthetically important or ecologically fragile, but concluding that such cultural and aesthetic damage must be balanced against the potentially devastating effects of climate change in order to arrive at a workable solution for the impending fossil fuel shortage); Robert G. Osborn et al., *Bird Mortality Associated with Wind Turbines at the Buffalo Ridge Wind Resource Area, Minnesota*, 143 AM. MIDLAND NATURALIST 41, 50 (2002) (concluding that wind farms do not cause more bird deaths than other man-made structures, but arguing that bird habitats and migration patterns should be considered when siting wind farms).

37. *See generally* Ernest E. Smith, *U.S. Legislative Incentives for Wind-Generated Electricity: State and Local Statutes*, 23 J. ENERGY & NAT. RESOURCES L. 173 (2005) (providing an overview of the federal and state financial and regulatory incentives for wind power).

38. *See, e.g.*, 26 U.S.C. § 45 (2010) (providing tax incentives to electricity producers who use a wide range of renewable resources including wind, solar, geothermal, hydrokinetic, and biomass).

39. Marvin C. Bynum II, *Testing the Waters: Assessing Wisconsin's Regulatory Climate for Offshore Wind Projects*, 93 MARQ. L. REV. 1533, 1566 (2010). Over the past several years, both houses of Congress have introduced sweeping renewable energy legislation, but the proposed bills have repeatedly stalled on the floor. *See, e.g.*, American Clean Energy and Security Act of

renewable energy on a per-kilowatt-hour basis over a ten-year period from the date the renewable energy generation facility was placed in service.[40] The PTC is intended to provide support to the renewable energy sector, rendering renewable technologies cost-competitive with fossil fuels and fostering the growth of an "environmentally sustainable energy system."[41]

The PTC is generally considered a success, as it is "partly responsible for spurring thousands of megawatts of land-based wind-generated electricity."[42] However, it has also been the source of a great deal of uncertainty in the wind industry[43] because it has been allowed to expire several times since it was enacted in 1992.[44] A sharp downturn in investment in renewable energy infrastructure has followed each expiration of the PTC,[45] while a boom in investment and installation has

2009, H.R. 2454, 111th Cong. §§ 101(d), 701(b)(2), 724 (2006) (seeking to create a national Renewable Electricity Standard similar to state RPSs, institute a carbon cap-and-trade system, and provide funds for modernizing the electricity grid).

40. 26 U.S.C. § 45(a) (2006). As of May 2010, the PTC was valued at 2.2 cents per kilowatt-hour of energy produced using wind, geothermal, or closed-loop biomass technologies. *Renewable Electricity Production Tax Credit*, DATABASE STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=US13F (last updated May 4, 2010). As an alternative to the PTC, wind project developers who began construction before the end of 2010 could choose to receive an Investment Tax Credit ("ITC") equal to 30 percent of the tax basis in the energy-producing property. 26 U.S.C. § 48(a).

41. H.R. REP. NO. 102-474(II), at 83 (1992).

42. Greg Watson & Fara Courtney, *Nantucket Sound Offshore Wind Stakeholder Process*, 31 B.C. ENVTL. AFF. L. REV. 263, 265 (2004).

43. Kaplan, *supra* note 27, at 183 ("[T]he absence of a stable national policy regarding wind power technology has presented a major challenge to the American wind energy industry, resulting in several boom and bust cycles.").

44. *See* Marilyn A. Brown & Sharon Chandler, *Governing Confusion: How Statutes, Fiscal Policy, and Regulations Impede Clean Energy Technologies*, 19 STAN. L. & POL'Y REV. 472, 486 (2008) ("These tax credits were initially made available for the first ten years of operation for all qualifying plants that entered service from 1992 through mid-1999. The subsidy was later extended to 2001, then to 2003, and again with EPAct 2005 to the end of 2007."). The PTC was originally enacted as part of the Energy Policy Act of 1992 but expired at the end of 2001. Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776. In March 2002, the PTC was extended by the Job Creation and Worker Assistance Act of 2002, Pub. L. No. 107-147, 116 Stat. 21. This extension expired at the end of 2003, and the PTC was not renewed again until October 2004 as part of the Working Families Tax Relief Act of 2004, Pub. L. No. 108-311, 118 Stat. 1166. The PTC was subsequently extended until December 31, 2007 by the Energy Policy Act of 2005 (EPAct), Pub. L. No. 109-58, 119 Stat. 594. In December 2006, the PTC was extended yet again by the Tax Relief and Health Care Act of 2006, Pub. L. No. 109-432, 120 Stat. 2922 (extending the PTC through December 31, 2008).

45. Christopher Riti, *Three Sheets to the Wind: The Renewable Energy Production Tax Credit, Congressional Political Posturing, and an Unsuitable Energy Policy*, 27 PACE ENVTL. L. REV. 783, 795 (2010) (reporting that investment in wind technology and infrastructure has dropped 73 to 93 percent in the years immediately following the expiration of the PTC); *see also* Brown & Chandler, *supra* note 44, at 486 (explaining that expirations of the PTC cause significant decreases in investment even if the PTC is re-extended shortly after its expiration because the

followed each subsequent reenactment.[46] The most recent re-extension of the PTC occurred as part of the American Recovery and Reinvestment Act of 2009, which provides the PTC to all renewable energy generation facilities placed in service before January 1, 2013.[47]

2. State Incentives

At the state level, the primary incentive for wind power development is the Renewable Portfolio Standard ("RPS").[48] More than half of the states have enacted an RPS, which usually requires that a certain percentage of in-state utility companies' electricity sales be produced using renewable sources.[49] The required percentage is then increased over an established timeline.[50] Most states allow utility companies to satisfy their responsibilities under the RPS in one of several ways: producing electricity from a renewable source, buying electricity generated by a third party from renewable sources, or purchasing renewable energy credits.[51] Although the required percentages, acceptable renewable sources, and timelines vary widely from state to

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planning and permitting processes for wind installations can take up to two years).

46. Riti, *supra* note 45, at 793. For example, in 2003, 2005, and 2006, the years immediately following re-enactments of the PTC, installations of wind power production capacity increased 36 percent, 43 percent, and 27 percent, respectively. *Id.*

47. American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, § 1101(a), 123 Stat. 115 Subtitle B, Part I (codified at 26 U.S.C.A. § 45(d)(1) (West 2010)).

48. Kaplan, *supra* note 27, at 187. Some states provide other incentives for renewable energy generation, such as tax credits and exemptions, grants and loans, and green-labeling requirements. *Id.* at 188.

49. Rosenberg, *supra* note 20, at 636 n.8. Despite successes on the state level, a federal RPS has not yet been enacted. A federal RPS was part of the American Clean Energy & Security Act that was passed by the U.S. House of Representatives in June 2010 but was abandoned by the Senate. American Clean Energy & Security Act, H.R. 2454, 111th Cong. (2009). A Senate bill that includes a national RPS was introduced in September 2010. Renewable Electricity Promotion Act of 2010, S. 3818, 111th Cong. (2010). Policy advocates such as the American Wind Energy Association advocate for a national RPS. *Renewable Electricity Standard: Why is a National RES Needed?*, AM. WIND ENERGY ASS'N, http://www.awea.org/documents/Why_RES_is_Needed.pdf (last visited Feb. 20, 2011). Opponents, however, say that the issue should be regulated on a state-by-state basis, as renewable resources differ greatly from state to state, among other reasons. *See, e.g.*, Robert J. Michaels, *National Renewable Portfolio Standard: Smart Policy or Misguided Gesture?*, 29 ENERGY L.J. 79, 84–93 (2008) (analyzing multiple arguments typically advanced in support of implementation of a national RPS, and rejecting each as economically inefficient or otherwise unsupported); Jim Rossi, *The Limits of a National Renewable Portfolio Standard*, 42 CONN. L. REV. 1425, 1431 (2010) (arguing that the uniformity potentially imposed by a federal RPS is illogical in light of the variation in geographical distribution of natural resources among states).

50. Smith, *supra* note 37, at 181.

51. *Id.* at 182. If a utility company produces more electricity from renewable sources than is necessary to meet the RPS requirements, the excess electricity can be converted into renewable energy credits, a commodity that can be sold or traded to another utility company to help satisfy that utility company's obligations under the RPS. *Id.*

state,[52] RPSs are very effective at encouraging renewable electricity production, and have been credited with up to 50 percent of the growth in the American wind power industry.[53] RPSs have been especially effective at encouraging wind power development because wind power is one of the lowest-cost alternatives available to satisfy utility companies' obligations under an RPS.[54]

C. The Case for Offshore Wind Development

Offshore wind technology is an especially attractive option for fulfillment of the requirements imposed by state RPSs[55] because it presents an unparalleled opportunity for capitalization on the economies of scale that are presented by large bodies of water—usually broad, flat, open spaces in immediate proximity to densely populated areas.[56] While offshore locations require greater initial investment than onshore locations due to the specialized equipment and personnel needed to install the turbines and underwater transmission facilities,[57] the increased cost is generally offset over the lifetime of the wind farm.[58]

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52. For example, compare the RPS programs in effect in California, Colorado, and New Jersey. California's RPS requires that utility companies increase their procurement of renewably-sourced energy at least 1 percent each year, and produce at least 20 percent of their electricity from renewable sources including biomass, tidal, photovoltaics, and wind by the end of 2010. CAL. PUB. RES. CODE §§ 25740–25751 (West 2010). Colorado's RPS requires that large investor-owned utility companies produce 20 percent of their electricity from renewable sources, while smaller utility companies are required to produce only 10 percent from renewable sources by 2020. COLO. REV. STAT. § 40-2-124 (2010). However, renewably-sourced electricity produced within Colorado is subject to a multiplier ranging from 1.25 to 3. *Id.* Additionally, at least 4 percent of the renewably-sourced energy in Colorado must be generated by solar technology. *Id.* New Jersey's RPS requires that by 2021, 17.88 percent of electricity sold within the state be produced using anaerobic digesters, biomass, geothermal, tidal, wave, and wind, while 2.5 percent must be produced using hydroelectric technology and 2.12 percent from solar. N.J. ADMIN. CODE § 14:8-2.1 to -2.12 (2010); *see also Renewable & Alternative Energy Standards*, PEW CENTER ON GLOBAL CLIMATE CHANGE, http://www.pewclimate.org/what_s_being_done/in_the_states/rps.cfm (last updated Feb. 11, 2011) (comparing each of the state RPSs in graphical form).

53. Rosenberg, *supra* note 20, at 636 n.8 (citing Ryan H. Wiser, Lawrence Berkeley Nat'l Lab., State Policy Update: A Review of Effective Wind Power Incentives 5, 24 (June 15, 2007) (presentation to the Midwestern Wind Policy Institute)).

54. Kaplan, *supra* note 27, at 190.

55. *See supra* Part II.B.2 (describing the framework of state RPSs).

56. Bisbee, *supra* note 30, at 350.

57. Bynum, *supra* note 39, at 1552.

58. The capital costs involved in installation and operation of an offshore wind farm are typically between 30 to 70 percent higher than the costs of a land-based wind farm. ARI REEVES, RENEWABLE ENERGY POLICY PROJECT, WIND ENERGY FOR ELECTRIC POWER 14 (2003). However, these increased capital costs can be amortized over the lifetime of the offshore turbine, which is typically twice as long as the lifetime of a land-based turbine because of reduced wind turbulence at sea. Rosenberg, *supra* note 20, at 653 n.91. Additionally, experts expect that costs

Because bodies of water are large, flat, open spaces, wind passing over bodies of water is often significantly stronger, more consistent, and less turbulent than wind over land, resulting in longer turbine lifetimes, higher energy outputs, and significantly higher revenue potential.[59] As a result, the power output of a wind turbine located offshore will be approximately 50 percent greater than the output of an identical wind turbine placed onshore.[60]

In comparison to onshore wind farms, offshore wind farms have a second advantage: they can be located in closer proximity to major population centers than onshore wind farms.[61] Onshore wind farms are generally located in remote areas for two reasons: remote areas usually have high wind resource potential,[62] and, in more populated areas, onshore wind farms must compete for space with traditional and existing land uses such as homes and other buildings.[63] When wind farms are constructed in remote areas, the energy produced must be transmitted to populated areas where it can be used by consumers, but transmission facilities are extraordinarily expensive to install and inefficient to use.[64] In contrast to land-based wind farms, wind energy

associated with offshore wind farms will fall as the industry matures. Brian Snyder & Mark J. Kaiser, *Ecological and Economic Cost-Benefit Analysis of Offshore Wind Energy*, 34 RENEWABLE ENERGY 1567, 1574 (2009).

59. *See* REEVES, *supra* note 58, at 14 (analyzing the economics of offshore wind); Snyder & Kaiser, *supra* note 58, at 1569 (explaining that the constancy of wind speed over water allows offshore wind turbines to operate at full capacity for a larger percentage of time, and therefore provide a more reliable source of power to the grid). The reduced turbulence over bodies of water, as compared to over land, results in minimized wind shear. Snyder & Kaiser, *supra* note 58, at 1569. Due to reduced wind shear, turbines installed offshore typically have operational lifetimes of up to fifty years, while onshore wind turbines generally last for a maximum of only twenty-five years. REEVES, *supra* note 58 at 14; *see also* Rosenberg, *supra* note 20, at 653 ("The higher offshore construction costs may be offset by higher and more consistent wind speeds which can produce more electricity at a significantly lower cost.").

60. *See* Margaret Bryant, *Wind Energy in Texas: An Argument for Developing Offshore Wind Farms*, 4 ENVTL. & ENERGY L. & POL'Y J. 127, 132 (2009) (recommending that Texas provide incentives for offshore wind development in the Gulf of Mexico in order to increase production in the heavily-populated eastern half of the state and avoid installation of expensive transmission from land-based wind farms in the sparsely-populated western half).

61. *Id.*

62. *See* Bynum, *supra* note 39, at 1549 (discussing the potential benefits associated with the implementation of offshore wind technology in the Great Lakes Basin, with emphasis on Wisconsin).

63. *Id.* at 1552; *see also* Muscarello v. Ogle Cnty. Bd. of Comm'rs, 610 F.3d 416, 420–21 (7th Cir. 2010) (asserting claims based on takings, denial of due process, denial of equal protection, common law trespass, and nuisance against a land-based wind farm).

64. A significant portion of transmitted energy is lost in transmission due to the age of the system. ERIC HURST, EDISON ELEC. INST., U.S. TRANSMISSION CAPACITY: PRESENT STATUS AND FUTURE PROSPECTS 33 (2004), *available at* http://www.oe.energy.gov/DocumentsandMedia/transmission_capacity.pdf. "[The] limited expansion of the transmission system over the last two

produced offshore typically needs to be transmitted only the short distance to shore where it can be used by consumers in major coastal population centers, so not only is transmission more efficient, it also requires less infrastructure.[65] Therefore, the higher capital costs of constructing and maintaining an offshore wind farm may be lower than the combined costs of developing an onshore wind farm and simultaneously upgrading or expanding the transmission grid to enable delivery of the electricity generated by a remote land-based wind farm to consumers in populated areas.[66]

D. The Threat of Litigation Serves as a Powerful Disincentive to Offshore Wind Implementation

Despite the benefits associated with energy produced from wind,[67] wind farms, especially those located offshore, often face strong opposition.[68] Opposition to offshore wind farms comes from

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decades has resulted in: portions of the system being at or near capacity; the system being unable, without more capacity, to handle load growth; and problems associated with interconnecting and delivering the output of new generation facilities." *Id.*; *see also* LITOS STRATEGIC COMMC'N, U.S. DEP'T OF ENERGY, THE SMART GRID: AN INTRODUCTION 6–23 (2008), *available at* http://www.oe.energy.gov/DocumentsandMedia/DOE_SG_Book_Single_Pages(1).pdf (explaining the inefficiencies and flaws of the current system and the DOE's plan for upgrades to the transmission system).

65. Bryant, *supra* note 60, at 134 ("[C]oastal wind resources appear to have a much smaller incremental transmission need due to their proximity to the existing transmission grid." (quoting GOVERNOR'S COMPETITIVENESS COUNCIL, 2008 TEXAS STATE ENERGY PLAN 8 (July 2008), *available at* http://governor.state.tx.us/files/gcc/2008_Texas_State_Energy_Plan.pdf)).

66. *Id.* at 132.

67. *See supra* Part II.A (describing the benefits of wind power).

68. *See infra* Part II.D (examining litigation arising from the siting of an offshore wind farm in Nantucket Sound). Land-based wind farms generate opposition as well. *See, e.g.*, Susan Lorde Martin, *Wind Farms and NIMBYs: Generating Conflict, Reducing Litigation*, 20 FORDHAM ENVTL. L. REV. 427, 455–61 (2009) (describing a variety of claims typically brought by NIMBY groups against land-based wind farms). As a matter of policy, the opponents of land-based wind farms generally emphasize the uncertainty regarding the effect of turbines on bird and bat populations and habitats, the negative aesthetic impacts experienced by nearby communities, and the concern that, while wind power may avoid many existing negative environmental effects, it will create a new range of unprecedented problems which have not been fully examined or considered. Adam M. Dinnell & Adam J. Russ, *The Legal Hurdles to Developing Wind Power as an Alternative Energy Source in the United States: Creative and Comparative Solutions*, 27 NW. J. INT'L L. & BUS. 535, 537–38 (2007). Litigation initiated against land-based wind farms is typically based on theories of private nuisance (premised on the noise or light-flicker caused by wind turbines), constitutional takings (premised on the theory of deprivation of property value), or due process (premised on the fact that the wind farm will disproportionately harm nearby landowners while other landowners will benefit). *See, e.g.*, *Muscarello*, 610 F.3d at 421–25 (asserting claims based on takings, denial of due process and equal protection, and private nuisance); Rankin v. FPL Energy, 266 S.W.3d 506, 511–12 (Tx. Ct. App. 2008) (asserting nuisance claims based on a proposed wind farm's negative aesthetic impact). When claims of this nature are asserted at the permitting phase, courts usually dismiss them as speculative or

individuals and groups across the political spectrum, and has divided the environmental community.[69] The litigation initiated in opposition to offshore wind projects is often intended to prevent or discourage the construction of the wind farm at issue, so the claims are usually asserted at the permitting stage as opposed to the construction or operation phases, and typically cite inappropriate permitting authority as the primary shortcoming in development plans.[70] Litigation based on this theory has substantially delayed the installation of Cape Wind—the first offshore wind farm proposed in the United States[71]—and may have served as a disincentive for other potential offshore wind developers.

The litigation in opposition to Cape Wind is ongoing, and has been initiated by groups of landowners, including the Alliance to Protect Nantucket Sound ("Alliance") and Ten Taxpayer Citizens Group ("Ten Taxpayer"), which may be classified generally as NIMBY.[72] NIMBY is an acronym for "Not In My Back Yard," and refers to those who fight against the siting of any development that may have a negative effect on property values or aesthetics in its immediate vicinity, even if the development provides significant benefits to the community at large.[73]

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unripe, but claims may be more substantial after wind turbines are constructed. *Muscarello*, 610 F.3d at 425 (holding that the plaintiff could not succeed "at this time under either a nuisance or trespass theory," but leaving open the possibility that valid claims might arise after construction).

69. *See* Dinnell & Russ, *supra* note 68, at 536–37 (explaining that traditional environmental concerns fall on both sides of the wind power debate: proponents of wind power cite reduction of pollution as a compelling reason for increased use of wind power, while critics point to habitat damage and increased industrialization as compelling reasons for limiting installation of wind farms).

70. *See infra* Part II.D (examining the claims asserted against Cape Wind, the first proposed offshore wind farm in the United States).

71. Cape Wind first submitted a permit application to the U.S. Army Corps of Engineers in 2001. Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 288 F. Supp. 2d 64, 68 (D. Mass. 2003). However, construction of the wind farm has not yet begun. *Project Timeline*, CAPE WIND, http://www.capewind.org (last visited Feb. 20, 2011).

72. Alliance to Protect Nantucket Sound "was formed in 2001 in response to Cape Wind's proposal to build a wind farm in [Nantucket] Sound. . . . The Alliance supports wind power as an alternative energy source. However, [it] oppose[s] the proposed Cape Wind plant in Nantucket Sound due to potential adverse economic, environmental and public safety impacts." *About Us*, ALLIANCE TO PROTECT NANTUCKET SOUND, https://org2.democracyinaction.org/o/6891/content_item/aboutus (last visited Feb. 20, 2011); *see* Iva Ziza, Note, *Siting of Renewable Energy Facilities and Adversarial Legalism: Lessons from Cape Cod*, 42 NEW ENG. L. REV. 591, 620 (2008) (describing the litigation filed against Cape Wind by Alliance to Protect Nantucket Sound and Ten Taxpayer Citizens Group as NIMBY, and arguing for restricted access to courts for groups challenging administrative permitting action in order to avoid "inefficiency and delays that often have no environmentally beneficial impact at all").

73. *See* Martin, *supra* note 68, at 427 (comparing NIMBY suits against cell-phone towers and wind farms, and recommending that those burdened by such installations be included in the planning process and compensated for any decrease in property values that occurs as a result of the installation).

As a matter of policy, these opponents of offshore wind farms generally emphasize the uncertainty regarding the effect of turbines on bird and bat populations and habitats, the negative aesthetic impacts experienced by nearby communities, and the concern that, while wind power may avoid many existing negative environmental effects, it will create a range of unprecedented problems that may not have not been fully examined or considered.[74]

As a legal strategy, however, these groups have chosen to attack the jurisdiction of the state and federal permitting agencies and the procedural processes used to issue permits for construction of offshore wind farms in a string of cases including *Ten Taxpayer Citizens Group v. Cape Wind Associates*,[75] *Alliance to Protect Nantucket Sound v. United States Army Corps of Engineers*,[76] and *Alliance to Protect Nantucket Sound v. Energy Facilities Siting Board*.[77]

Cape Wind Associates proposed to construct an offshore wind farm in federal waters of Nantucket Sound off the coast of Massachusetts.[78] They envisioned a two-step development process for the wind farm, in which they would first install a data tower designed to collect information about the environmental and geological conditions in Nantucket Sound, and later, if the information collected suggested that Nantucket Sound was a satisfactory location for an offshore wind farm, Cape Wind would install wind turbines.[79] The United States Army Corps of Engineers ("USACE") issued Cape Wind a permit for the installation of the data tower.[80]

However, Ten Taxpayer and Alliance each contested the validity of the permit authorizing construction of Cape Wind's data tower on the basis of statutory ambiguities that were the result of a misfit between

74. Dinnell & Russ, *supra* note 68, at 537–38.

75. Ten Taxpayer Citizens Grp. v. Cape Wind Assocs., 373 F.3d 183, 191 (1st Cir. 2004), *aff'g* 278 F. Supp. 2d 98 (D. Mass. 2003) (alleging that Congress had ceded power to regulate Nantucket Sound to the Commonwealth of Massachusetts, so state regulatory approval was necessary in addition to federal regulatory approvals).

76. Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 398 F.3d 105, 108–09 (1st Cir. 2005) (claiming that the U.S. Army Corps of Engineers, which had issued a permit for construction of a data collection tower on Nantucket Sound, had jurisdiction to permit activities related to mineral extraction only, and therefore did not have authority to permit activities related to any other resource).

77. Alliance to Protect Nantucket Sound v. Energy Facilities Siting Bd., 932 N.E.2d 787, 796 (Mass. 2010) (alleging that the Energy Facilities Siting Board improperly issued permits for construction of transmission lines, which would carry electricity produced at the offshore wind farm).

78. *Ten Taxpayer*, 373 F.3d at 186.

79. *Id.*

80. *Id.*

the statutes in existence at the time and the novel experiment being conducted by Cape Wind.[81] At the time these claims were filed, permitting authority for renewable energy development was not expressly vested in any state or federal regulatory agency. The Outer Continental Shelf Lands Act ("OCSLA"), the federal law governing disposition of the land beneath federal waters, specifically provided permitting processes for the extraction of oil, gas, and other mineral resources.[82] However, OCSLA was ambiguous in relation to offshore wind energy production because it did not expressly provide procedures for issuing permits for activities unrelated to mineral extraction in federal waters on the outer continental shelf.[83] Under the version of OCSLA in effect at the time, the jurisdiction of the USACE was similarly limited to permitting of installations for the purpose of extracting mineral resources.[84] Ten Taxpayer and Alliance exploited this ambiguity by claiming that the USACE did not have the authority to issue the permits which would allow Cape Wind to move forward in the development process.[85]

In each case related to the ambiguous nature of offshore wind permitting authority, however, the First Circuit Court of Appeals held in favor of Cape Wind.[86] In *Alliance*, the First Circuit held that the

81. *Id.* at 186–87 ("In its complaint, Ten Taxpayer acknowledged that the [data tower] site is more than three miles from the nearest Massachusetts shoreline and that, accordingly, the location falls under the jurisdiction of the federal government. Nevertheless, Ten Taxpayer contended, Cape Wind could not build the [data tower] without regulatory approval from Massachusetts because Congress has ceded to Massachusetts the power to regulate any activity affecting fishing in Nantucket Sound."); Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 288 F. Supp. 2d 64, 74 (D. Mass. 2003) ("Plaintiffs argue that the Corps lacked the authority to issue the permit in question because Congress, in amending the OCSLA in 1978, restricted the sweeping authority that it had previously granted to the Corps to issue . . . permits for activities on the [outer continental shelf]. Plaintiffs' theory is that the Corps presently has [permitting] jurisdiction on the [outer continental shelf] only over those structures erected for the purpose of extracting resources.").

82. 43 U.S.C. § 1337 (2000).

83. *Id.* (delegating power to issue oil and gas leases on the outer continental shelf to the Secretary of the Interior and establishing general guidelines for the exercise of this authority), *amended by* 43 U.S.C. § 1337(p) (2006) (extending the authority of the Secretary of the Interior to include issuance of leases supporting the production of energy *from sources other than oil and gas*) (emphasis added).

84. 43 U.S.C. § 1333(e) (2006); *see also* Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 398 F.3d 105, 108 (1st Cir. 2005) (describing the structure of the regulations when the suit was filed).

85. *See Alliance*, 398 F.3d at 108 (delineating the claims asserted by Alliance); *Ten Taxpayer*, 373 F.3d at 184 (explaining that Ten Taxpayer was claiming that the USACE did not have jurisdiction to issue a permit, and that Cape Wind Associates needed an additional permit issued by Massachusetts).

86. *Alliance*, 398 F.3d at 111 (holding that the USACE had jurisdiction to issue a permit for construction of Cape Wind's data tower); *Ten Taxpayer*, 373 F.3d at 197 (holding that, because

USACE had authority to issue permits for construction of *all* types of structures on the outer continental shelf, not just those structures related to the extraction of mineral resources.[87] Additionally, in *Ten Taxpayer*, the First Circuit held that Cape Wind was not required to obtain regulatory approval from the state of Massachusetts, in addition to (or in lieu of) the permit from the USACE. The court reasoned that because OCSLA provided for the USACE permitting authority on the outer continental shelf, it preempted any state requirement as fundamentally inconsistent.[88] The decisions issued by the First Circuit in *Alliance* and *Ten Taxpayer* were "the judicial equivalent to a green light" to Cape Wind because they resolved ambiguities in OCSLA to solidify jurisdictional authority in the USACE for permitting the data tower, and thereby allowed Cape Wind to move forward in the development process using only the permits it had already acquired.[89]

Despite its victories in *Alliance* and *Ten Taxpayer*, Cape Wind's wrangling with the complex statutory issues presented by its unprecedented wind farm was far from over. Although the wind farm was to be located in federally-controlled waters in Nantucket Sound, the electricity produced by the turbines needed to be transmitted back to the mainland, where it could be sold to consumers.[90] In 2005, the Massachusetts Energy Facility Siting Board ("Siting Board") granted Cape Wind a permit to construct and operate transmission cables that would run underwater and underground on the floor of Nantucket Sound.[91] After multiple rounds of state and local approval proceedings and a final approval by the Siting Board, several NIMBY groups, including Alliance, filed appeals that were consolidated to form *Alliance to Protect Nantucket Sound v. Energy Facilities Siting Board* ("EFSB").[92]

Massachusetts law was inapplicable on the outer continental shelf, Cape Wind was not required to obtain a Massachusetts permit as well as a permit from OCSLA).

87. *Alliance*, 398 F.3d at 110–11 (noting that the statute itself was somewhat ambiguous, but that, when considering a 1978 amendment to OCSLA, Congress had been aware that the USACE issued permits for structures unrelated to oil and gas extraction, and had implied its approval by choosing not to place explicit limits on USACE permitting authority).

88. *Ten Taxpayer*, 373 F.3d at 194 (finding that the Massachusetts statutes in question were inapplicable to the proposed wind farm site by their own terms, and that the state statutes were fundamentally inconsistent with federal law; and further finding the statutes invalid because, if held to be applicable, such statutes would effectively grant Massachusetts veto power over the use of the federally-controlled seabed).

89. Kaplan, *supra* note 27, at 209.

90. Alliance to Protect Nantucket Sound v. Energy Facilities Siting Bd., 932 N.E.2d 787, 791–92 (Mass. 2010).

91. *Id.* at 793.

92. *Id.* at 793–95 (describing the administrative approval process and the consolidation of the

The plaintiffs in *Alliance v. EFSB* filed a claim based on the Public Trust Doctrine,[93] a common law principle by which the state holds its navigable waters and the lands under them in trust for the public, and may not alienate these lands or waters except when the public use of them is enhanced or when the public use of the remaining lands or waters is not harmed.[94] The plaintiffs in *Alliance v. EFSB* claimed that the Siting Board had violated the Public Trust Doctrine because it was not expressly granted authority to consider issues relating to the public trust.[95] However, the Court rebuffed this complaint, interpreting the relevant statute to grant the Siting Board authority to administer public trust rights.[96] The fact that the specifics of the Court's decision are based on interpretation of obscure Massachusetts public utility statutes should not diminish the importance of this claim.[97] Every future

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multiple appeals from the Siting Board's final decision).

93. *Id.* at 798. Plaintiffs claimed that the

> tidelands [were] both owned and held in trust by the Commonwealth to protect the public's rights in them, and that no one—including a State agency such as the siting board—[could] claim authority to act in connection with the tidelands unless granted express legislative authority to do so. [Plaintiffs] contend[ed] that [the statute creating the siting board] contain[ed] no language of delegation . . . and therefore, the siting board [could not] grant a [permit].

Id.

94. The seminal case regarding the Public Trust Doctrine is *Illinois Central R.R. Co. v. Illinois*, 146 U.S. 387 (1892), which held that a grant of property rights in hundreds of acres of land beneath Lake Michigan from the Illinois legislature to a privately-owned railroad company was invalid because the state's property interest in the land was unalienable, unless a grant of property rights would enhance the public's use of the land in question. Essentially, the Public Trust Doctrine places the ownership of lands beneath state-controlled waters in the state but prevents the state from alienating those lands unless the public use of the land would be either unchanged or enhanced. *See generally* Friends of the Parks v. Chi. Park Dist., 786 N.E.2d 161 (Ill. 2003) (interpreting the Public Trust Doctrine as it applied to the construction of a new football stadium in Chicago on land that was once navigable water in Lake Michigan). For background information and an analysis of the *Illinois Central* case, see generally Douglas L. Grant, *Underpinnings of the Public Trust Doctrine: Lessons from Illinois Central Railroad*, 33 ARIZ. ST. L.J. 849 (2001) (addressing criticisms of the reasoning relied upon in the case and providing in-depth analysis of the somewhat elusive constitutional and common law underpinnings of the doctrine). For a discussion of the application of the Public Trust Doctrine to claims involving use of natural resources, see generally Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).

95. Alliance to Protect Nantucket Sound v. Energy Facilities Siting Bd., 932 N.E.2d 787, 798 (Mass. 2010).

96. *Id.* at 800–02. The relevant statute allows the Siting Board to issue a certificate that serves as a "composite of all individual permits, approvals or authorizations which would otherwise be necessary for construction or operation of the facility." MASS. GEN. LAWS ANN. ch. 164, § 69K (West 2010).

97. The statutes at issue in *Alliance v. EFSB* were MASS. GEN. LAWS ch. 164, §§ 69J, 69K, which govern the procedures used and factors considered by the Siting Board when issuing permits for energy facilities. The Massachusetts Supreme Court found these statutes sufficient to vest authority in the Siting Board to administer the public trust. *Alliance*, 932 N.E.2d at 800.

offshore wind farm must contend with the relevant state's Public Trust Doctrine, since each state is obligated to abide by the Doctrine,[98] and each wind farm must transmit its electricity to customers on the mainland via transmission cables like those at issue in this case.

Notwithstanding the economic and environmental benefits of wind power[99] and the strong political willpower to implement offshore wind technology existing throughout the United States,[100] NIMBY litigation delayed Cape Wind implementation for nearly a decade.[101] The roadblocks presented by statutory ambiguity are significant and must be resolved, either in the courts or by legislators, in order to accomplish the goal of offshore wind development.

III. DISCUSSION

Cape Wind Associates endured nearly a decade of legal battles before securing the final permit necessary to enable them to begin construction of the offshore wind farm.[102] However, this lengthy permitting process was accelerated in 2009 when the Department of the Interior issued a new regulatory framework that specifically authorized offshore renewable energy developments.[103] This Part will provide an overview of the primary federal laws applicable to offshore wind farms in order to foster an understanding of the mechanics of a streamlined and effective wind farm permitting process. First, this Part will detail the scope and procedural structure of the regulations governing offshore renewable energy development that were promulgated in April 2009 and are administered by the Bureau of Ocean Energy Management, Regulation and Enforcement ("BOEMRE").[104] Next, this Part will examine two auxiliary federal laws that are particularly relevant to offshore wind

98. Grant, *supra* note 94, at 849–50 ("Each state in its sovereign capacity owns the navigable waters and underlying lands within its borders. . . . The legislature has no power to abolish or modify the doctrine, either across the board or in particular situations. Consequently, the judiciary has the final say on the validity of legislative and administrative grants of public trust resources into private ownership.").

99. *See supra* Part II.A (describing the economic and environmental benefits of wind power generally); Part II.C (describing the additional benefits of offshore wind).

100. *See supra* Part II.B (describing the state and federal regulatory incentives that have developed as a result of the tangible benefits of wind power and other renewable energy resources).

101. *Court Upholds Cape Wind Ruling*, *in* NORTH AMERICAN WIND POWER 18, 18 (Mark Del Franco ed., 2010).

102. *Id.*

103. 30 C.F.R. §§ 250, 285, 290 (2009).

104. *See infra* Part III.A (reviewing the permitting structure established by the Minerals Management Service.)

farm development: the National Environmental Policy Act ("NEPA") and the Coastal Zone Management Act ("CZMA").[105]

A. Jurisdiction in Federal Waters: The Bureau of Ocean Energy Management, Regulation and Enforcement, and the Outer Continental Shelf Lands Act

Prior to 2005, OSCLA expressly authorized the Secretary of the Interior to issue leases only for activities supporting production, storage, development, and transportation of oil, natural gas, sand, and gravel.[106] This historical limitation on the power of the Secretary led to substantial confusion and litigation regarding agency jurisdiction on the outer continental shelf, because federal law did not expressly authorize any department or agency to issue permits for wind power developments in federal waters.[107] The Energy Policy Act of 2005 ("EPAct") amended OSCLA, in part to address this confusion, and extended the jurisdiction of the Department of the Interior to allow its Secretary to grant leases, easements, and rights of way for the production of "energy from sources other than oil and gas."[108] Under the revised OSCLA, the Secretary of the Interior delegated regulation of offshore renewable energy development on the outer continental shelf[109] to the Minerals

105. *See infra* Part III.B (providing an overview of the requirements imposed by NEPA and the CZMA).

106. 43 U.S.C. § 1337 (2000).

107. For a description of the litigation generated by this confusion, see *supra* Part II.D. The USACE was authorized to permit dredging and filling under the Clean Water Act § 1344, 33 U.S.C. §§ 1251–1387 (2000), as well as construction of structures that may obstruct navigable waters of the United States under the Rivers and Harbors Appropriations Act § 403, 33 U.S.C. §§ 401–426 (2000); the Minerals Management Service ("MMS") was authorized to permit oil and gas developments under OSCLA, 43 U.S.C. § 1337 (2000); and the Federal Energy Regulatory Commission ("FERC") was authorized to permit only hydrokinetic power developments under the Federal Power Act § 797, 16 U.S.C. §§ 791a–823d (2000). None of these agencies was permitted to regulate renewable energy sources directly. Watson & Courtney, *supra* note 42, at 267 (contrasting the government pre-planning that functioned as a driving force behind offshore wind development in other countries with the fact that Cape Wind's proposal "caught federal and state regulatory agencies by surprise" because the United States had not yet developed an administrative process to accommodate such development).

108. Outer Continental Shelf Lands Act (OSCLA), 43 U.S.C. §§ 1331–1356a (2006); Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, 744–45.

109. The "outer continental shelf" is defined as "all submerged lands lying seaward and outside of the area of lands beneath navigable waters . . . and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control." 43 U.S.C. § 1331(a). The term "lands beneath navigable waters" is also a defined term, meaning

> all lands within the boundaries of each of the respective States which are covered by nontidal waters . . . seaward to a line three geographical miles distant from the coast line of each such State and to the boundary line of each such State where in any case such boundary . . . extends seaward (or into the Gulf of Mexico) beyond three geographical miles.

Management Service ("MMS").[110] The MMS promulgated rules establishing a process for the permitting, construction, and decommissioning of renewable energy developments in April 2009.[111] When the MMS was reorganized in 2010 as a response to the Deepwater Horizon oil spill, the newly-created Bureau of Ocean Energy Management, Regulation and Enforcement assumed the energy-related functions of the MMS.[112]

1. Scope of the BOEMRE's Jurisdiction: An Inherent Limitation

The scope of the BOEMRE's authority to issue permits is limited in accordance with the scope of OCSLA. By amending OCSLA, as opposed to creating a new law governing offshore renewable energy development in all contexts and jurisdictions, Congress artfully tiptoed through a minefield of conflicting and contested jurisdictions. Prior to the amendment, the USACE regulated dredging, filling, and installation

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Id. § 1331(a)(1)–(2). Under these definitions, state territory includes a three-mile-wide strip of land directly parallel to the coastline. The outer continental shelf is all federally-controlled land that lies further than three miles from the coast.

110. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,638–40 (Apr. 29, 2009) (to be codified at 30 C.F.R. pts. 250, 285, 290).

111. 30 C.F.R. §§ 250, 285, 290 (2009). These rules closely mimic the framework already in existence within the BOEMRE regulations for permitting offshore oil and gas production and gravel extraction. Peter J. Schaumberg & Angela F. Colamaria, *Siting Renewable Energy Projects on the Outer Continental Shelf: Spin, Baby, Spin!*, 14 ROGER WILLIAMS U. L. REV. 624, 628 (2009).

112. The BOEMRE was established in May 2010 when Secretary of the Interior Kenneth Salazar issued an order separating and reassigning duties that had previously been under the jurisdiction of the MMS. U.S. DEP'T OF THE INTERIOR, SECRETARIAL ORDER NO. 3299, ESTABLISHMENT OF THE BUREAU OF OCEAN ENERGY MANAGEMENT, THE BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT, AND THE OFFICE OF NATURAL RESOURCES REVENUE (May 19, 2010), *available at* http://www.doi.gov/deepwaterhorizon/loader.cfm?csModule=security/getfile&PageID=32475. This initial order was amended on June 18, 2010. U.S. DEP'T OF THE INTERIOR, SECRETARIAL ORDER NO. 3299A1, ESTABLISHMENT OF THE BUREAU OF OCEAN ENERGY MANAGEMENT, THE BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT, AND THE OFFICE OF NATURAL RESOURCES REVENUE (June 18, 2010), *available at* http://elips.doi.gov/app_so/act_getfiles.cfm?order_number=3299A1. The dismantling and restructuring of the MMS is ongoing, and several bills regarding proposed changes to the structure of the MMS are currently pending in Congress. *See, e.g.*, S. 3643, 111th Cong. (2010); S. 3516, 111th Cong. (2010); H.R. 3736, 111th Cong. (2009); H.R. 3534, 111th Cong. (2009). The restructuring of the MMS became a priority after the Deepwater Horizon oil spill, which raised concerns regarding potential conflicts of interest within the MMS. HENRY B. HOGUE, CONG. RESEARCH SERV., REORGANIZATION OF THE MINERALS MANAGEMENT SERVICE IN THE AFTERMATH OF THE DEEPWATER HORIZON OIL SPILL 1 (2010), *available at* http://www.fas.org/sgp/crs/misc/R41485.pdf (explaining that concerns regarding conflicts of interest and ethical lapses within the MMS had existed prior to the oil spill; analyzing the organizational structure of the MMS and the actions taken by Secretary Salazar; and proposing several options for assignment of the BOEMRE/MMS functions).

of structures in federal waters;[113] the MMS had jurisdiction over mineral extraction on the outer continental shelf;[114] the Federal Energy Regulatory Commission ("FERC") and the MMS both claimed authority to regulate hydrokinetic energy development in federal water;[115] and states had the ability to regulate and permit any structures in state water according to their individual preferences.[116] Because the EPAct amended OCSLA to provide a permitting process for offshore renewable energy development, the regulatory framework administered by the BOEMRE is relevant only to the outer continental shelf, which is defined in OSCLA to include only submerged lands under the control of the federal government.[117] Indeed, those lands under the control of the states, termed "lands beneath navigable waters," are specifically excluded from the province of OCLSA.[118] Therefore, while the

113. Section 10 of the Rivers and Harbors Appropriation Act of 1899 gives USACE authority over the "construction of any structure in or over any navigable water of the United States." 33 U.S.C. § 403 (2006). Section 404 of the Clean Water Act gives USACE the authority to issue permits "for the discharge of dredged or fill material into the waters of the United States." 33 U.S.C. § 1344 (2006).

114. Schaumberg & Colamaria, *supra* note 111, at 625 ("MMS has regulated oil and gas development on the OCS for over fifty years . . . .").

115. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. at 19,639.

116. *See* Submerged Lands Act, 43 U.S.C. § 1311(a) (2006) ("[T]he right and power to manage, administer, lease, develop, and use the [lands beneath navigable waters within the boundaries of the respective states] and natural resources all in accordance with applicable State law . . . [are] vested in and assigned to the respective States . . . ."). The Submerged Lands Act was enacted to resolve conflict between the states and the federal government regarding jurisdiction over the valuable oil reserves on the outer continental shelf, and firmly established state jurisdiction as extending three miles seaward from the coast. Rachael E. Salcido, *Law Applicable on the Outer Continental Shelf and in the Exclusive Economic Zone*, 58 AM. J. COMP. L. 407, 409–10 (2010). The Submerged Lands Act is a complement to OCSLA that governs the federal government's use of the submerged lands within its jurisdiction. *Id.*

117. 43 U.S.C. § 1337(p)(1) (2006) ("The Secretary . . . may grant a lease, easement or right-of-way on the outer Continental Shelf . . . ."). The outer continental shelf is defined as "all submerged lands lying seaward and outside of the area of lands beneath navigable waters . . . and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control." *Id.* § 1331.

118. 43 U.S.C. § 1331(a) defines "outer continental shelf" to mean all submerged lands lying *outside* of the area of lands beneath navigable waters. *Id.* § 1331(a) (emphasis added). 43 U.S.C. § 1301(a)(2) defines "lands beneath navigable waters" to mean

> all lands permanently or periodically covered by tidal waters up to but not above the line of mean high tide and seaward to a line three geographical miles distant from the coast line of each such State and to the boundary line of each such State where in any case such boundary as it existed at the time such State became a member of the Union, or as heretofore approved by Congress, extends seaward beyond three geographical miles.

Id. § 1301(a)(2). The practical effect of these provisions is to extend state jurisdiction three miles off the shore of each coastal state. Any point further than three miles from the coast falls under federal jurisdiction. In the case that Congress specifically approves different state boundaries,

amendment to OCSLA clarifies the role of federal agencies in federal waters, it remains silent with respect to authority to permit renewable energy developments on land within state control. Despite this limitation in scope, the regulations are novel, effective, and merit in-depth consideration.

2. Preliminary Qualifications of Lessees and the Bidding Process

The regulations administered by the BOEMRE first set forth the general qualifications for prospective lessees: although any citizen, corporation, association, agency, state, or political subdivision of the United States may be granted a lease, each prospective leaseholder must be able to demonstrate that it is technically and financially capable of constructing, operating, maintaining, and decommissioning the project for which it seeks authorization.[119]

Second, the BOEMRE regulations describe the process for issuing leases, and the terms of the leases granted by the BOEMRE.[120] Leases may be issued in two ways; the BOEMRE is required by OSCLA to use a competitive bidding process to grant leases, but when there is no competitive interest in a particular parcel of submerged land, a lease may be issued to a prospective developer using a non-competitive process.[121]

In order to determine whether there is competitive interest in a parcel that the BOEMRE has chosen to offer for lease, the BOEMRE must publish a Request for Interest in the Federal Register.[122] If multiple expressions of interest are received, the BOEMRE begins a competitive auction process that is similar to the auction process used for conveyances of mineral rights on the outer continental shelf.[123] This process begins with a notice and comment period, during which time the BOEMRE solicits comments from all interested parties, including

any land within state boundaries is considered "land beneath navigable waters," and jurisdiction falls to the relevant state.

119. 30 C.F.R. § 285.106–.107 (2009).

120. *Id.* § 285.210–.225.

121. 43 U.S.C. § 1337 (p)(3) (2006); 30 C.F.R. § 285.201.

122. 30 C.F.R. § 285.210. The BOEMRE issued its first Request for Interest on December 29, 2010, for an area off the coast of Massachusetts that is unrelated to the Cape Wind development. Commercial Leasing for Wind Power on the Outer Continental Shelf Offshore Massachusetts—Request for Interest, 75 Fed. Reg. 82,055–61 (Dec. 29, 2010). The Request for Interest explains that the BOEMRE is seeking responses from prospective developers describing their area of interest within the Request for Interest block, the objectives and schedule of the development, data concerning the availability of the resources, documentation of legal, technical, and financial capability to construct and operate the project, and plans for transmission of the energy produced to the mainland. *Id.* at 82,060.

123. Schaumberg & Colamaria, *supra* note 111, at 632.

developers, state and local agencies, and private individuals, regarding areas and levels of interest, and advantages and disadvantages of the proposed lease.[124] Interested developers must submit responses including a detailed description of their area of interest, a general description of their objectives, a general schedule of their proposed activities, data concerning the environmental and energy resource conditions in the area, and documentation of their qualifications to hold the lease.[125] The BOEMRE uses this information to complete the documentation required by NEPA and the CZMA,[126] and coordinates with other agencies and state or local governments to identify the appropriate boundaries of the area to be leased.[127]

The BOEMRE then uses competitive auctions to finalize the sale of leases to developers.[128] The auction may use one of four formats,[129] and the BOEMRE may choose among six bidding systems for each auction it initiates.[130] Although this variety of auction formats and bidding procedures has the advantage of being flexible enough to

124. 30 C.F.R. § 285.111(a) (2009).

125. *Id.* § 285.113.

126. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,638, 19,659 (Apr. 29, 2009). NEPA requires that every federal agency prepare a study of the impacts of "major federal actions significantly affecting the quality of the human environment." *Id.* at 19,651. This study can take the form of either an Environmental Assessment or a much lengthier and more detailed Environmental Impact Statement. *See infra* Part III.B.1 (describing NEPA generally and providing a detailed explanation of the elements to be included in an Environmental Impact Statement). The BOEMRE believes that, at least initially, it will be required to prepare an EIS for each competitive lease sale, but eventually, the less-intensive EA may become appropriate. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. at 19,659. The CZMA mandates that federal actions that are likely to affect any land or water use of a state's coastal zone are consistent with the state's Coastal Management Plan. *Id.* at 19,651.

127. 30 C.F.R. § 285.111(b).

128. *Id.* § 285.220.

129. The four auction formats are as follows: (1) sealed bidding, whereby developers submit a single, sealed bid and the BOEMRE reveals the highest bidder at a specified time but reserves the right to reject winning bids for a number of reasons; (2) ascending bidding, whereby developers know the terms of the bids of others and may enter multiple increasing bids within the bidding period; (3) two-stage bidding, whereby, in the first stage, developers submit multiple ascending bids until only two bidders remain or until at least two bidders offer the maximum bid amount, then in the second stage submit a sealed bid which determines the lessee; and (4) multiple-factor auction, whereby developers submit a single proposal, which the BOEMRE evaluates based on a variety of monetary and non-monetary variables. *Id.* § 285.220, 285.222(a). The BOEMRE may reject winning bids for reasons such as insufficiency, illegality, anti-competitive behavior, administrative error, and unusual bidding patterns. *Id.* § 285.222.

130. *Id.* § 285.221. The bidding systems are as follows: a cash bonus with a constant fee rate; a constant operating fee rate with a fixed cash bonus; a sliding operating fee rate with a fixed cash bonus; a cash bonus and a constant operating fee rate; and a multiple-factor combination of non-monetary and monetary factors. *Id.* Each of these systems is subject to a minimum bid level established by the BOEMRE. *Id.*

accommodate a wide range of circumstances, it has been criticized for its failure to ensure that auction participants are bona fide bidders.[131] Despite the fact that the MMS received comments voicing this concern during its rulemaking process, the final rules do not include any provisions ensuring genuine interest.[132] This omission leaves the possibility that organizations seeking to prevent offshore wind development may enter the bidding process in order to increase lease sale prices, or to force non-competitive lease sales into lengthy and costly auction procedures.[133]

While the BOEMRE has the ability to initiate competitive bidding processes by publishing a Request for Interest, prospective developers[134] may also initiate non-competitive leasing processes[135] by requesting a lease for a part of the outer continental shelf that is not scheduled for a competitive lease sale from the BOEMRE.[136] After receiving a request for a lease, the BOEMRE will issue a Request for Interest to determine whether there is competitive interest in the area.[137] If competitive interest exists, the BOEMRE will initiate the competitive leasing process described above, and the developer may choose whether or not to participate.[138] If, however, the BOEMRE does not receive any

131. Schaumberg & Colamaria, *supra* note 111, at 634 (noting that the BOEMRE plans to establish bid evaluation procedures in sale or bid notices, which are released as the leasing system moves forward).

132. *Id.* at 652.

133. *Id.* at 634. The BOEMRE attempts to address these concerns by instituting minimum bids, which it believes can be set at a price that potential speculative bidders or parties seeking to discourage development would not have the desire or the financial capability to pay. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,667 (Apr. 29, 2009).

134. Like the competitive process, any citizen, corporation, association, agency, state, or political subdivision of the United States may be granted a lease, but each prospective leaseholder must be able to demonstrate that it is technically and financially capable of constructing, operating, maintaining, and decommissioning the project for which it seeks authorization. 30 C.F.R. § 285.106–.107 (2009).

135. The non-competitive renewable energy leasing process mirrors the non-competitive leasing processes used by the BOEMRE in conveying leases to remove sand and gravel from the outer continental shelf. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. at 19,670.

136. 30 C.F.R. § 285.231 (2009). Such requests must include a detailed description of the potentially-leased area, a general description of the developer's objectives, a general schedule of proposed activities, any data concerning renewable energy resources and environmental conditions in the area, a statement issued by the relevant state and local authorities that the activity complies with energy planning requirements, documentation demonstrating the qualifications of the prospective leaseholder, and an acquisition fee. *Id.* § 285.230; *supra* notes 134–35.

137. 30 C.F.R. § 285.231.

138. *Id.* § 285.231(c). The BOEMRE proposed a minor change to this process, which took effect in January 2010, eliminating a second Request for Interest in the event that only one

responses indicating competitive interest, it will offer the developer a non-competitive lease, which the developer may choose to accept or reject.[139]

3. Lease Structure: Commercial and Limited Leases

The BOEMRE issues two types of leases: commercial leases, which allow the lessee to conduct any activity associated with generating, storing, or transmitting electricity from a renewable energy project on the outer continental shelf,[140] and limited leases, which allow the lessee to conduct activities such as research, data collection, or new technology testing that support the production of energy, but do not allow commercial-scale production or sale of electricity.[141] Leases issued by the BOEMRE grant the lessee the right to install and operate renewable energy facilities on the leased portion of the outer continental shelf, as well as a non-competitive right to any easements necessary to transmit and distribute the energy produced.[142]

Each commercial lease has an operations term of twenty-five years,[143] and is intended for use by utility-scale electricity generation developments.[144] Limited leases, on the other hand, have operations terms of five years,[145] and are intended to support exploratory, data-collection, and site-assessment purposes only.[146]

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developer responds to an initial Request for Interest. Renewable Energy Alternate Uses of Existing Facilities on the Outer Continental Shelf—Acquire a Lease Noncompetitively, 75 Fed. Reg. 72,679 (Nov. 26, 2010) (to be codified at 30 C.F.R. pt. 285.231(d)(1)). The BOEMRE estimates that the removal of this redundant step may save the parties six to twelve months. Press Release, Bureau Ocean Energy Mgmt. Reg. & Enforcement, Fact Sheet: Revisions to Offshore Renewable Energy Regulations, http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&PageID=73318.

139. 30 C.F.R. § 285.231(f)–(g).

140. *Id.* § 285.112.

141. *Id.*

142. *Id.* § 285.200. Developers who hold commercial or limited leases on the outer continental shelf are not required to apply separately for such easements or rights-of-way; these rights are included in the lease they hold. *Id.* § 285.300(c).

143. Commercial leases that were issued through a competitive process provide preliminary terms of six months, during which time the developer must submit an SAP or a combined SAP/COP. *Id.* § 285.235(a). Commercial leases issued in non-competitive processes do not have preliminary terms, because SAPs contain essentially the same data required in a developer's request for a lease under non-competitive processes. *Id.* In either case, if a COP is not submitted initially, a commercial lease will also include a five-year site assessment term, during which time a developer must submit a COP. *Id.* The operations term of the lease begins on the date that the BOEMRE approves the COP. *Id.*

144. *Id.* Commercial leases may be renewed upon agreement between the BOEMRE and the developer. *Id.*

145. Limited leases that were issued competitively have a preliminary term, during which time the developer must submit a GAP. *Id.* § 285.236(a). The operations term begins on the date

4. Provisions for Changes in the Lease

The regulations administered by the BOEMRE include provisions for the assignment, suspension,[147] renewal, termination, relinquishment, contraction,[148] and cancellation[149] of leases granted by the BOEMRE.[150] During the term of the lease, leaseholders may assign all or part of their lease to others, subject to approval by the BOEMRE.[151] Upon approval by the BOEMRE, the assignee becomes jointly and severally liable for the obligations under the lease with each prior and subsequent lessee who held an interest in the leased land from the time the obligation accrued until it is satisfied.[152] In other words, if an assignee takes a lease from a party who has failed to perform each of its obligations, the assignee becomes jointly and severally liable for those obligations, regardless of its origin with the assigning party or its discovery after assignment to a third party.

Leases may also be renewed upon request by the leaseholder.[153] The BOEMRE has discretion in approving renewal requests, and has stated that it will approve only those requests that seek to conduct activities

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that the BOEMRE approves the GAP. *Id.*

146. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,647 (Apr. 29, 2009). A developer holding a limited lease may, however, sell up to 5MW of electricity generated by its assessment installations to recoup some of the costs associated with engaging in a limited lease. *Id.* Limited leases can be renewed but may not be converted into commercial leases; so if a developer desires to construct utility-scale energy generation facilities after the expiration of a limited lease, he must enter the competitive or non-competitive processes outlined in Part III.A.3, *supra*. *Id.* Because the BOEMRE anticipates that it will process and issue limited leases within six months of the application date, developers may apply simultaneously for both a limited lease and a commercial lease on the same outer continental shelf site, and may then conduct site assessment activities under a limited lease while a commercial lease is pending approval. Schaumberg & Colamaria, *supra* note 111, at 636.

147. Leases may be suspended by request submitted to the BOEMRE by the leaseholder, or by order of the BOEMRE. No activities may be conducted on the leased parcel during the suspension period, but the lease term is extended by the length of the suspension period. 30 C.F.R. § 285.415–.417 (2009).

148. The BOEMRE also has the ability to reduce the size of the area subject to the lease if, after review, it determines that the area leased is larger than that required to conduct the activities specified in the lease agreement. *Id.* § 285.436.

149. In the event of fraud or misrepresentation, failure to comply with OSCLA or the terms of the operations plan, or a determination by the Secretary that continued activity under the lease would harm national security, natural resources, or the environment, the BOEMRE may cancel the lease after notice and an opportunity for a hearing. *Id.* § 285.437.

150. *Id.* § 285.408–.437.

151. *Id.* § 285.408. When a leaseholder seeks to assign its lease, it must file an application with the BOEMRE and remain liable for all obligations under its lease until the BOEMRE approves the application. *Id.* § 285.410.

152. *Id.* § 285.411.

153. *Id.* § 285.425.

similar to those conducted under the original lease.[154] A leaseholder who has submitted a renewal request may continue to operate while the decision is pending with the BOEMRE.[155] If a lease is not renewed, it is considered terminated.[156] Upon termination, a leaseholder has two years to remove all installations and facilities in accordance with a plan approved by the BOEMRE.[157]

5. Payments and Financial Obligations Under Leases

The BOEMRE requires leaseholders to make several types of payments: acquisition fees,[158] rental payments, and operating fees.[159] A portion of the revenues[160] collected by the BOEMRE from leasing and operations processes of qualified projects[161] must be distributed to

154. *Id.* Although the regulations require that the activities conducted under a renewed lease be "substantially similar" to existing activities, the term is not defined. *Id.* However, the BOEMRE indicates that it will balance developers' desire for simplicity in lease renewal against the potential for unchecked operation of obsolete technologies as well as use of renewable resources, which was not specifically authorized in the original lease. *Cf.* Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,676 (Apr. 29, 2009) (explaining that comments recommending automatic renewals were rejected due to concern that such renewals would result in inefficient or obsolete operations); 30 C.F.R. § 285.429 (describing the criteria used in consideration of lease renewal requests to include "design life of existing technology. . . [and] competitive interest and fair return considerations").

155. 30 C.F.R. § 285.428(a). The renewal request must be submitted in a timely fashion, no later than 180 days before the termination date of a limited lease, or no later than two years before the termination date of the operations term of a commercial lease. *Id.*

156. *Id.* § 285.432.

157. *Id.* § 285.433. If the leaseholder fails to comply with the removal plan, the BOEMRE may seize the financial assurances provided by the leaseholder in the lease acquisition process, and the lessee remains liable for removal and disposal costs. *Id.*

158. For leases issued competitively, the acquisition fee is assessed as a deposit of 20 percent of the total amount of the bid entered by the prospective developer. *Id.* § 285.501. For non-competitive leases, developers must submit an acquisition fee of $0.25 per acre with the request for a lease. *Id.* § 285.502. Depending on whether the leasing process continues as non-competitive, or becomes competitive after expressions of interest from other prospective developers, the BOEMRE may retain the acquisition fee, refund it, or apply it to required deposits or bids within the competitive process. *Id.*

159. *Id.* § 285.505. Each lease is also subject to an annual operating fee, determined in accordance with the following formula: [operating fee] = [installed capacity] x [hours per year] x [capacity factor] x [power price] x [operating fee rate]. *Id.* § 285.506(a). This formula deviates from normal royalty payment schemes, in that it is based on the theoretical design capacity of the project and published wholesale prices for electricity, not on the actual amount of electricity produced by the project, or the price received by the producer for the energy sold. Schaumberg & Colamaria, *supra* note 111, at 640.

160. 43 U.S.C. § 1337(p)(2)(B) (2006); 30 C.F.R. § 285.540. The BOEMRE is required to distribute 27 percent of the revenues to eligible coastal states. 30 C.F.R. § 285.540.

161. If a project is at least partially within a swath of the outer continental shelf between the outer boundary of state jurisdiction—which extends three nautical miles off the coast—and a line three nautical miles further seaward from the coast, it is considered a qualified project, and revenues must be shared with eligible states. 30 C.F.R. § 285.541.

affected states.[162] The rent for renewable energy leases is substantially lower than the rental rate for oil and gas leases issued by the BOEMRE,[163] due to a desire on the part of the BOEMRE to encourage investment in offshore renewable energy production, as the use of renewable fuels in energy generation has lower environmental costs than the use of fossil fuels.[164]

The BOEMRE also requires that the lessee acquire several financial assurance instruments specific to the lease at various stages of leasing and project development.[165] The value of these instruments is determined on a case-by-case basis, and is dependent on factors such as projected rent over the next year and the estimated cost of decommissioning the installation.[166] These financial assurances may be collected by the BOEMRE if the lessee fails to comply with any term of the lease or becomes insolvent, and are intended to ensure that the decommissioning costs and other financial liabilities accrued by the leaseholder do not become the BOEMRE's responsibility if the leaseholder becomes insolvent or uncooperative.[167]

6. Required Plans and Information

Lessees must submit plans and information to the BOEMRE at various stages corresponding to the leasing and construction phases of projects.[168] Throughout the process of plan approval, the BOEMRE

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162. A state is eligible to receive revenues if any part of its coastline is within fifteen miles of the geographic center of the qualified project. *Id.* § 285.542. If no state is within fifteen miles of the geographic center of a project, no states share the revenue generated by that project. *Id.* If several states are eligible to receive revenue generated by a project, the BOEMRE determines each state's share using a formula that apportions shares based on the relative distance between the nearest point of each eligible state and the geographic center of the project. *Id.* § 285.540(c).

163. The rental rate for renewable energy leases is $3 per acre per year, *id.* § 285.503, 285.505, while the rental rate for oil and gas leases is $6.25 per acre per year, Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,680 (Apr. 29, 2009).

164. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. at 19,680.

165. *See* 30 C.F.R. § 285.515–.521 (requiring financial assurances for commercial and limited leases); *id.* § 285.535 (requiring forfeiture of a bond upon noncompliance with a term of a lease issued by the BOEMRE); *id.* § 285.913 (requiring forfeiture of a bond if a lessee fails to comply with the specifications contained in the decommissioning plan).

166. *Id.* § 285.517.

167. *Id.* § 285.535.

168. Site Assessment Plans (SAPs) are required for commercial leases, while General Assessment Plans (GAPs) are required for limited leases and other rights-of-way or easements. *Id.* § 285.613 (governing SAPs); *id.* § 285.640 (governing GAPs). Developers who are issued leases in a competitive process must submit an SAP or GAP within six months of the issuance of the lease. *Id.* § 285.601(a). Developers who request a non-competitive lease must submit an SAP or GAP sixty days after the BOEMRE determines that there is no competitive interest in the area

coordinates with relevant federal agencies and state and local governments.[169] The purpose of this approval process is to demonstrate that the developer has adequately planned the development to ensure that the activities will conform to applicable law, will be safe, will not unreasonably interfere with other uses of the outer continental shelf, will not cause undue harm to environmental or historical resources, and will use the best available technology and management practices, as well as properly trained personnel.[170] Developers must submit enough information to allow the BOEMRE to complete the appropriate NEPA analysis, as well as certification indicating that the plan is consistent with the CZMA in at least two of the several planning and approval stages.[171] Once the plan has been approved,[172] the developer may begin the activities outlined in the plan.[173] Because of the multiple rounds of approval within the BOEMRE, and the environmental reviews and consultations with agencies and state and local governments, it could take up to six years before construction can begin under a lease.[174]

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to be leased. *Id.* § 285.601(b). As the SAP phase in commercial leasing draws to a close, the developer must submit a Construction and Operations Plan (COP). *Id.* § 285.618–.620. The COP must describe the construction, operations, and eventual decommissioning plans for the lease, including all onshore and support facilities as well as all required easements, and must contain results of detailed surveys of the leased area, a certification of consistency with the CZMA, and information enabling the BOEMRE to complete a second round of NEPA analysis. *Id.* § 285.620–.627. The COP must be approved before the developer initiates construction of any permanent or long-term generation facilities. *Id.* § 285.620. For an example of the types of data and information collected by developers and submitted to the BOEMRE prior to the construction and operation of a renewable energy facility on the outer continental shelf, see generally Cape Wind Lease, *supra* note 4 (listing the terms of the lease agreement between Cape Wind Associates, LLC and the BOEMRE).

169. *See* 30 C.F.R. § 285.613(c) (governing SAPs); *id.* § 285.648(c) (governing GAPs); *id.* § 285.628(d) (governing COPs).

170. *See id.* § 285.610 (governing SAPs); *id.* § 285.641 (governing GAPs).

171. *See id.* § 285.611–.612 (governing SAPs); *id.* § 285.646–.647 (governing GAPs); *see also infra* Part III.B (discussing the requirements of NEPA and the CZMA in depth).

172. After reviewing the SAP or GAP submitted by the lessee, the BOEMRE has discretion to approve it, disapprove it, or approve it with modifications. *Id.* § 285.613(e) (governing SAPs); *id.* § 285.648(e) (governing GAPs). If the BOEMRE disapproves the plan, the developer has the opportunity to submit a revised plan. *Id.* § 285.613(e) (governing SAPs); *id.* § 285.648(e) (governing GAPs).

173. *See id.* § 285.614–.618 (governing SAPs); *id.* § 285.650–.657 (governing GAPs). For both SAPs and GAPs, the activities in the plan would be essentially testing and assessment. *See id.* § 285.614–.618 (governing SAPs); *id.* § 285.650–.657 (governing GAPs). Under an SAP, the developer would be conducting assessments in order to compile an accurate COP. *See id.* § 285.614–.618 (governing SAPs). Under a GAP, the developer would be conducting assessments to determine the efficacy of a new or initial-stage technology. *See id.* § 285.650–.657 (governing GAPs).

174. Schaumberg & Colamaria, *supra* note 111, at 644–45.

7. Decommissioning

If a lessee chooses not to renew the lease,[175] it must submit a decommissioning application to the BOEMRE at least two years before the expiration of a lease.[176] The application must include a proposed schedule for decommissioning, descriptions of removal methods, plans for disposal of the turbines,[177] resources that could be affected by the decommissioning, results of recent biological surveys in the area, and descriptions of measures taken to prevent discharge of pollutants.[178] All facilities must be removed within two years of the termination of the lease.[179] If the lessee fails to comply with the decommissioning plan, the BOEMRE may force it to turn over the financial assurance required in the leasing and planning process.[180]

B. Related Federal Statutory Requirements

The offshore wind permitting process administered by the BOEMRE is subject to several related federal statutes that impose supplemental requirements on the BOEMRE and on prospective developers of offshore wind facilities.[181] Under the regulations administered by the BOEMRE, prospective developers must provide sufficient data to enable the BOEMRE to comply with NEPA by assembling at least one comprehensive statement of the environmental impact of a proposed wind farm, and provide the BOEMRE with a certification of consistency with the relevant states' coastal management plans, as required by the CZMA.[182] This subsection explores the requirements of

175. If a lease is not renewed according to the procedures outlined in 30 C.F.R. § 285.425, it is considered terminated. 30 C.F.R. § 285.432.

176. *Id.* § 285.905. If the lessee ceases conducting commercial activities or other activities approved under a right-of-way or right-of-use grant, the lessee must submit a decommissioning application within ninety days. *Id.*

177. The lessee may request that some facilities remain in place to be used by subsequent lessees, or converted into an artificial reef. *Id.* § 285.909.

178. *Id.* § 285.906.

179. *Id.* § 285.902.

180. *Id.* § 285.913. All lessees are jointly and severally liable for decommissioning the facilities, and this liability accrues at the point in time when the lessee installs, constructs, or acquires any facility or obstruction on the outer continental shelf. *Id.* § 285.900–.901.

181. *See* Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,640 (Apr. 29, 2009) ("Each project developed under this new program will be subject to environmental reviews under the [NEPA]."); *id.* at 19,651 (explaining that the BOEMRE must make consistency determinations as required by the CZMA).

182. 30 C.F.R. § 285.611–.614 (requiring parties seeking SAP approval to submit information enabling the BOEMRE to comply with NEPA and the CZMA); *id.* § 285.646–.648 (requiring parties seeking GAP approval to submit information enabling the BOEMRE to comply with NEPA and CZMA).

these two statutes in order to provide understanding of the scope of the compliance reviews conducted by the BOEMRE prior to issuing a lease.[183]

1. The National Environmental Policy Act of 1969

NEPA[184] is the "central and unique environmental policy for (self-) regulating the federal government."[185] In order to effectuate its two primary purposes—promoting harmony between humans and the environment, and preventing and remedying existing damage to the environment[186]—NEPA requires that federal agencies prepare and include an Environmental Impact Statement ("EIS") in every proposal for major federal action.[187] An EIS details the environmental impact of the proposed action, any adverse environmental effects of the action that cannot be avoided, any alternatives to the proposed action,[188] the

183. Several other statutes are also relevant to the permitting and siting processes but are outside the scope of this Article. Among these statutes are: the Endangered Species Act ("ESA"), which assesses penalties when harm is caused to species listed as endangered or threatened, 16 U.S.C. §§ 1531–1544 (2006); the Migratory Bird Treaty Act ("MBTA"), which invokes strict liability for killing or harming a bird covered by any one of several international treaties, 16 U.S.C. §§ 703–712 (2006); and the National Historic Preservation Act ("NHPA"), which requires that federal agencies consider the effects that their actions will have on sites that are listed in the National Register of Historic Places, 16 U.S.C. § 470–470x-6 (2006). The application of each of these statutes to a wind farm in the Great Lakes is uncertain. Little is known about the flight patterns of birds over the Great Lakes, so it is unclear whether bird habitat will be affected by an offshore wind farm, and therefore unclear whether the MBTA or the ESA will be invoked by offshore wind turbine interaction with birds. Bynum, *supra* note 39, at 1554. Similarly, the effect of turbines on aquatic species is unclear. *Id.* In some circumstances, turbine structures have been shown to enhance fish habitat by functioning as an artificial reef, but until a wind turbine is installed in the Great Lakes, it will be difficult to assess the effects of an offshore wind farm on aquatic species that are native to the Great Lakes. *Id.* Lastly, the NHPA may have a limited effect on options for locating offshore wind farms in Lake Michigan. There are no historic sites listed in the Illinois waters of Lake Michigan, but there are at least two shipwrecks off the coast of Wisconsin that are listed in the National Register of Historic Places. *See National Register of Historic Places: National Register Listed Properties in Google Earth*, NAT'L PARK SERVICE, http://nrhp.focus.nps.gov/natreg/docs/Google_Earth_Layers.html (last updated Aug. 18, 2010) (displaying all registered locations in the Midwest region). Offshore wind farms will likely not be permitted near these historic sites. Bynum, *supra* note 39, at 1554–55.

184. National Environmental Policy Act, 42 U.S.C. §§ 4321–4347 (2006).

185. Simmons v. U.S. Army Corps of Eng'rs, 120 F.3d 664, 666 (7th Cir. 1997) (finding that an EIS prepared by the USACE was inadequate because the USACE had improperly restricted its consideration of alternatives to a dam and reservoir).

186. 42 U.S.C. § 4321.

187. *Id.*

188. In order to decide which alternatives to explore in an EIS, an agency must make decisions on three preliminary issues. *Simmons*, 120 F.3d at 666. First, what is the purpose of the proposed federal action? *Id.* at 668. Next, given that purpose, are there reasonable alternatives to the action? *Id.* And last, to what extent should the agency explore each alternative? *Id.*

relationship between the short-term uses of the environmental resources involved and the maintenance and enhancement of long-term productivity, and any irreversible commitments of resources that would be involved in the proposed action.[189]

When preparing an EIS, agencies are required to consider only reasonable alternatives to the proposed action.[190] Therefore, the determination of which alternatives are reasonable is at the core of an EIS.[191] Ultimately, the agency has discretion in choosing whether to discuss a particular issue or alternative, and how much discussion to devote to it.[192]

In addition to agencies' wide discretion in determining which alternatives to discuss,[193] agencies are also free to make any decision regarding appropriate action following the issuance of an EIS. While NEPA mandates that federal agencies prepare an EIS, it does not mandate a particular result.[194] Agencies are not required to eventually choose the least-impact alternative; they are merely required to consider the relative impacts of a range of alternatives.[195] In fact, the U.S. Supreme Court has said that "NEPA merely prohibits uninformed—rather than unwise—agency action."[196]

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189. 42 U.S.C. § 4332(c).

190. *Id.* § 4332(c)(iii). Agencies are required to consider reasonable alternatives and, as far as is reasonable, a "no action alternative," which is a continuation of the status quo. 40 C.F.R. § 1508.25(b) (2009).

191. *Simmons*, 120 F.3d at 666. An action with an expansively-stated purpose will require consideration of a wide range of alternatives, while a narrowly-defined purpose will limit the number of reasonable alternatives. *Id.* The agency is not required to disregard an applicant's purpose if that purpose is broad enough to allow consideration of alternatives, but blind adoption of an applicant's goals is a "losing proposition" because it does not allow the agency to consider the full range of alternatives to the project. Envtl. Law & Policy Ctr. v. U.S. Nuclear Regulatory Comm'n, 470 F.3d 676, 683 (7th Cir. 2006). Therefore, prospective offshore wind farm developers must carefully outline the purpose of their projects. For example, a stated purpose such as "siting a wind farm in a particular location" might be considered too narrow and therefore unacceptable. A more widely-defined purpose, such as "providing sustainable energy," on the other hand, might open up NEPA review to a panoply of alternatives such as solar energy and clean coal.

192. Bisbee, *supra* note 30, at 354. Agency discretion in choosing issues for NEPA analysis is particularly broad because agency determinations will only be overturned if they are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law" under the Administrative Procedure Act. *Id.* (citing 5 U.S.C. § 706(2)(A) (2006)).

193. *Id.*

194. *Envtl. Law & Policy Ctr.*, 470 F.3d at 682 (summarizing the Seventh Circuit's approach to agency action under NEPA in a case brought by environmental action groups to challenge the Nuclear Regulatory Commission's issuance of an early-stage permit for a nuclear power generation facility).

195. *Id.*

196. Bisbee, *supra* note 30, at 353 (quoting Robertson v. Methow Valley Citizens Council,

Preparation of an EIS was originally required at several stages in the BOEMRE permitting process for offshore wind installation.[197] However, the BOEMRE has begun an initiative entitled "Smart from the Start" that seeks to shorten and simplify the offshore wind permitting process by identifying prime locations for offshore wind energy development as "wind energy areas," and preparing less-intensive Environmental Assessment for each wind energy area.[198] A full EIS would likely still be required upon the submission of a COP, but the BOEMRE believes that this initiative could eliminate at least one EIS for each requested lease, and could therefore shorten the lease acquisition process by approximately two years.[199]

2. The Coastal Zone Management Act

For the most part, the offshore wind permitting process is subject to the discretion of federal agencies, with only limited deference to state policy.[200] The CZMA, however, empowers states to exert significant influence over federal agency actions related to offshore wind power generation facilities as they affect states' coastal zones.[201]

Under the CZMA, coastal states are required to formulate a plan that establishes enforceable policies and standards to guide public and

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490 U.S. 332, 351 (1989)).

197. *See infra* Part III.A.2 (explaining that the BOEMRE completes NEPA and CZMA review prior to offering parcels for lease); Part III.A.7 (explaining that BOEMRE conducts a second round of NEPA and CZMA review upon submission of lessees' construction and operations plans).

198. Press Release, Bureau of Ocean Energy Mgmt. Reg. & Enforcement, "Smart from the Start" Atlantic OCS Offshore Wind Initiative Frequently Asked Questions 1 (2010), http://www.doi.gov/news/pressreleases/loader.cfm?csModule=security/getfile&PageID=73317.

199. Christa Marshall, *U.S. Government Puts Offshore Wind on Fast Track*, SCI. AM., Nov. 24, 2010, *available at* http://www.scientificamerican.com/article.cfm?id=us-government-puts-offshore-wind.

200. Under the regulations promulgated by the BOEMRE, state input in the permitting and leasing process is limited to the deference granted to state Coastal Management Plans. *See supra* Part III.A.2 (explaining that the BOEMRE requires consistency with state coastal management plans under the CZMA prior to offering parcels for lease); Part III.A.6 (explaining that the BOEMRE reviews construction and operations plans prior to approval to ensure consistency with state coastal management plans, as required by the CZMA).

201. Coastal Zone Management Act, 16 U.S.C. §§ 1451–1466 (2006). The CZMA requires coastal states to submit coastal resource management plans to the Secretary of Commerce for approval. *Id.* § 1453(12). Once a plan has been approved, all federal agency action that might affect a state's coastal zone must be consistent with the state's plan. *Id.* § 1456(c)(1)(A). The purpose of the CZMA is to capitalize on both state expertise regarding its coastal zone and state interest in preserving its coastal zone while ensuring consistency among state management plans and discouraging state policies that benefit individual states at the expense of other states. *Id.* § 1451(i).

private use of land within the coastal zone.[202] Plans must contain several elements, the most relevant of which are a planning process for energy facilities likely to be located in, or which might significantly affect, the state's coastal zone, and adequate consideration of the national interest involved in planning for and managing the siting of energy facilities that are of greater than local significance.[203]

After the Secretary of Commerce has approved a state's coastal management plan,[204] federal agencies are required to conduct any activities affecting that state's coastal zone in a manner consistent with the policies contained in the management program of the affected state.[205] Pursuant to this requirement, any applicant for a federal permit to conduct activity within the coastal zone of any state must provide the permitting agency with certification that the activity complies with the state's program prior to receiving a permit.[206] The permitting agency may not issue the permit until the affected state has concurred with the applicant's certification of consistency with the coastal management plan.[207]

While OCSLA and the permitting process administered by the BOEMRE are the primary tools that govern siting of offshore wind developments, the CZMA and NEPA exert significant influence as well. Together, these statutes represent a comprehensive regulatory scheme for offshore wind power.

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202. Once formulated, the plan is submitted to the Secretary of Commerce for approval. *Id.* § 1455(e)(2). States that are required to enact coastal management plans are those states that border on the Atlantic, Pacific, or Arctic Oceans, the Gulf of Mexico, Long Island Sound, or one or more of the Great Lakes. *Id.* § 1453(4). Coastal waters include the waters within the territorial jurisdiction of the United States, including the Great Lakes and their connecting waters. *Id.* § 1453(3).

203. *Id.* § 1455(d)(2)(H), (d)(8). The plan must also identify the boundaries of the coastal zone, define permissible land and water uses, present guidelines on priority of uses within the coastal zone, demonstrate coordination with local, areawide and interstate plans applicable to the coastal zone, and provide a mechanism for public participation in the permitting process and consistency determinations pursuant to the plan. *Id.* § 1455.

204. *Id.* § 1455(e)(2).

205. *Id.* § 1456(c)(1)(A).

206. *Id.* § 1456(c)(3)(A).

207. *Id.* If the state disagrees with the applicant's certification of consistency, the resulting dispute is adjudicated within the Department of Commerce, and the Secretary of Commerce may overrule a state's finding of inconsistency. 15 C.F.R. § 930.120 (2011). The Secretary's decision is subject to judicial review under the Administrative Procedure Act, which provides that an agency decision may only be overturned if it is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law. 5 U.S.C. § 706(2)(A) (1966).

IV. ANALYSIS

The amendment to OSCLA[208] and the regulations subsequently promulgated by the BOEMRE[209] that allow for offshore renewable energy development on the outer continental shelf represent a step forward in the development of a sustainable energy production system in the United States because they provide prospective wind farm developers with a valuable asset: regulatory certainty.[210] In light of this newfound regulatory certainty, prospective developers of offshore wind farms on the outer continental shelf are eager to initiate leasing procedures and install wind farms.[211] However, the fact that the regulations apply only to waters above the "outer continental shelf"—which are, by definition, federal waters[212]—but remain silent regarding jurisdictional authority in state-controlled waters, represents an oversight that is likely to prove problematic.[213] Because the regulations ignore the issue of permitting wind farms in state-controlled waters, a wind farm developed in state waters would still be subject to claims of inadequate jurisdiction arising out of regulatory uncertainty—claims similar to those filed against the developers of Cape Wind.[214]

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208. The EPAct amended OCSLA to provide the BOEMRE with the authority to permit offshore renewable energy generation. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (codified at 43 U.S.C. § 1337(p)).

209. 30 C.F.R. § 285.100–.118 (2009).

210. *See infra* Part IV.B.3 (explaining how regulatory uncertainty operates as a disincentive for development of offshore wind farms).

211. Jim Suydam, spokesman for the Texas General Land Office, made the following comment regarding offshore wind permitting in the state: "We're number one on onshore wind and we expect that we'll be first on offshore wind because we're easy to do business with . . . . [W]e're Texas, of course we want to be first. We said we'd be first five years ago and we still think we'll be first." Restuccia, *supra* note 5. Several proposed offshore wind farms are in the permitting and development phases, perhaps the most infamous of which, the Cape Wind project off the coast of Nantucket Sound in Massachusetts, received the first federal offshore wind development lease on October 6, 2010. Press Release, Cape Wind Associates, First U.S. Offshore Wind Farm Lease is Signed by Secretary Salazar, Issued to Cape Wind (October 6, 2010), http://www.capewind.org/news1139.htm. Others are proposed in New Jersey and Rhode Island. MIKINETICS CONSULTING & PUB. SECTOR CONSULTANTS ON BEHALF OF MICH. GREAT LAKES WIND COUNCIL, REPORT OF THE MICHIGAN GREAT LAKES WIND COUNCIL 12 (2009) [hereinafter REPORT OF THE MICHIGAN GREAT LAKES WIND COUNCIL].

212. 43 U.S.C. § 1337(p)(1) ("The Secretary . . . may grant a lease, easement or right-of-way on the outer Continental Shelf."). The outer continental shelf is defined as "all submerged lands lying seaward and outside of the area of lands beneath navigable waters . . . and of which the subsoil and seabed appertain to the United States and are subject to its jurisdiction and control." *Id.* § 1331.

213. *See infra* Part IV.B (using Illinois as an example to illustrate the difficulties facing wind farm developers due to remaining regulatory ambiguity in the context of state-controlled water).

214. *See infra* Part IV.B.3 (describing the potential applicability of the claims used by the plaintiffs in the Cape Wind cases to a proposed wind farm in the Great Lakes).

This Part will analyze the regulatory uncertainty that remains with respect to offshore wind farms located within state-controlled waters, using the Great Lakes, and specifically Illinois, as examples of the problems caused by OCSLA's inherent limitation to federally-controlled waters.[215] It will begin with an explanation of why OCSLA, and the regulations issued under its delegation, do not apply within the Great Lakes.[216] This Part will proceed by using Illinois as an example to demonstrate how the state statutes that would impact development of an offshore wind farm in the Great Lakes fail to vest sufficient authority in any single agency to enable a prospective developer to avoid litigation mimicking the suits brought against Cape Wind in Massachusetts.[217] This Part will conclude that, in the face of such litigation, potential offshore wind developers will avoid the Great Lakes region, to the detriment of the region's residents.[218]

A. The Hole in the Permitting Process: The Regulations Provide Only for Offshore Renewable Energy Development in Federally-Controlled Waters

The jurisdiction of coastal states extends, for the most part, three miles off the coastline.[219] In some states, however, boundary lines extend further than three miles off the shore; in these cases, all lands within the state boundaries are considered lands beneath navigable waters and are subject to the jurisdiction of the respective states.[220] The states bordering the Great Lakes represent the most notable example of this extension of state boundaries, as all submerged land within the Great Lakes is under the jurisdiction of the neighboring states.[221]

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215. *See infra* Part IV.A–B (explaining how the remaining regulatory uncertainty is likely to affect offshore wind farm development in state waters).

216. *See infra* Part IV.A (providing an explanation of the provisions that limit the reach of OCSLA).

217. *See infra* Part IV.B (describing the application of current Illinois law to a proposed wind farm in Lake Michigan in light of the claims made in litigation against Cape Wind Associates).

218. *See infra* Part IV.B.3 (explaining that expensive and time-consuming litigation is likely to operate as a disincentive to offshore wind farm development in the Great Lakes); *see also supra* Part II.A (outlining the environmental, economic, and human health related benefits of wind-generated electricity, as opposed to electricity generated using traditional fuels such as coal, natural gas, and nuclear).

219. Submerged Lands Act, 43 U.S.C. §§ 1301–1356(a) (2006).

220. *Id.* § 1301(a).

221. *See* ILL. DEP'T NAT. RES., COASTAL MANAGEMENT PROGRAM 33–34 (2010) http://www.dnr.illinois.gov/cmp/Pages/documentation.aspx [hereinafter ILL. COASTAL MGMT. PLAN] (describing the extent of Illinois' territory within Lake Michigan and illustrating the boundaries of all states surrounding Lake Michigan); *see also* Clifton Williams, *Who Owns the Bed of Lake Michigan?*, 12 MARQ. L. REV. 12, 12–17 (1928) (describing the evolution of the chain of title to the lakebed of Lake Michigan and explaining that title now rests with the nearby

Because the submerged lands in the Great Lakes are subject only to state control, the offshore renewable energy permitting process administered by the BOEMRE under the authority of OCSLA has no application within the Great Lakes.[222]

B. Illinois as an Example of the Conundrum Facing the Great Lakes States

In coastal states, this inherent limitation in OCSLA will likely prove to be a minor roadblock, as developers who wish to take advantage of the regulatory certainty provided by the established federal permitting process and thereby avoid the looming threat of claims such as those filed against Cape Wind Associates will almost always have the option to choose a site located in federally-controlled water farther from shore.[223] However, within the Great Lakes, developers do not have the option of relocating to avoid regulatory uncertainty, and must therefore continue to contend with multiple overlapping potential permitting agencies and litigious groups intent on using uncertainty to discourage development.[224] Until developers are provided with regulatory certainty comparable to that established by the BOEMRE regulations, the development of offshore wind farms in the Great Lakes will likely lag behind development on the coasts, denying the region's residents the economic, environmental, and human health related benefits of wind-generated electricity.[225]

For example, Evanston, Illinois, a suburb north of Chicago, is currently evaluating proposals from several developers for a wind farm off its coast.[226] The current law in Illinois creates an atmosphere of

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states under the Equal Footing Doctrine).

222. *See* 43 U.S.C. § 1337(p)(1) (allowing the Secretary of the Interior to issue renewable energy leases only on the outer continental shelf).

223. Revenue potential is typically higher farther from shore, so increased infrastructure and construction costs are offset over the life of the wind farm. Kaplan, *supra* note 27, at 191.

224. *See infra* Part IV.B.1–3 (describing the interaction of the USACE, Illinois Department of Natural Resources, Illinois Pollution Control Board, and Illinois Environmental Protection Agency).

225. *See infra* Part II.A (discussing the benefits of renewable energy and the problems associated with traditional electricity generation); *see also* Michael Hawthorne, *Hidden Costs of Coal Generation*, CHI. TRIB. (Oct. 20, 2010), http://www.chicagotribune.com/news/local/ct-met-coal-plants-20101020,0,3375669.story (explaining that pollution from Chicago's coal-fired power plants costs nearby communities $137 million per year in health damages).

226. Evanston is evaluating proposals for a wind farm to be located six to nine miles off the coast of Illinois in Lake Michigan that would provide enough power for up to 50,000 homes—nearly double the 30,000 homes existing in the city. Kevin Eisenmann, *Offshore Wind Power on the Horizon for Evanston*, MEDILL REP. CHI. (Aug. 27, 2010), http://news.medill.northwestern.edu/chicago/news.aspx?id=169199; Bob Seidenberg, *Two Firms Pitch Offshore Wind Farm to Evanston*, CHI. SUN-TIMES (Nov. 4, 2010, 12:02 PM), http://www.suntimes.com/business/

regulatory uncertainty similar to the situation in Cape Cod before the creation of a federal permitting process.[227] It is unclear whether the authority of either the USACE or the Illinois Department of Natural Resources ("DNR") is sufficient to permit construction of an offshore wind farm.[228] An examination of the applicable statutes is helpful to understand the tangled nature of the permitting process in Illinois.

1. The Jurisdiction of the U.S. Army Corps of Engineers

The authority of the USACE under Section 10 of the Rivers and Harbors Act to permit construction of all structures built on state-controlled "lands beneath navigable waters,"[229] as well as the authority to issue permits for the discharge of dredged or fill material into navigable waters under Section 404 of the Clean Water Act,[230] remain unaffected by the amendment to OCSLA. Thus, it seems logical that the USACE would remain the primary permitting authority for offshore wind projects in state waters.[231] However, USACE authority to issue permits for renewable energy developments in state waters remains murky for several reasons.

First, in *Alliance v. USACE*, the only case dealing directly with the authority of the USACE to permit structures related to offshore renewable energy projects, the Massachusetts District Court shied away from the issue of authority to permit the energy production facilities themselves, determining instead that the only issue presented in the case was the validity of permits for data collection towers.[232] Additionally,

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2808418,CST-NWS-wind17.article; *see also* Joe Barrett, *Wind Farms Catch a Gust on Great Lakes*, WALL ST. J., Apr. 20, 2010, at A8 ("This is the best spot in the U.S. for industrial wind power, without a doubt." (quoting a representative of a prospective Evanston-area offshore wind farm developer)).

227. *See infra* Part IV.B.3 (explaining that the inadequacies in the pre-existing permitting structure in Massachusetts led to costly litigation and delay, and that the current law in Illinois mirrors that in Massachusetts at the time the Cape Wind proposal was first considered).

228. *See infra* Part IV.B.1–2 (detailing the ambiguities in the enabling statutes for both the USACE and the Illinois DNR as they apply to offshore wind permitting).

229. 33 U.S.C. § 403 (2006).

230. *Id.* § 1344; 33 C.F.R. § 323 (2009).

231. Prior to the amendments to OCSLA, the USACE was the primary permitting agency for any structures built on the outer continental shelf. 43 U.S.C. § 1337 (2000).

232. *See* Alliance v. U.S. Dep't of the Army, 288 F. Supp. 2d 64, 80–81 (D. Mass. 2003) (finding that, because the construction of the data tower did not "automatically trigger" the construction of the wind farm, the "Corps did not act wrongfully in considering the two permit applications separately from one another"). This particular issue was not contested on appeal. See also *infra* Part II.D for an in-depth discussion of *Alliance v. USACE*. After this decision, uncertainty remained as to USACE's authority to permit installation of the wind turbines themselves. On one hand, despite the narrowly-defined issue in the case, it was likely that a future case dealing with wind turbines would address issues similar to those presented in *Alliance*

the Court held that a permit from USACE was necessary in order to begin construction but did not address the issue of whether a permit from USACE was *sufficient*, by itself, to authorize construction.[233] Therefore, *Alliance v. USACE* left unclear whether the USACE could potentially extend its jurisdiction over the initial phase of wind farm development and thereby issue a permit for a full wind farm, or whether the USACE jurisdiction pertains only to auxiliary structures such as the data towers at issue in *Alliance v. USACE*.[234]

Second, the EPAct amendment to OCSLA exacerbated the uncertainty surrounding the permitting authority of the USACE, as it effectively overturned the decision in *Alliance v. USACE*.[235] The practical effect of the decision in *Alliance v. USACE* was to allow Cape Wind Associates, the prospective wind farm developer, to proceed with construction and operation of the data tower with only the permit from the USACE.[236] However, less than six months after the final decision in *Alliance v. USACE*, Congress amended OCSLA to grant permitting authority to the Department of the Interior.[237] This amendment to

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v. USACE, so the decision seemed to clear the path for eventual determinations that USACE had jurisdiction over wind farms. Kaplan, *supra* note 27, at 209–10. On the other hand, although the court eventually decided that the USACE did have the authority to permit periphery structures such as the data tower, the opportunities for future application of this case to development of offshore wind farms were limited by the narrowly-defined issue in the case. *See* Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 398 F.3d 105, 116 (1st Cir. 2005) (holding that the USACE had jurisdiction to permit the data tower); *Alliance*, 288 F. Supp. 2d at 80–81 (holding that the USACE acted properly in considering the data tower application without considering the potential impacts of the proposed wind farm).

233. *Alliance*, 398 F.3d at 114 ("[A] Section 10 permit is *necessary* for all structures on the [outer continental shelf] . . . but does not determine whether such a permit is *sufficient* to authorize building on the federally controlled [outer continental shelf].").

234. *See id.* at 109 (determining that it was unnecessary to decide whether the USACE's interpretation of its statutory authority to issue permits was entitled to deference under the *Chevron* doctrine because the legislative history clearly revealed congressional intent to allow the USACE to permit structures unrelated to mineral extraction). Since the USACE had merely granted a permit for an auxiliary structure, and since the level of deference was left open by the court in this case, it is unclear whether the USACE would be entitled to any level of deference under *Chevron* if it chose to grant a permit for a full wind farm. *See generally* Chevron, U.S.A., Inc. v. Natural Res. Def. Council, Inc., 467 U.S. 837 (1984) (establishing the standard by which courts determine the degree of deference given to an agency's interpretation of a federal statute).

235. *See id.* at 110–11 (holding that the USACE had jurisdiction to issue a permit for a data collection tower that was a preliminary step to installation of a full wind farm); *see also supra* Part II.D (discussing *Alliance v. USACE* in depth).

236. *See* Kaplan, *supra* note 27, at 209–10 (explaining that the decision in *Alliance v. USACE* would have allowed Cape Wind Associates to construct the data tower, even though the USACE was incapable of granting property interest on the outer continental shelf).

237. The final decision in the *Alliance v. USACE* controversy was issued on February 16, 2005. OSCLA was amended by Public Law 109-58, which received final approval on August 8, 2005. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594.

OCSLA almost completely removed the USACE from consideration of prospective offshore wind farm developments in federal waters, relegating the USACE instead to a minor role in authorizing geological, geophysical, and other related site assessments.[238] The prompt removal of USACE from consideration of wind farms in federal waters indicates Congressional belief that the vesting of permitting authority in USACE was unsatisfactory.[239]

Because the USACE has been removed from consideration of wind farm development in federal waters, it is unclear whether the USACE has any authority to permit offshore wind farms in state waters.[240] However, the USACE retains express jurisdiction under Section 10 of the Rivers and Harbors Act to issue permits for "construction of any structure in or over any navigable water of the United States,"[241] as well as express jurisdiction to issue permits for the "discharge of dredged or fill material" under Section 404 of the Clean Water Act.[242] Each of these express grants of authority bears directly on the development of an offshore wind farm, given that the turbines would be considered "structures," falling under Section 10's permitting authority, and their installation would almost certainly require "discharge" of materials, which would be subject to approval under Section 404.[243] Because both

238. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,654 (Apr. 29, 2009).

239. *See Legis. Hearing Before the Subcomm. on Energy and Mineral Res. of the H. Comm. on Res.*, H.R. 793, 794, 108th Cong. 47 (2003) (statement of Hon. Tom Reilly, Att'y Gen. of Mass.) (noting that energy development is "not what the Army Corps of Engineers does in terms of their area of expertise and focus. They are going to be focused on the navigational aspects of it"); *cf. id.* at 17 (statement of Hon. Ron Kind, Ranking Democrat, Subcomm. on Energy and Mineral Res.) (explaining that the MMS was "well equipped" to exercise authority over energy-related use of the outer continental shelf, given its experience with offshore oil and gas extraction); *id.* at 18 (statement of Hon. William Delahunt, Rep. in Cong. from the State of Mass.) (recommending that authority to regulate offshore renewable energy development be placed in the National Oceanographic and Atmospheric Association ("NOAA") because of its experience in ocean management). Much debate on this initial introduction of the bill concerned the allocation of authority between the MMS and NOAA, but all participants seemed in agreement that offshore renewable energy permitting was outside the scope of USACE expertise. *See id.* at 17–18.

240. *Compare* Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (vesting authority to issue permits for offshore renewable energy facilities in the BOEMRE), *with Alliance*, 398 F.3d at 111 (holding that the USACE had authority to issue permits for data collection facilities that were preliminary to installation of a wind farm).

241. 33 C.F.R. § 320.2(b) (2009) (interpreting the grant of jurisdiction to the USACE under 33 U.S.C. § 403 (2006)).

242. 33 U.S.C. § 1344(a); *see also* 33 C.F.R. § 320.2(f) (describing the USACE's jurisdiction under Section 404 of the Clean Water Act). The USACE authority to permit discharge is subject to veto by the U.S. Environmental Protection Agency. 33 U.S.C. § 1344(c); 40 C.F.R. § 230.10.

243. *See* Bynum, *supra* note 39, at 1562 ("[T]he construction of most turbine foundations requires both the displacement of existing lake or seabed material and the addition of new fill material."); *see also supra* notes 241–42 and accompanying text (explaining the USACE's

permits are administered by the USACE, the Corps' involvement in the siting and approval of an offshore wind farm located in state waters is mandatory.[244] However, due to the Congressional rejection of the USACE's authority to permit offshore wind farms in federal waters, the extent of the USACE's authority to permit offshore wind farms in state waters is ambiguous at best.[245]

Even if it were assumed that the USACE has proper authority to permit the construction of offshore wind turbines, the process for issuing permits and beginning construction under current USACE procedures can be somewhat unpredictable.[246] When evaluating an application for a permit under either Section 10 of the Rivers and Harbors Act or Section 404 of the Clean Water Act, the USACE conducts a public interest review, in which it weighs "all those factors which become relevant," including no less than twenty-one generally-defined factors.[247] The weight accorded to each factor is "determined by its importance and relevance to the particular proposal."[248] While this loosely-termed balancing process gives the USACE flexibility to adapt its procedures over the range of its responsibilities,[249] it may lead to uncertainty on the part of wind farm developers, who will not know how their proposals will be evaluated.[250]

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jurisdiction under the respective sections of the Rivers and Harbors Act and Clean Water Act).

244. *See* 33 U.S.C. § 403 (2006) (mandating that "it shall not be lawful to build" structures in navigable waters "except on plans recommended by the Chief of Engineers"); *see also id.* § 1344 (authorizing the Secretary of the Army to issue permits for the discharge of dredged material into navigable water).

245. Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (placing permitting authority for offshore renewable energy facilities in the BOEMRE).

246. Bynum, *supra* note 39, at 1560–61.

247. 33 C.F.R. § 320.4(a)(1). The factors to be considered are as follows:

> [C]onservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership and, in general, the needs and welfare of the people.

Id.

248. 33 C.F.R. § 320.4(a)(3).

249. The responsibilities of the USACE include permitting the construction of dams and dikes, establishing harborlines, and allowing occupation of wharves and piers, among others. See 33 C.F.R. § 320.2 for a list of all responsibilities delegated to the USACE.

250. *Cf.* Bisbee, *supra* note 30, at 353 (discussing the uncertainty created by the similarly-vague public interest balancing test utilized in NEPA evaluations, and noting that "[t]he lack of guidance on the balancing of interests in NEPA review makes it easy to overemphasize simple issues . . . and underemphasize more complex issues").

2. Illinois Law and Jurisdiction

A wind farm sited in the portion of Lake Michigan within Illinois state boundaries would require approval from Illinois state agencies in addition to approval from the USACE.[251] Although no Illinois state agency has explicit authority to permit offshore renewable energy development, several state statutes would likely be implicated in the permitting process.

The Illinois DNR has primary jurisdiction to supervise activities within Illinois lakes,[252] and oversees the utilization of the waters of Lake Michigan in cooperation with the Illinois Pollution Control Board and the Illinois Environmental Protection Agency.[253] Although the Illinois DNR is explicitly provided with the authority to issue permits for the construction of structures,[254] it is clear that renewable energy generation structures were not contemplated within the statutes.[255] Indeed, the lone mention of "public utility use" of lake resources apparently contemplated only thermoelectric fossil fuel generation, as evidenced by its provision for water intakes and conduits, which would provide cooling water to thermoelectric energy generation facilities.[256] Therefore, it is unclear whether the authority of the Illinois DNR to supervise and permit construction in Lake Michigan extends to the construction of structures related to offshore renewable energy development.

Similarly, the Illinois Coastal Management Plan ("Plan"), which includes a chapter on the process for planning energy facilities that might affect the Illinois coastal zone,[257] in compliance with the CZMA,[258] does not specify procedures by which renewable energy may

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251. *See* Robert W. Eberhardt, *Federalism and the Siting of Offshore Wind Energy Facilities*, 14 N.Y.U. ENVTL. L.J. 374, 380–86 (2006) (explaining that states' nearly-absolute control over the disposition of their submerged lands gives them a high degree of control over the siting of offshore wind farms). Although an offshore wind farm has yet to be constructed entirely within state-controlled waters, states are able to exercise some degree of control over wind farms sited in federal waters, as transmission cables carrying electricity produced offshore must cross state waters in order to connect to the grid. *See, e.g.*, Alliance to Protect Nantucket Sound v. Energy Facilities Siting Bd., 932 N.E.2d 787, 792–93 (Mass. 2010) (regarding a controversy that arose because defendant wind farm developers were required to obtain a permit to transmit electricity across state land).

252. 615 ILL. COMP. STAT. 5/5 (2008).

253. *Id.* at 5/14a. The Illinois EPA is charged with the specific duties of controlling the discharge of pollutants and waste into Lake Michigan. *Id.*

254. *Id.* at 5/18.

255. *Id.* (providing for construction of wharves, piers, harbors, and other similar structures).

256. *Id.*

257. ILL. COASTAL MGMT. PLAN, *supra* note 221, at 147–57.

258. See *supra* Part III.B.2 for a discussion of the CZMA.

be sited within the Illinois coastal zone, although it provides extensive discussion of coal, natural gas, and nuclear power plants.[259] Although the Plan does indicate that procedures for renewable energy development are being considered,[260] this omission might allow an inference to the effect that Illinois has chosen to avoid renewable energy development in its coastal zone. In accordance with the CZMA, federal agencies must comply with state policy, and this omission might constrain USACE action on renewable energy development in the portion of Lake Michigan under Illinois' control.[261]

Despite these uncertainties, the Illinois DNR might choose to assert authority over offshore wind farm permitting as an extension of its ability to permit offshore mineral extraction, using an argument closely mimicking that proffered by the USACE in *Alliance v. USACE*.[262] However, while the process of permitting mineral extraction from Lake Michigan might seem analogous to permitting the construction of wind turbines, Illinois statutes governing mineral extraction from Lake Michigan are questionable authority for wind farm development.[263] Although Illinois statutes vest authority to permit offshore mineral extraction in the Illinois DNR,[264] offshore oil drilling in Lake Michigan is currently prohibited under a federal ban.[265] Given the federal ban on offshore oil drilling, it is unclear whether the Illinois DNR has authority

259. ILL. COASTAL MGMT. PLAN, *supra* note 221, at 147–57.

260. *Id.*

261. *See* 16 U.S.C. § 1456(c)(1)(A) (1992) (requiring that federal agencies conduct activities affecting a state's coastal zone in a manner consistent with the policies contained in the state's coastal management plan).

262. Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 288 F. Supp. 2d 64, 75 (D. Mass. 2003). The USACE asserted its authority to permit the Cape Wind data tower based on its interpretation of a provision in OCLSA, which it interpreted to extend its authority to "all artificial islands, installations and other devices located on the seabed . . . including but not limited to, those that *may be* used to explore for, develop or produce resources." *Id.* (quoting 43 U.S.C. § 1333(a)(1) (2000); 33 C.F.R. § 320.2(b) (2009)) (internal quotation marks omitted). The Massachusetts District Court granted deference to this interpretation. *Id.* at 76–77. Like the statute at issue in *Alliance v. USACE*, the statute authorizing the Illinois DNR to permit structures and use of lake water contains specific examples of items that the Illinois DNR may permit, but a court may find that these lists were not intended to limit the scope of the permitting authority vested in the Illinois DNR. *See* 615 ILL. COMP. STAT. 5/18 (2008) (declaring it unlawful to build "any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, causeway, harbor or mooring facilities for watercraft" without submitting plans to the Illinois DNR and receiving a permit).

263. Oil and gas extraction regulations were used as the model for the BOEMRE regulations governing offshore renewable energy development. Schaumberg & Colamaria, *supra* note 111, at 628.

264. 615 ILL. COMP. STAT. 5/18b provides for extraction of "coal, gas, oil or other mineral or substance."

265. 42 U.S.C. § 15941 (2006) ("No Federal or State permit or lease shall be issued for new oil and gas slant, directional, or offshore drilling in or under one or more of the Great Lakes.").

to permit resource extraction facilities, such as wind turbines, which are analogous but unrelated to oil facilities.

Notwithstanding the permitting problems that might arise due to confusion regarding applicable state law, Illinois' RPS represents a significant incentive to develop offshore wind.[266] Based on findings that the "health, welfare, and prosperity of all Illinois citizens require the provision of adequate, reliable, affordable, efficient, and environmentally sustainable electric service,"[267] the Illinois legislature implemented a statewide RPS requiring at least 10 percent of each utility company's total electricity supply to be produced using renewable resources by June 1, 2015, increasing yearly thereafter to require at least 25 percent renewably-sourced electricity by June 1, 2025.[268] The RPS also specifically requires that at least 75 percent of the renewable energy used to meet the RPS be produced using wind,[269] a set-aside that is substantially greater than the wind quota provided in the RPS of any other state.[270] Illinois' RPS is particularly ambitious when considered in light of the fact that non-renewable coal and nuclear fuels accounted for over 95 percent of the electricity generated in Illinois in 2010.[271] Given the potential for offshore wind turbines to be significantly more productive than land-based turbines,[272] and the need to satisfy the aggressive RPS,[273] offshore wind is a particularly attractive option for electricity providers in Illinois.

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266. Although Illinois' RPS does not mention offshore wind specifically, it includes aggressive goals for implementation of all renewable fuels and for implementation of wind technology, specifically. *Compare* 20 ILL. COMP. STAT. 3855/1-75(c) (2008) (requiring that 18.75 percent of Illinois electricity be generated using wind technology by 2025), *with Renewable & Alternative Energy Standards: Detailed Table of State Policies*, PEW CTR. ON GLOBAL CLIMATE CHANGE, http://www.pewclimate.org/what_s_being_done/in_the_states/rps.cfm (last updated Feb. 11, 2011) [hereinafter *Pew Center Climate Table*] (showing that Illinois currently produces approximately 1.35 percent of its electricity using *all* types of renewable fuels).

267. 20 ILL. COMP. STAT. 3855/1-5(1).

268. *Id.* at 3855/1-75(c).

269. *Id.* The statute also includes a 6 percent set-aside for solar photovoltaic technology. *Id.*

270. *Pew Center Climate Table*, *supra* note 266.

271. *State Energy Profile: Illinois*, U.S. ENERGY INFO. ADMIN., http://www.eia.doe.gov/state/state_energy_profiles.cfm?sid=IL (last updated Jan. 20, 2011).

272. See *infra* Part II.C for a discussion of the increased production capability of wind turbines located offshore.

273. Illinois currently produces approximately 1.35 percent of its electricity using *all* types of renewable fuels, but will need to produce 18.75 percent *from wind alone* by 2025 in order to satisfy the RPS. *See Pew Center Climate Table*, *supra* note 266 (noting that "Other Renewables" produced 254,000 MWh of electricity in Illinois in July 2010, while "Total Net Electricity Generation" was 18,945,000 MWh).

3. Regulatory Uncertainty Opens the Door for Litigation and Operates as a Substantial Disincentive to Development

The ambiguity contained in existing Illinois law is representative of similar ambiguity in the laws of other Great Lakes states. Such ambiguity places developers in each state in a position very much like the one faced by Cape Wind before the amendment to OCSLA and the establishment of a streamlined federal permitting process[274] because, in each situation, the seemingly-applicable law does not expressly grant authority to any single agency.[275] As the litigation concerning Cape Wind has shown, regulatory uncertainty such as overlapping agency jurisdictions or ambiguous statutory language[276] provides fodder for NIMBY claims, allowing NIMBY claimants to exercise undue influence over the permitting, siting, and development processes.[277] Parties wishing to prevent or delay the implementation of a proposed offshore wind farm in the Great Lakes could file claims of inadequate jurisdiction similar to those filed by the plaintiffs in *Ten Taxpayer*,[278] *Alliance v. USACE*,[279] and *Alliance v. EFSB*.[280] Although the decisions in these cases overwhelmingly favored the respective permitting authorities and essentially allowed the wind farm development projects to move forward,[281] the costs and delays associated with defending such

274. *See supra* Part III (discussing the EPAct's amendment to OCSLA and the regulations subsequently promulgated by the BOEMRE).

275. *See supra* Part II.D (discussing the litigation concerning the fact that OCSLA was ambiguous in relation to offshore wind energy production in federal waters because it did not expressly grant permitting authority for offshore renewable energy to any agency); *supra* Part IV.B (discussing relevant Illinois law and concluding that current law does not expressly provide for permitting authority for offshore renewable energy development).

276. See *supra* Part IV.B for a discussion of the overlapping agency jurisdictions and ambiguous statutory language in Illinois.

277. See *supra* Part II.D for a description of NIMBY claims filed against Cape Wind.

278. Ten Taxpayer Citizens Grp. v. Cape Wind Assocs., 373 F.3d 183, 187 (1st Cir. 2004), *aff'g* 278 F. Supp. 2d 98 (D. Mass. 2003). In *Ten Taxpayer*, the plaintiffs asserted that federal permits were insufficient because Congress had ceded the power to regulate in Nantucket Sound to the state of Massachusetts. *Id.*

279. Alliance to Protect Nantucket Sound v. U.S. Dep't of the Army, 398 F.3d 105, 108 (1st Cir. 2005). In *Alliance v. USACE*, the plaintiffs asserted that the USACE had jurisdiction to permit only structures related to mineral extraction on the outer continental shelf. *Id.*

280. Alliance to Protect Nantucket Sound v. Energy Facilities Siting Bd., 932 N.E.2d 787, 798 (Mass. 2010). In *Alliance v. EFSB*, the plaintiffs asserted that the state authority for permitting transmission facilities did not have the ability to dispose of lands held in trust for the public. *Id.*

281. *See Alliance*, 398 F.3d at 111 (affirming the Massachusetts District Court's grant of summary judgment for Cape Wind); *Ten Taxpayer*, 373 F.3d at 197 (affirming the Massachusetts District Court's dismissal of the case against Cape Wind); *Alliance*, 932 N.E.2d at 815 (affirming the decision of the Siting Board to issue permits to Cape Wind); *supra* Part II.D (providing a complete discussion of each case).

suits are substantial,[282] and may discourage, inhibit, or even completely prevent offshore wind energy development in the Great Lakes region.[283]

Litigation-based disincentives to development will likely prove to be a more substantial roadblock in the Great Lakes region than on the Atlantic or Pacific coasts because, on the coasts, prospective developers may avoid the threat of potential litigation by choosing to site their project more than three miles from the coastline, thereby taking advantage of the federal leasing framework authorized by OCSLA and administered by the BOEMRE.[284] However, in the Great Lakes region, prospective developers have no such option because the entirety of the Lakes is under state jurisdiction.[285] Therefore, the Great Lakes states are at a severe disadvantage as compared to the coastal states in terms of renewable energy development and implementation. Effectively, the wind resource over the Great Lakes cannot be tapped under current law, as a wind farm developer is unlikely to endure the conflict and litigation involved in siting an offshore wind farm in state-controlled waters.[286] The Great Lakes states are therefore constrained from developing their renewable energy resources to their full potential by the disincentives to developers that are created by the regulatory uncertainty surrounding jurisdiction in state waters.

V. PROPOSAL

Offshore wind energy production in the Great Lakes could provide a stable, clean energy source[287] for the energy-hungry populations in cities such as Chicago, Illinois; Gary, Indiana; and Milwaukee and

282. Martin, *supra* note 68, at 466 (noting that, while the concerns voiced by NIMBY groups often seem frivolous in comparison to the community benefits of wind power, "what is not frivolous is the money and delay caused by NIMBY litigation"). For example, the Cape Wind project was proposed in 2001 but has been immersed in litigation ever since. *Id.* at 450. The project received final approval on October 6, 2010, and construction is expected to take up to two years. *See generally* Cape Wind Lease, *supra* note 4 (stating the terms of the lease agreement between Cape Wind Associates, LLC and the BOEMRE).

283. Ziza, *supra* note 72, at 619–20 ("[F]uture investors in offshore wind projects in the United States, if any, might be deterred by the story [of adversarial legalism] behind Cape Wind."); *see also* 20% WIND BY 2030, *supra* note 19, at 124 (noting that uncertainty arising from "the lack of well-defined siting strategies" can contribute to delays in deployment of offshore wind technology).

284. As discussed *supra* Part III.C, the leasing scheme established under OCSLA applies only in federal waters.

285. *See* ILL. COASTAL MGMT. PLAN, *supra* note 221, at 33–34 (showing state boundary lines of all states bordering Lake Michigan and describing the Illinois borders within Lake Michigan).

286. *See supra* Part II.D (discussing the litigation that has delayed the construction of Cape Wind for almost ten years).

287. See *supra* Part II.A for a description of the benefits of wind power.

Green Bay, Wisconsin; where traditional electricity generation profiles are costing citizens hundreds of millions of dollars in healthcare costs each year.[288] However, in light of the regulatory uncertainty remaining in the wake of the amendment to OSCLA due to its failure to address offshore renewable energy permitting in state waters,[289] implementation of offshore wind technology in the Great Lakes region will likely lag behind offshore wind development on the coasts.[290]

In order to effectuate the goals outlined in their respective RPSs[291] and protect the health and economic well-being of their citizens,[292] the Great Lakes states must establish a permitting process enabling prospective offshore wind farm developers to avoid the costly and time-consuming NIMBY litigation that is facilitated by regulatory uncertainty.[293] Because current law is ambiguous when applied to

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288. *See* Hawthorne, *supra* note 225. According to Hawthorne,

> Pollution from Chicago's two coal-fired power plants costs neighboring communities $137 million a year in hidden health damages. . . . The latest report did not include the hidden costs of the State Line Power Station along Lake Michigan, just a few feet over the border from Chicago in Hammond [Indiana]. A recent Tribune report documented how the Indiana plant is far dirtier than either of the Chicago plants.

Id. Indiana is ranked tenth in the nation in terms of energy consumption, and produces approximately 95 percent of its electricity using coal. *Indiana State Energy Profiles*, U.S. ENERGY INFO. ASS'N, http://www.eia.doe.gov/state/state_energy_profiles.cfm?sid=IN (last updated Jan. 20, 2011). Approximately two-thirds of Wisconsin's electricity is produced using coal, while nuclear and natural gas supply most of the remaining one-third. *Wisconsin State Energy Profiles*, U.S. ENERGY INFO. ASS'N, http://www.eia.doe.gov/state/state_energy_profiles.cfm?sid=WI (last updated Jan. 20, 2011).

289. *See supra* Part IV.A (discussing why OCSLA does not apply to state waters); *supra* Part IV.B (discussing how the limitations inherent in OCLSA create regulatory uncertainty in states).

290. *See supra* Part IV.B.3 (explaining how litigation based on regulatory uncertainty operates as a disincentive to development).

291. For a discussion of RPSs generally, see *supra* Part II.B.2. For a discussion of Illinois' RPS specifically, see *supra* Part IV.B.2. Indiana does not have an RPS. *Indiana State Energy Profiles*, *supra* note 288. Wisconsin's RPS requires utility companies to produce 10 percent of their electricity from renewable sources by 2015. WIS. STAT. ANN. § 196.378 (West 2010). Michigan's RPS requires 10 percent of the electricity generated by utility companies in the state to come from renewable sources by 2015. MICH. COMP. LAWS ANN. § 460.1021–.1053 (West 2010). Minnesota's RPS requires utility companies to produce 30 percent of their electricity from renewable sources by 2020. *Id.* § 216B.1691. New York's RPS requires that its utility companies produce 29 percent of their electricity from renewable sources by 2015. N.Y. PUB. SERV. CASE 03-E-0188. Ohio requires that its utility companies produce 12.5 percent of their electricity from renewable sources by 2025. OHIO REV. CODE ANN. § 4928.64 (West 2010). Pennsylvania's RPS requires that utility companies provide 18.5 percent of their electricity from renewable sources by 2020. 66 PA. CONS. STAT. ANN. § 1648.1 (West 2010).

292. *See supra* Part II.A (detailing the environmental, economic, and human-health benefits of electricity generated from wind).

293. *See generally supra* Part II.D (describing the litigation surrounding the Cape Wind project, which began almost ten years ago in 2001 when Ten Taxpayer Citizens Group filed the first claim against Cape Wind Associates).

offshore wind farms, each state will likely need to amend its laws governing the use of its submerged lands to allow an agency or entity of the state to administer the public trust in the permitting and siting of offshore wind development.[294] Although energy policy has typically been the province of individual states,[295] a multi-state compact governing offshore wind siting procedures would allow each Great Lakes state to take advantage of its wind resources[296] while spreading the costs of the legal, technical, and scientific analyses involved in the development of regulations.[297]

Such a multi-state compact is not without precedent in the Great Lakes region.[298] Indeed, each of the eight states in the Great Lakes region has joined in the Great Lakes Basin Compact ("GLBC"), a multi-state compact enacted to ensure proper use and conservation of the water resources of the Great Lakes.[299] The GLBC established a

294. *See supra* Part IV (using Illinois as an example to illustrate the ambiguity of current state law with respect to offshore wind farms); *see also* REPORT OF THE MICHIGAN GREAT LAKES WIND COUNCIL, *supra* note 211, at 32 (noting that the Michigan Great Lakes Wind Council had determined that an amendment to the Michigan statute regulating use of Great Lakes bottomlands and a new statute were both necessary to complete the objective of installing an offshore wind farm); H.R. 6564, 95th Leg., Reg. Sess. (Mich. 2010) (seeking to add offshore wind permitting procedures to Michigan state law).

295. *See* Bynum, *supra* note 39, at 1578 ("[W]hile the federal government has the authority to regulate interstate energy transmission, only state and local governments can oversee construction of electricity generation and transmission facilities.").

296. *See* MARC SCHWARTZ ET AL., ASSESSMENT OF OFFSHORE WIND ENERGY RESOURCES FOR THE UNITED STATES, NATIONAL RENEWABLE ENERGY LABORATORY 29–103 (June 2010), *available at* http://www.nrel.gov/docs/fy10osti/45889.pdf (providing a detailed study of the wind energy potential in all fifty states, including the Great Lakes states).

297. For example, it took the MMS almost four years to conduct the rulemaking proceedings that resulted in the development of the leasing process. The EPAct amended OCSLA on August 8, 2005, Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, but the final regulations were not released until April 29, 2009, *see* Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,637 (Apr. 29, 2009).

298. Act of July 24, 1968, Pub. L. No. 90-419, 82 Stat. 414. Massachusetts and Rhode Island have entered into a similar cooperative agreement by signing a Memorandum of Understanding that requires coordination between the states during the development of offshore wind farms within an area of Rhode Island Sound. Alex Kuffner, *Cooperation Seen as Key to R.I., Mass. Offshore Wind Farm Effort*, PROVIDENCE J. (Dec. 11, 2010, 1:00 AM), http://www.projo.com/news/content/FEDERAL_WIND_WORKSHOP_12-11-10_T3LDO74_v8.142ac3a.html. Unlike the GLBC, the Memorandum establishes only that the states share information and mutually agree upon the specifications of any offshore wind farm located in Rhode Island Sound. Memorandum of Understanding Between the State of Rhode Island and the Commonwealth of Massachusetts Identifying an Area of Mutual Interest (July 26, 2010) [hereinafter Rhode Island–Massachusetts Memorandum], *available at* http://www.projo.com/news/2010/pdf/0726_offshore memo.pdf. The permitting process for any such wind farm remains within the jurisdiction of the BOEMRE. *Id.*

299. Rhode Island–Massachusetts Memorandum, *supra* note 298; *see also* 45 ILL. COMP. STAT. 145/1 § 1 (Article I) (2008) (detailing the purposes of the GLBC). The GLBC gained full

commission comprised of members designated by each member state that collects data and information related to water use and recommends regulations for developing the Great Lakes water resources.[300]

The development of an offshore wind generation permitting process through multi-state action should occur in two phases. First, the Great Lakes states should act together to create a multi-state commission with the mandate to promulgate regulations, issue permits, and generally oversee the efficient development of offshore wind energy generation facilities in the Great Lakes. Thus, the role of the commission would be analogous to the "lead agency" role played by the BOEMRE in federal waters.[301] The responsibilities of the commission might also include duties resembling those established for the Great Lakes Commission, such as making policy recommendations to member states, collecting data, and publishing reports.[302] In order to ensure the effective operation of the commission, the enabling legislation must be passed by each state and must garner the consent of the U.S. Congress.[303] Additionally, in order to minimize the potential for a judicial abrogation of the powers granted to the commission, the commission should be explicitly granted the ability to administer the public trust.[304]

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effect in 1968, when Congress granted consent to the compact, as required by Article I, Section 10 of the U.S. Constitution. Act of July 24, 1968, Pub. L. No. 90-419, 82 Stat. 414.

300. 45 ILL. COMP. STAT. 145/1 (Article IV); Act of July 24, 1968, Pub. L. No. 90-419, 82 Stat. 414.

301. Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. at 19,638.

302. 45 ILL. COMP. STAT. 145/1 (Article VI).

303. Given the emphasis placed on the development of alternative and renewable energy by the current administration, and the recently-enacted federal legislation allowing offshore wind energy development on the coasts, such Congressional consent is likely to be readily granted. In fact, President Obama hosted a workshop in Chicago, Illinois, on October 26–27, 2010, with the objective of bringing together regulators, environmental advocates, and other stakeholders to discuss methods for gaining greater certainty and coordination for offshore wind in the Great Lakes. Press Release, U.S. Dep't of Energy, Obama Administration Hosts Great Lakes Offshore Wind Workshop in Chicago with Great Lakes Wind Collaborative (Oct. 28, 2010), http://www.energy.gov/news/9736.htm. According to the Chair of the White House Council on Environmental Quality, Nancy Sutler,

> President Obama has made an unprecedented commitment to renewable energy development in the United States. Increasing our wind power generation is a critical component to building greater energy independence and creating jobs here at home. We must improve and increase the lines of communication to bring wind development in the Great Lakes closer to fruition.

Id.

304. *See generally* Alliance to Protect Nantucket Sound v. Energy Facilities Siting Bd., 932 N.E.2d 787 (Mass. 2010) (contesting the validity of a permit allowing transmission lines to run across submerged land under Massachusetts state control, with Plaintiffs arguing that the state permitting agency did not have explicit authority to administer the public trust). Cursory statements that offshore wind is in the interest of the public are insufficient and must be supported

In the second phase of multi-state action, the offshore wind commission should promulgate regulations governing the issuance of permits for offshore wind development in the Great Lakes. The Great Lakes regulations should be designed to avoid regulatory uncertainty in order to attract both public and private sector investment and enable the Great Lakes states to take full advantage of the benefits of electricity generated by offshore wind.[305] Of course, the unique environmental attributes of the Great Lakes should be carefully considered and balanced against this motivation to develop offshore wind resources.[306] The regulations should also be developed in consultation with the USACE and other relevant federal agencies, such as the U.S. Environmental Protection Agency, in order to ensure that the cumulative requirements imposed upon developers are compatible and not excessively burdensome.[307] The interested public should also be given an opportunity to participate in the development of the regulations through the submission and incorporation of comments.[308]

For the most part, the substance of the Great Lakes regulations should mimic the regulations administered by the BOEMRE.[309] Like the BOEMRE's regulations, the Great Lakes regulations should offer two types of leases: long-term leases intended for commercial wind farm development, and short-term leases intended for exploratory or experimental use.[310] This framework will provide developers with the

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by specific and verifiable findings of fact. Envtl. Law & Policy Ctr. v. U.S. Nuclear Reg. Comm'n., 470 F.3d 678, 683 (7th Cir. 2006).

305. REPORT OF THE MICHIGAN GREAT LAKES WIND COUNCIL, *supra* note 211, at 32.

306. *Id.* at 36 ("The permitting and leasing process should strike a balance between resource protection and development.").

307. *Id.* at 33.

308. The BOEMRE regulations were promulgated in accordance with the Administrative Procedure Act, which requires that interested persons be given an opportunity to submit written and/or oral data and arguments, and that the agency incorporate a statement of the basis and purpose of the rules after consideration of public commentary. 5 U.S.C. § 553 (2010). The offshore wind development statute that was recently proposed in Michigan was not developed using notice-and-comment procedures but requires at least four public hearings at various stages in the permitting process for each proposed offshore wind farm. H.R. 6564, 95th Leg., Reg. Sess. (Mich. 2010). The availability and quality of stakeholder input was especially beneficial to the USACE's evaluation of the Cape Wind proposal given the novelty of offshore wind development and the polarized nature of public opinion in the area. Watson & Courtney, *supra* note 42, at 268–76.

309. The Michigan Great Lakes Wind Council has advocated using an approach similar to that established by the BOEMRE to issue permits for offshore renewable energy development in the Great Lakes. REPORT OF THE MICHIGAN GREAT LAKES WIND COUNCIL, *supra* note 211, at 33. In late 2010, a bill was introduced to the Michigan House of Representatives that follows the structure of the BOEMRE regulations but was not passed during the 2010 session. H.R. 6564 (seeking to add offshore wind permitting procedures to Michigan state law).

310. 30 C.F.R. § 285.112 (2009).

flexibility necessary to enable experimentation, and will ensure that the commercial-scale technologies implemented in the Great Lakes are those best suited to the unique conditions present on the Lakes.[311]

The Great Lakes regulations should also include a bidding system similar to the system used by the BOEMRE.[312] Competitive bidding will ensure that the developer who places the greatest value on the parcel offered in a lease sale will receive the right to develop it. Unlike the BOEMRE's regulations, but in light of comments received by the MMS in promulgating its rules, the Great Lakes regulations might include a mechanism such as an affidavit of good faith that would ensure that auction participants are not entering the auction simply to deter development by artificially raising the price of the lease.[313]

Leases offered to developers under the Great Lakes regulations should include several provisions to ease the burden of acquiring permits and ensure stability for developers over the life of their leases.[314] First, leases should include the right to install transmission facilities, in order to alleviate some of the permitting burden placed on prospective developers.[315] The acquisition of transmission rights will be simpler in the Great Lakes than it is on the coasts, because developers do not need to acquire transmission rights in federal waters in addition to rights in state waters.[316] Second, leases should include provisions for renewal to provide for increased stability in the Great Lakes' offshore wind industry.[317] Stability in leasing will be valuable both to lessees, who will not be forced to remove productive turbines after the initial term of their leases,[318] and to electricity consumers, who

311. *See* Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,658 (Apr. 29, 2009) (discussing how the two lease structures satisfy developers' need for flexibility in testing and implementing technology).

312. 30 C.F.R. § 285.220–.232.

313. Schaumberg & Colamaria, *supra* note 111, at 652–53 (questioning whether the fee required by the BOEMRE in order to enter the auction process is sufficient to deter bad faith bidders from entering the bidding solely for the purpose of increasing the costs for bona fide participants).

314. *See* REPORT OF THE MICHIGAN GREAT LAKES WIND COUNCIL, *supra* note 211, at 32–33 (noting that the permitting process should be designed to attract public as well as private sector investment and should not be overly burdensome on developers).

315. Commercial leases issued by the BOEMRE include the right to transmit electricity produced on the outer continental shelf across federally-controlled land. 30 C.F.R. § 285.200.

316. *See generally* Alliance to Protect Nantucket Sound v. Energy Facilities Siting Bd., 932 N.E.2d 787 (Mass. 2010) (describing a prospective wind farm developer's struggle to acquire transmission rights within both state and federal waters).

317. *See supra* Part II.A (discussing the analogous problems associated with volatility in the natural gas-generated electricity market).

318. *See* 30 C.F.R. § 285.425 (allowing a lessee to continue to conduct activities upon renewal of a lease).

will benefit from consistent long-term electricity supply and prices.[319] Finally, leases should include provisions for joint and several liability in the event that a lessee desires to transfer the lease to a third party.[320] Such a liability provision would ensure that environmental risks are adequately considered by all parties to the transfer of a lease.[321]

In order to compensate states and citizens for the wind farms' infringement on the public trust, the Great Lakes regulations should provide for collection of rent and royalties from lessees, and for distribution of collected funds among states affected by the lease in question.[322] The percentage of total rent collected by the affected states in the Great Lakes region should be much greater than the mere 27 percent collected by states on the coasts, as the 27 percent figure was designed to compensate states for incidental effects of leases outside their boundaries.[323] Because the Great Lakes states would own the submerged land subject to lease, the infringement on the ownership rights of the states and their citizens would be more than incidental; the affected states should be compensated to the full extent of the infringement on their ownership right in the bottomlands.[324]

As an additional financial protection of the public trust in the Great Lakes, the regulations should require lessees to provide the commission with a financial assurance instrument that could be collected by the commission in the event that the lessee becomes insolvent or fails to

319. *See supra* Part II.A (explaining that volatility in the price of electricity generated by natural gas causes uncertainty and concern among consumers).

320. *See* 30 C.F.R. § 285.411 (providing for joint and several liability among prior and subsequent lessees on the outer continental shelf and referencing environmental and operational problems as specific sources of liability).

321. *Id.*

322. *See* H.R. 6564, 95th Leg., Reg. Sess. (Mich. 2010) (providing that 70 percent of the rent and royalty payments collected be expended in the protection and management of the bottomlands, 23 percent be deposited in an energy efficiency and renewable energy loan fund, and the remaining 7 percent be used to carry out the duties of the Michigan Public Service Commission under the proposed offshore wind permitting procedures); *see also* REPORT OF THE MICHIGAN GREAT LAKES WIND COUNCIL, *supra* note 211, at 36–37 (recommending that the permitting agency direct revenue received under leases to the state in order to offset the impacts of offshore wind development).

323. *See* 43 U.S.C. § 1337(p)(2)(B) (2006) (directing the Secretary of the Interior to pay 27 percent of the combined royalty and rental revenues to states whose submerged lands are in close proximity to a wind power development located on federally-controlled land); *see also* 30 C.F.R. § 285.540–.543 (determining a state's share of revenue according to a formula using relative proximity to a project to approximate relative impact of the project on the state); Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf, 74 Fed. Reg. 19,678 (Apr. 29, 2009) (responding to comments questioning whether distance should be the primary factor in determining the equitable share of revenue to be received by a state).

324. *See supra* Part IV.A (explaining that the states surrounding the Great Lakes have jurisdiction over the bottomlands).

comply with a provision of the lease.[325] The value of the financial assurance should be set at an amount that would allow the commission to decommission or otherwise dispose of any facilities abandoned by the lessee.[326]

Finally, the Great Lakes regulations should require detailed plans at several stages of the development process in order to ensure that each action taken by lessees complies with state and federal law. Like the plans required by the BOEMRE, the plans submitted by lessees in the Great Lakes should enable the Great Lakes offshore wind commission to conduct evaluations to ensure compliance with NEPA and the CZMA.[327] The Great Lakes regulations should also provide a mechanism for the commission to evaluate and approve decommissioning plans in the event a lessee terminates a lease.[328]

VI. CONCLUSION

Despite political drive advocating for the adoption of renewable energy generally, and offshore wind specifically, the regulatory framework in existence in the Great Lakes states remains ambiguous with respect to the ability of any single agency or state-authorized body to issue permits for the construction of offshore wind farms. Similar ambiguities have encouraged litigation, which has, in turn, operated as a costly and time-consuming disincentive to the implementation of offshore wind technology across the United States. If the Great Lakes states truly desire to utilize the enormous offshore wind potential that exists within their grasp, they must amend their respective statutes to vest permitting authority in a single agency. In order to accomplish this objective in the most effective and efficient manner, the Great Lakes states should cooperate in multi-state action, using the Great Lakes Basin Compact and the regulations promulgated by the BOEMRE as a blueprint.

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325. *See* 30 C.F.R. § 285.515–.521 (requiring financial assurances for commercial and limited leases issued by the BOEMRE for parcels on the outer continental shelf); *id.* § 285.535 (requiring forfeiture of a bond if a lessee fails to comply with a term of a lease issued by the BOEMRE); *id.* § 285.913 (requiring forfeiture of a bond if a lessee fails to comply with a decommissioning plan).

326. *See id.* § 285.517 (providing that the BOEMRE may determine the amount of a required financial assurance on a case-by-case basis but will base the amount on estimates of the cost to meet all obligations under a lease, including decommissioning).

327. *See id.* § 285.611–.612 (requiring developers submitting SAPs to include sufficient information to allow the BOEMRE to comply with NEPA and the CZMA); *id.* § 285.646–.647 (requiring developers submitting GAPs to submit the same information).

328. *See id.* § 285.905 (requiring developers on the outer continental shelf to submit decommissioning plans to the BOEMRE).