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## Note

# UNCLOS: Securing the United States' Future in Offshore Wind Energy

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The United States faces an energy revolution.<sup>1</sup> Oil and coal have long been the foundation of the world's energy resources. Few countries have enjoyed the benefits of oil and coal power more than the United States.<sup>2</sup> Centuries of reliance on fossil fuels are now coming back to haunt the industrialized world. The carbon dioxide emitted from the burning of fossil fuel has created a greenhouse effect that is slowly but surely warming the planet.<sup>3</sup> The effects of global warming are devastating: global warming has been credited as the cause of rising sea levels, drought, starvation, escalating political tensions, and violence.<sup>4</sup> As the terrifying effects of global warming are being realized, there is a growing call for a massive reduction in

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1. Kenneth Chang, *As the Earth Warms, The Hottest Issue is Energy*, N.Y. TIMES, Nov. 4, 2003, at F1.

2. *Id.* ("The United States produces more carbon dioxide than any other country by far. Each American, on average, generates about 45,000 pounds of carbon dioxide a year. That is about twice as much as the average person living in Japan or Europe and many times more than someone living in a developing country like Zimbabwe, China or Panama.")

3. *Id.* ("Most scientists believe the billions of tons of carbon dioxide released since the start of the Industrial Revolution are in part to blame for the one-degree rise in global temperatures over the past century. Carbon dioxide concentrations are now 30 percent higher than preindustrial levels.")

4. See Ban Ki Moon, *A Climate Culprit in Darfur*, WASH. POST, June 16, 2007, at A15 ("Amid the diverse social and political causes, the Darfur conflict began as an ecological crisis, arising at least in part from climate change."). See generally IPCC – Intergovernmental Panel on Climate Change, <http://www.ipcc.ch> (last visited Oct. 22, 2008).

carbon dioxide emissions.<sup>5</sup> The primary solution to reduce carbon dioxide emissions is to change how energy is generated. This call for change has led to developing alternative energy technologies to replace fossil fuels.<sup>6</sup> While currently only a small sector of the energy market, alternative energy promises to provide a much larger share in the near future.<sup>7</sup> As this burgeoning industry in alternative energy grows, the United States must take full advantage of all opportunities for alternative energy development. To guarantee its sources of energy and economic security, the United States must act now to protect its alternative energy interests.

Wind power is a rapidly growing source of alternative energy that is likely to be a fundamental feature in the United States' energy future.<sup>8</sup> The success of traditional terrestrial wind turbines combined with an increasing demand for alternative energy has led to increased proposals for developing offshore wind resources.<sup>9</sup> Because oceans and seas are governed by a wide body of treaties, the construction of offshore wind installations will raise questions of international law.<sup>10</sup> Ratification of the United Nations Convention on the Law of the Sea ("UNCLOS")<sup>11</sup> by the United States would clarify the issues of international law for U.S. development of offshore wind

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5. See Ban, *supra* note 4 (noting an agreement by world leaders to cut greenhouse gas emissions by 50 percent).

6. See Matt Richtel, *Start-Up Fervor Shifts to Energy In Silicon Valley*, N.Y. TIMES, Mar. 14, 2007, at C4 ("Apart from the profit motive, many here say they are driven by more unselfish concerns: cleaning up the atmosphere and creating energy independence for the United States.").

7. See *id.*

8. Press Release, World Wind Energy Association, New World Record in Wind Power Capacity: 14,9 GW added in 2006 – Worldwide Capacity at 73,9 GW (Jan. 29, 2007), available at [http://www.wwindea.org/home/images/stories/pdfs/pr\\_statistics\\_2006\\_29010.pdf](http://www.wwindea.org/home/images/stories/pdfs/pr_statistics_2006_29010.pdf) ("The currently installed wind power capacity generates more than 1% [73.9 GW] of the global electricity consumption. Based on the accelerated development, WWEA has increased its prediction for 2010 and expects now [160 GW] to be installed by the end of 2010."). See also 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, 178–82 (2004) (discussing the growth of wind energy).

9. See, e.g., Cape Wind, <http://www.capewind.org> (last visited Dec. 18, 08). Cape Wind is a proposed offshore wind farm that would be located in the Nantucket Sound.

10. See Gail Osherenko, *New Discourses on Ocean Governance: Understanding Property Rights and the Public Trust*, 21 J. ENVTL. L. & LITIG. 317, 336 (2006) (discussing the role of international law on offshore property rights).

11. United Nations Convention on the Law of the Sea, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

power.<sup>12</sup>

UNCLOS is a multinational treaty defining and codifying the law of the sea. On May 15, 2007, President Bush submitted UNCLOS to the Senate for its advice and consent.<sup>13</sup> The Senate's ratification of UNCLOS will secure U.S. interests in the development of offshore wind power by providing a uniform body of law for offshore development. Most importantly, it will define jurisdiction, and provide for dispute resolution.

This Note examines how the United States' ratification of UNCLOS will secure U.S. interests in the development of offshore wind power. Section I of this Note outlines the status of offshore wind power within the United States and examines the current international and U.S. law that applies. Section II of this Note analyzes how UNCLOS provides a more comprehensive body of law governing offshore resources. This Note concludes that UNCLOS will secure and encourage the exploitation of offshore wind resources by providing the security and clarity of law necessary to promote development.

## I. BACKGROUND

### A. OFFSHORE WIND TURBINES

Offshore wind power generates energy the same way terrestrial wind power does, but it requires additional support structures that are unnecessary on land. Wind turbines are used to harness the mechanical energy of the wind and convert it by means of a generator into electrical energy.<sup>14</sup> On land, a tower and a base are sufficient to secure the generator at a height necessary to operate effectively.<sup>15</sup> At sea, the generator

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12. See Karen N. Scott, *Tilting at Offshore Windmills: Regulating Wind Farm Development Within the Renewable Energy Zone*, 18 J. ENVTL. L. 89 (2006) (analyzing the application of UNCLOS to offshore wind farms in The United Kingdom).

13. President's Statement on Advancing United States Maritime Interests, 43 WEEKLY COMP. PRES. DOC. 635 (May 15, 2007) [hereinafter Statement on Maritime Interests] ("First, I urge the Senate to act favorably on U.S. accession to the United Nations Convention on the Law of the Sea during this session of Congress. . . . It will secure U.S. sovereign rights over extensive marine areas, including the valuable natural resources they contain."). As of October 5, 2008, the Senate had yet to ratify UNCLOS.

14. Wind and Hydropower Technologies Program, U.S. Department of Energy, *How Wind Turbines Work*, Nov. 30, 2006, [http://www1.eere.energy.gov/windandhydro/wind\\_how.html](http://www1.eere.energy.gov/windandhydro/wind_how.html).

15. See *id.*

does not need to be as high, but the construction of the wind turbine still faces some challenges.<sup>16</sup> The exact method of building an offshore wind turbine depends on the specifics of the location. The general method involves building a platform rooted in the seabed that functions as a foundation for the wind turbine.<sup>17</sup> Alternatively, floating platforms tethered to the seafloor have been proposed as a means of building wind turbines where traditional foundations are not feasible.<sup>18</sup>

Building a wind turbine at sea has advantages over building one on land. Wind speeds at sea tend to be higher and more consistent than on land, resulting in higher energy production.<sup>19</sup> Terrestrial turbines also encounter more resistance from local citizenry because of perceived aesthetic harm.<sup>20</sup> While not immune from such resistance,<sup>21</sup> offshore wind turbines may provide a more tolerable alternative to terrestrial turbines.

Offshore wind power does have certain disadvantages. Building turbines at sea incurs a higher initial cost.<sup>22</sup> By placing the generators farther away from the power grid, transmission costs also increase.<sup>23</sup> Placing the turbines at sea

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16. See ARI REEVES, RENEWABLE ENERGY POLICY PROJECT, WIND ENERGY FOR ELECTRIC POWER: A REPP ISSUE BRIEF 7 (2003), available at [http://www.repp.org/articles/static/1/binaries/wind%20issue%20brief\\_FINAL.pdf](http://www.repp.org/articles/static/1/binaries/wind%20issue%20brief_FINAL.pdf).

17. *Id.*

18. *Id.* ("In the future, wind turbines could be mounted on floating platforms, tethered to the sea floor . . . Preliminary feasibility studies suggest that facilities of this type could be built; however, further research is needed before such a wind farm can become a reality."). See also Matthias Altmann & Frank Richert, *Hydrogen Production At Offshore Wind Farms*, in OFFSHORE WIND ENERGY SPECIAL TOPIC CONFERENCE, BRUSSELS, BELGIUM 10–12 DECEMBER 2001 (European Wind Energy Association CD-ROM, 2001), available at <http://www.hydrogen.org/wissen/pdf/GEO2001OffshoreH2.pdf>; Andrew R. Henderson & Mino H. Patel, *Floating Offshore Wind Energy*, in WIND ENERGY: SWITCH ON TO WIND POWER. PROCEEDINGS OF THE 20TH BRITISH WIND ENERGY ASSOCIATION CONFERENCE. CARDIFF UNIVERSITY OF WALES, 2-4 SEPTEMBER 1998 (Simon Powles, ed., 1998), available at [http://www.owen.eri.ac.uk/documents/bwea20\\_48.pdf](http://www.owen.eri.ac.uk/documents/bwea20_48.pdf).

19. REEVES, *supra* note 16, at 7 ("Average wind speeds over water are typically 20% higher than nearby locations on land. Thus, due to the cubic relationship between velocity and power, an offshore turbine can expect to capture 50% more wind energy than a similar onshore turbine.").

20. See Adam Dinnell & Adam 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 (2007).

21. The Cape Wind project proposed in Nantucket Sound has encountered stiff resistance from Massachusetts residents. See Dinnell & Russ, *supra* note 20, at 547–48.

22. REEVES, *supra* note 16, at 14.

23. REEVES, *supra* note 16, at 19. While there may be more transmission cost

also raises a potential to interfere with shipping and fishing.

Offshore wind turbines are often built close to shore in order to minimize the increased cost of locating them at sea.<sup>24</sup> This trend may be changing. China has proposed a wind farm that would be located 30 miles offshore.<sup>25</sup> Decommissioned oil platforms have been suggested as locations for wind turbines.<sup>26</sup> As oil drilling expands farther offshore, there may be incentives to locate wind turbines much farther out at sea than currently planned.<sup>27</sup>

## B. THE LAW OF THE SEA

In 1958, four conventions (the "1958 Conventions") were adopted at the First United Nations Conference on the Law of the Sea in Geneva: the Convention on the Territorial Sea and the Contiguous Zone,<sup>28</sup> the Convention on the Continental Shelf,<sup>29</sup> the Convention on the High Seas<sup>30</sup> and the Convention on Fishing and Conservation of the Living Resources of the High Seas.<sup>31</sup> The United States has ratified all four treaties. As a result, these treaties govern U.S. rights and obligations

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involved with offshore wind power than conventional coal or nuclear power, the transmission cost may be less than terrestrial wind power since terrestrial generators are often in remote locations. *See id.*

24. REEVES, *supra* note 16, at 7.

25. *China to Build Wind Farms Offshore*, CHINA DAILY, May 16, 2005, available at [http://www.chinadaily.com.cn/english/doc/2005-05/16/content\\_442680.htm](http://www.chinadaily.com.cn/english/doc/2005-05/16/content_442680.htm).

26. John Geoghegan, *Inherit the Wind*, WIRED, Feb. 2007 at 144, 146.

27. *See* Paul L. Kelly, Senior Vice President, Rowan Companies, Inc., Presentation to the Global Offshore Drilling Conference: Evaluating the Impact of the Law of the Sea Treaty on Future Offshore Drilling (Apr. 19, 2005) at 4, available at <http://web.archive.org/web/20071201115855/http://www.clgd.org/downloads/unclos/GlobOffDrlg05.pdf>.

28. Convention on the Territorial Sea and the Contiguous Zone, Apr. 29, 1958, 15 U.S.T. 1606, 516 U.N.T.S. 206 [hereinafter Territorial Sea Convention]. The treaty entered into force Sept. 10, 1964, and is ratified by 51 countries including the United States.

29. Convention on the Continental Shelf, Apr. 29, 1958, 15 U.S.T. 471, 499 U.N.T.S. 312 [hereinafter Continental Shelf Convention]. The Treaty entered into force June 10, 1964, and is ratified by 58 countries, including the United States.

30. Convention on the High Seas, Apr. 29, 1958, 13 U.S.T. 2312, 450 U.N.T.S. 82 [hereinafter High Seas Convention]. The treaty entered into force Sept. 30, 1962, and is ratified by 63 countries including the United States.

31. Convention on Fishing and Conservation of the Living Resources of the High Seas, Apr. 29, 1958, 17 U.S.T. 138, 559 U.N.T.S. 286 [hereinafter Fishing and Conservation Convention]. The treaty entered into force March 20, 1966, and is ratified by 38 countries including the United States.

regarding the neighboring oceans and seas.<sup>32</sup>

### 1. Geneva Conventions on the Territorial Sea and Contiguous Zone

The Geneva Convention on the Territorial Sea and Contiguous Zone defines the waters adjacent to the land of a state that are considered to be within the territory of the state.<sup>33</sup> Within this section of the ocean, a state retains complete sovereign authority.<sup>34</sup> This belt of sea may extend up to 12 miles from the coastline but not beyond.<sup>35</sup> Though the state maintains sovereign authority, it is required not to restrict or hamper the innocent passage of ships within its territorial waters.<sup>36</sup> In addition to the territorial waters, the Convention provides for a contiguous zone which extends beyond the territorial sea. This zone may not expand more than 12 miles from the baseline, wherein the state may exercise control for the purposes of preventing and punishing infringements of regulations that might occur within its territorial sea.<sup>37</sup>

The Convention on the Territorial Sea protects the coastal state's complete sovereign right over the territorial sea, which includes any contemplated use, such as constructing offshore

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32. See Convention on the Law of Treaties, art. 26, May 23, 1969, 1155 U.N.T.S. 331 ("Every treaty in force is binding upon the parties to it and must be performed by them in good faith."). The treaty entered into force on Jan. 27, 1980. Though the United States has signed but not ratified the Vienna Convention, it describes the obligations treaties will impose. Because the United States is a party to the Geneva Conventions that apply to the law of the sea, the rights and obligations defined within the treaties will be the applicable law.

33. Territorial Sea Convention, *supra* note 28, art. 1, 15 U.S.T. at 1608, 516 U.N.T.S. at 206 ("The sovereignty of a State extends, beyond its land territory and its internal waters, to a belt of sea adjacent to its coast, described as the territorial sea.").

34. *Id.* at art. 1, 15 U.S.T. at 1608, 516 U.N.T.S. at 206.

35. *Id.* at art. 24, 15 U.S.T. at 1613, 516 U.N.T.S. at 220.

36. *Id.* at art. 14, 15 U.S.T. at 1610, 516 U.N.T.S. at 214 ("Subject to the provisions of these articles, ships of all States, whether coastal or not, shall enjoy the right of innocent passage through the territorial sea.").

37. *Id.* at art. 24, 15 U.S.T. at 1613, 516 U.N.T.S. at 220. Article 24 provides:

1. In a zone of the high seas contiguous to its territorial sea, the coastal State may exercise the control necessary to: (a) Prevent infringement of its customs, fiscal, immigration or sanitary regulations within its territory or territorial sea; (b) Punish infringement of the above regulations committed within its territory or territorial sea.

2. The contiguous zone may not extend beyond twelve miles from the baseline from which the breadth of the territorial sea is measured."

*Id.*

wind turbines, and excludes other countries from utilizing the wind resources within that region.<sup>38</sup> The only limitation is that offshore turbines must not interfere with established shipping lanes, so as not to impede innocent passage.<sup>39</sup>

## 2. *Geneva Conventions on the Continental Shelf*

The Geneva Convention on the Continental Shelf defines the state's rights to the seabed of the continental shelf that extends past the territorial waters.<sup>40</sup> The state exercises "sovereign rights for the purpose of exploring it and exploiting its natural resources."<sup>41</sup> "Natural resources" are defined as "mineral and other non-living resources of the seabed" as well as sedentary living organisms.<sup>42</sup> This right over seabed resources is exclusive to the extent that it does not depend on occupation of the continental shelf.<sup>43</sup> Even if the coastal state does not explore or exploit a natural resource, no other state may undertake to do so.<sup>44</sup> These sovereign rights, however, do not extend to the superjacent waters.<sup>45</sup> The state is permitted to construct installations to facilitate the exploration and exploitation of seabed resources on the continental shelf,<sup>46</sup> so

38. *Id.* at art. 1, 15 U.S.T. at 1608, 516 U.N.T.S. at 206–08.

39. *See id.* at art. 14, 15 U.S.T. at 1610–12, 516 U.N.T.S. at 214.

40. Continental Shelf Convention, *supra* note 29, art. 1, 15 U.S.T. at 473, 499 U.N.T.S. at 312. Article 1 provides:

[T]he term "continental shelf" is used as referring . . . to the sea-bed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas . . . .

*Id.*

41. *Id.* at art. 2(1), 15 U.S.T. at 473, 499 U.N.T.S. at 312.

42. *Id.* at art. 2(4), 15 U.S.T. at 473, 499 U.N.T.S. at 314 ("The natural resources referred to in these articles consist of the mineral and other non-living resources of the sea-bed and subsoil together with living organisms belonging to sedentary species . . . .").

43. *Id.* at art. 2(3), 15 U.S.T. at 473, 499 U.N.T.S. at 314 ("The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.").

44. *Id.* at art. 2(2), 15 U.S.T. at 473, 499 U.N.T.S. at 312 ("The rights . . . are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities, or make a claim to the continental shelf, without the express consent of the coastal State.").

45. *Id.* at art. 3, 15 U.S.T. at 473, 499 U.N.T.S. at 314 ("The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters as high seas, or that of the airspace above those waters.").

46. *Id.* at art. 5(2), 15 U.S.T. at 473–74, 499 U.N.T.S. at 314 ("[T]he coastal State is entitled to construct . . . on the continental shelf installations and other



long as they do not interfere with shipping, fishing, conservation of living resources, or scientific research.<sup>47</sup>

While the Convention on the Continental Shelf protects the coastal state's interest in energy resources from the seabed such as oil, the convention does not consider or anticipate the utilization of the continental shelf as a wind energy resource.<sup>48</sup> The convention provides sovereignty for the purposes of seabed resources but explicitly excludes the overlying water and air. Their exclusion implies that sovereignty does not extend to the utilization of air and water as a resource.<sup>49</sup> Furthermore, while the convention provides for the coastal state to build structures and installations for the utilization of the seabed resources, such structures for other purposes are not discussed.<sup>50</sup>

### *3. Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas and the Geneva Convention on the High Seas*

The Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas imposes rights and obligations solely to the conservation and productivity of living resources such as fish.<sup>51</sup> Because this Convention applies to fishing on the high seas, its scope does not include territorial activities and thus will not impact the construction of offshore wind turbines.<sup>52</sup>

The Geneva Convention on the High Seas applies to waters

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devices necessary for its exploration and the exploitation of its natural resources, and to establish safety zones around such installations and devices and to take in those zones measures necessary for their protection.”)

47. *Id.* at art. 5(1), 15 U.S.T. at 473, 499 U.N.T.S. at 314. Article 5(1) provides:

The exploration of the continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea, nor result in any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication.

*Id.*

48. *See id.* at art. 3, 15 U.S.T. at 473, 499 U.N.T.S. at 314.

49. *See id.* Since the rights of the state over the continental shelf do not affect the superjacent water and air, it would imply that the utilization over the water and air is not included within the sovereignty of the coastal state.

50. *See id.* at art. 5(2), 15 U.S.T. at 473-74, 499 U.N.T.S. at 314.

51. *See* Fishing and Conservation Convention, *supra* note 31, art. 1, 17 U.S.T. at 140, 559 U.N.T.S. at 286-88 (“All States have the right for their nationals to engage in fishing on the high seas, subject . . . to the provisions contained in the following articles concerning conservation of the living resources of the high seas.”).

52. *Id.*

not within the territory or jurisdiction of any state.<sup>53</sup> Since this treaty does not apply to waters within the jurisdiction of the United States, it will not affect the legal considerations regarding the construction of wind turbines within U.S. waters.<sup>54</sup>

### C. U.S. LAW APPLYING TO COASTAL SEAS

There is a broad collection of U.S. laws defining sovereignty over the waters adjoining the United States or impacting the development of offshore wind power in these waters.<sup>55</sup> Of these laws, the Outer Continental Shelf Lands Act (OCSLA) directly impacts the determination of the United States' sovereignty over the continental shelf.<sup>56</sup> OCSLA extends the political jurisdiction of the United States to the seabed of the continental shelf and artificial structures and islands built therein.<sup>57</sup> The extent of the U.S. jurisdiction over the continental shelf is based on accepted international law.<sup>58</sup> By proclamation of President

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53. See High Seas Convention, *supra* note 30, art. 1, 13 U.S.T. at 2314, 450 U.N.T.S. at 82 ("The term 'high seas' means all parts of the sea that are not included in the territorial sea or in the internal waters of a State.").

54. *Id.*

55. Girard Miller & Laura Morton, *Alternative Energy: Challenges at the Local, State and Federal Levels*, TRENDS IN ENERGY LITIG., 2007 (Fulbright & Jaworski, L.L.P., Minneapolis, MN) 118, 125. These laws include the Outer Continental Shelf Lands Act, the Coastal Zone Management Act, the Submerged Lands Act, the Endangered Species Act, the Marine Mammals Protection Act, the National Environmental Policy Act, the National Historic Preservation Act, the Rivers and Harbors Act, the Marine Sanctuary Act, The Magnuson-Stevens Fisher Conservation and Management Act, and the Migratory Bird Treaty Act. *Id.*

56. The Outer Continental Shelf Lands Act, 43 U.S.C. §§ 1331-1356 (2005).

57. 43 U.S.C. § 1333(a)(1). Section 1333(a)(1) provides:

The Constitution and laws and civil and political jurisdiction of the United States are extended to the subsoil and sea-bed of the outer Continental Shelf and to all artificial islands, and all installations and other devices permanently or temporarily attached to the sea-bed, which may be erected thereon for the purpose of exploring for, developing, or producing resources there from, or any such installation or other device (other than a ship or vessel) for the purpose of transporting such resources, to the same extent as if the outer Continental Shelf were an area of exclusive Federal jurisdiction located within a State[.]

*Id.*

58. Mineral Management Service, U.S. Department of the Interior, *What is the Outer Continental Shelf*, <http://www.gomr.mms.gov/homepg/whoismms/whatsocs.html>. The seaward limit is defined as:

[T]he farthest of 200 nautical miles seaward of the baseline from which the breadth of the territorial sea is measured or, if the continental shelf can be shown to exceed 200 nautical miles, a distance not greater than a line 100

Reagan, the United States recognizes the limits on the continental shelf to be those defined within UNCLOS.<sup>59</sup> Therefore, the international law that the United States recognizes for OSCLA jurisdiction is UNCLOS and the boundaries defined therein.

#### D. UNCLOS

UNCLOS is a complete codification of the international law of the sea that came into force in 1994.<sup>60</sup> The treaty incorporates,<sup>61</sup> modifies and expands on the law of the sea contained within the 1958 Conventions.<sup>62</sup> Almost all major maritime countries are party to UNCLOS with 155 signatories, but the United States has not ratified it yet due to objections with the initial version.<sup>63</sup> In 1994, a U.N. General Assembly

nautical miles from the 2,500-meter isobath or a line 350 nautical miles from the baseline.

Outer Continental Shelf limits greater than 200 nautical miles but less than either the 2,500 meter isobath plus 100 nautical miles or 350 nautical miles are defined by a line 60 nautical miles seaward of the foot of the continental slope or by a line seaward of the foot of the continental slope connecting points where the sediment thickness divided by the distance to the foot of the slope equals 0.01, whichever is farthest.

*Id.*

59. Proclamation No. 5030, 48 Fed. Reg. 10,605, 3 C.F.R., 1983 COMP., 22, 19 WEEKLY COMP. PRES. DOC. 10 (Mar. 10, 1983) (“[I]nternational law recognizes that, in a zone beyond its territory and adjacent to its territorial sea, known as the Exclusive Economic Zone, a coastal State may assert certain sovereign rights over natural resources and related jurisdiction.”), reprinted in Marian Nash Leigh, *Contemporary Practice of the United States Relating to International Law*, 77 AM. J. INT’L L. 616, 621 (1983). Note that this proclamation came before UNCLOS took effect.

60. UNCLOS, *supra* note 11, pmb. (“Prompted by the desire to settle, in a spirit of mutual understanding and co-operation, all issues relating to the law of the sea and aware of the historic significance of this Convention as an important contribution to the maintenance of peace, justice and progress for all peoples . . .”).

61. *Id.* at art. 311(1) (“This Convention shall prevail, as between States Parties, over the Geneva Conventions on the Law of the Sea of 29 April 1958.”).

62. *Id.* at pmb. (“Noting that developments since the United Nations Conferences on the Law of the Sea held at Geneva in 1958 and 1960 have accentuated the need for a new and generally acceptable Convention on the law of the sea . . .”).

63. Status of the United Nations Convention on the Law of the Sea, of the Agreement Relating to the Implementation of Part XI of the Convention and of the Agreement for the Implementation of the Provisions of the Convention Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, Oct. 26, 2007, available at [http://web.archive.org/web/20071201115737/http://www.un.org/Depts/los/reference\\_fi](http://web.archive.org/web/20071201115737/http://www.un.org/Depts/los/reference_fi)

Resolution was adopted that allows the United States to exempt itself from the controversial terms of the treaty.<sup>64</sup> Currently, the United States has not signed the treaty and it awaits Senate ratification.<sup>65</sup>

## II. OFFSHORE WIND ENERGY UNDER UNCLOS

UNCLOS contains provisions that provide rights necessary or advantageous to the development of offshore wind power. The treaty contains requirements that pose hurdles to offshore wind as well. The advantages, however, far outweigh the hurdles. Any downsides the treaty might create can be accommodated and will not block development, while the benefits of the treaty are necessary for the development of wind power, especially outside the territorial waters. Because UNCLOS has significant benefits and only limited burdens, the United States should ratify UNCLOS to secure offshore wind interests.

The future of offshore wind will likely depend on ratification of UNCLOS. Offshore wind is in its infancy in the United States, but has great potential to supply a large portion of the nation's energy needs.<sup>66</sup> To accomplish this development, the United States will need to expand farther offshore.<sup>67</sup> While expansion would require new advances in offshore wind technology, such expansion is economically viable.<sup>68</sup> The incentives to pursue such expansion will likely increase as the pressure to combat global warming increases and fossil fuel prices continue to rise.<sup>69</sup> By ratifying UNCLOS now, the United States can secure its future in offshore wind energy.

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les/status2007.pdf [hereinafter Status of UNCLOS]; see also James L. Malone, *The United States and the Law of the Sea After UNCLOS III*, 46 No. 2 LAW & CONTEMP. PROBS. 29, 31-32 (1983) (discussing President Reagan's reasons for not signing UNCLOS).

64. Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, G.A. Res. 48/263, U.N. Doc. A/RES/48/263 (Aug. 17, 1994).

65. Status of UNCLOS, *supra* note 63; see also Statement on Maritime Interests, *supra* note 13, for the President's statement urging ratification.

66. See Kaplan, *supra* note 8, at 178 (noting that offshore wind farms could power entire regions).

67. See REEVES, *supra* note 16, at 14.

68. *Id.*

69. See Scott, *supra* note 12, at 115.

## A. ADVANTAGES OF UNCLOS

UNCLOS, unlike the 1958 conventions, incorporates legal recognition for offshore wind power.<sup>70</sup> It also expands on the law necessary to protect offshore resources and developments. Furthermore, it provides an arbitration forum to resolve conflicts between countries that relate to the law of the sea.

### 1. *Expanded Region of Protected Resources*

UNCLOS, like the Geneva Convention on the Continental Shelf, protects the state's sovereign interest over seas adjacent to the territorial waters. UNCLOS provides for territorial waters that extend 12 nautical miles from shore.<sup>71</sup> UNCLOS, however, extends the contiguous zone to lie up to 24 miles from shore.<sup>72</sup>

Beyond the contiguous zone, UNCLOS creates a more extensive area of exclusive control than the Convention on the Continental Shelf does. UNCLOS provides for an exclusive economic zone ("EEZ").<sup>73</sup> The EEZ may extend up to 200 nautical miles from shore.<sup>74</sup> Where the continental shelf extends past this 200 mile limit, the state maintains a sovereign interest in the seabed.<sup>75</sup>

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70. UNCLOS, *supra* note 11, at art. 56.

71. *Id.* at art. 3 ("Every State has the right to establish the breadth of its territorial sea up to a limit not exceeding 12 nautical miles, measured from baselines determined in accordance with this Convention."); see also Wendy N. Duong, *Following the Path of Oil: The Law of the Sea or Realpolitik—What Good Does Law Do in the South China Sea Territorial Conflicts?*, 30 *FORDHAM INT'L L.J.* 1098, 1117–18 (2007) (discussing the definition of the territorial sea in UNCLOS).

72. UNCLOS, *supra* note 11, at art. 33 ("In a zone contiguous to its territorial sea, described as the contiguous zone, the coastal State may exercise . . . control . . . 2. The contiguous zone may not extend beyond 24 nautical miles from the baselines from which the breadth of the territorial sea is measured."); see also Duong, *supra* note 71, at 1118 (discussing the definition of the contiguous zone in UNCLOS).

73. UNCLOS, *supra* note 11, at art. 55 ("The exclusive economic zone is an area beyond and adjacent to the territorial sea, subject to the specific legal regime established in this Part, under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by . . . this Convention."); see also Duong, *supra* note 71, at 1119–20 (discussing the definition of the EEZ in UNCLOS).

74. UNCLOS, *supra* note 11, at art. 57 ("The exclusive economic zone shall not extend beyond 200 nautical miles from the baselines from which the breadth of the territorial sea is measured.")

75. *Id.* at art. 76(1). Article 76(1) provides:

The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout

Within the EEZ, the state may exercise its exclusive interest in any natural resources.<sup>76</sup> The state may exclude foreign entities from nonliving resources, and from the living resources of which the state will harvest or that are necessary for conservation efforts. The state maintains exclusive control over the EEZ for the construction of artificial islands or other installations.<sup>77</sup> Furthermore, the state exercises exclusive jurisdiction over these structures within the EEZ.<sup>78</sup>

The state is empowered to enact protections for structures built in the EEZ.<sup>79</sup> For example, the state may delegate safety zones around structures.<sup>80</sup> The state may also control navigation within these safety zones.<sup>81</sup> These safety zones are limited, however, such that they may not interfere with sea lanes necessary for navigation.<sup>82</sup>

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the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.

*Id.*

76. Cf. Jeremy Firestone et al., *Regulating Offshore Wind Power and Aquaculture: Messages from Land and Sea*, 14 CORNELL J.L. & PUB. POLY 71, 96 (2005) (discussing European development of offshore wind resources).

77. UNCLOS, *supra* note 11, at art. 60(1). Article 60(1) provides:

In the exclusive economic zone, the coastal State shall have the exclusive right to construct and to authorize and regulate the construction, operation and use of: (a) artificial islands; (b) installations and structures for the purposes provided for in article 56 and other economic purposes; (c) installations and structures which may interfere with the exercise of the rights of the coastal State in the zone.

*Id.*

78. *Id.* at art. 60(2) (“The coastal State shall have exclusive jurisdiction over such artificial islands, installations and structures, including jurisdiction with regard to customs, fiscal, health, safety and immigration laws and regulations.”).

79. *Id.* at art. 60(4) (“The coastal State may, where necessary, establish reasonable safety zones around such artificial islands, installations and structures in which it may take appropriate measures to ensure the safety both of navigation and of the artificial islands, installations and structures.”).

80. *Id.* at art. 60(5) (“The breadth of the safety zones shall be determined by the coastal State, taking into account applicable international standards. Such zones shall be designed to ensure that they are reasonably related to the nature and function of the artificial islands, installations or structures . . .”).

81. *Id.* at art. 60(6) (“All ships must respect these safety zones and shall comply with generally accepted international standards regarding navigation in the vicinity of artificial islands, installations, structures and safety zones.”).

82. *Id.* at art. 60(7) (“Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation.”).

The United Kingdom has designated a Renewable Energy Zone (REZ) in the surrounding waters where it claims rights to the exploitation of the region for renewable energy.<sup>83</sup> The REZ is coterminous with what would be their EEZ, though the UK has not claimed an EEZ.<sup>84</sup> As Karen Scott points out in *Tilting at Offshore Windmills: Regulating Wind Farm Development within the Renewable Energy Zone*, the fact that the UK has not claimed an EEZ complicates its claim to an REZ, though such a claim can be effectuated under other provisions of UNCLOS.<sup>85</sup> The fact that the UK has claimed its surrounding seas as REZ and is supported by UNCLOS indicates that protecting a nation's EEZ for purposes of offshore energy generation is not only possible but worthwhile. Such a claim would be one of the many benefits the United States would reap by ratifying UNCLOS.

## 2. Recognition of Wind Resources

UNCLOS explicitly contemplates wind and water as energy resources to which the state has exclusive control within its EEZ.<sup>86</sup> This is one of the most significant changes from the 1958 Conventions in UNCLOS that affects wind power. Article 56 of UNCLOS protects the sovereign rights of the state over its EEZ for uses that include the "production of energy from the water, currents and winds."<sup>87</sup> This is an improvement over the 1958 Conventions because the Convention on the Continental Shelf only protects exclusive rights to seabed resources and not energy from wind or water.<sup>88</sup>

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83. Scott, *supra* note 12, at 93.

84. *Id.* at 95.

85. *Id.* at 95-96.

86. UNCLOS, *supra* note 11, at art. 56; see also Candace L. Bates, *U.S. Ratification of the U.N. Convention on the Law of the Sea: Passive Acceptance Is Not Enough to Protect U.S. Property Interests*, 31 N.C. J. INT'L L. & COM. REG. 745, 777 (2006).

87. UNCLOS, *supra* note 11, at art. 56(1). Article 56(1) provides:

In the exclusive economic zone, the coastal State has sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the sea-bed and of the sea-bed and its subsoil, and with regard to other activities for the economic exploitation and exploration of the zone, such as the production of energy from the water, currents and winds.

*Id.*

88. See Continental Shelf Convention, *supra* note 29, art. 2(4), 15 U.S.T. at 473, 499 U.N.T.S. at 314.

The exclusive right to the water and wind as an energy resource only applies within the EEZ. The exclusive right to utilize wind or water as a source of energy is not included within the sovereign rights over the continental shelf that extends beyond the EEZ.<sup>89</sup> Article 77(1) states that “[t]he coastal state exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.”<sup>90</sup> Article 77(4) clarifies the definition of natural resources. “The natural resources referred to in this Part consist of the mineral and other non-living resources of the seabed and subsoil . . . .”<sup>91</sup> This does not include “production of energy from the water, currents and winds.”<sup>92</sup>

The state only has exclusive right to the resources contained within the seabed in the area of the continental shelf beyond the EEZ. The state, however, does maintain exclusive control over the construction of wind turbines within this region of the continental shelf.<sup>93</sup> Under article 80 of UNCLOS, “Article 60 applies *mutatis mutandis* to artificial islands, installations and structures on the continental shelf.”<sup>94</sup> *Mutatis Mutandis* means “with the necessary changes.”<sup>95</sup> Since the rights in article 60 apply “with the necessary changes”<sup>96</sup> to the continental shelf, the state would have the exclusive right to construct an exclusive jurisdiction over structures on its continental shelf.<sup>97</sup> Therefore, the state has exclusive control over the construction of wind turbines, effectively granting it an exclusive right to develop the wind as a resource within the continental shelf.<sup>98</sup>

89. UNCLOS, *supra* note 11, at art. 77.

90. *Id.* at art. 77(1); *see also* Duong, *supra* note 71, at 1118–19 (discussing the definition of the continental shelf in UNCLOS).

91. UNCLOS, *supra* note 11, at art. 77(4) (“The natural resources referred to in this Part consist of the mineral and other non-living resources of the sea-bed and subsoil together with living organisms belonging to sedentary species . . . .”). Sedentary species are “organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil.” *Id.* For further discussion of the definition of mineral resources in UNCLOS *see* Peter Prows, *Tough Love: The Dramatic Birth and Looming Demise of UNCLOS Property Law (And What is to be Done About It)*, 42 TEX. INT’L L.J. 241, 298–301 (2007).

92. UNCLOS, *supra* note 11, at art. 77(4).

93. *Id.* at art. 80.

94. *Id.*

95. BLACK’S LAW DICTIONARY 1044 (8th ed. 2004).

96. UNCLOS, *supra* note 11, at art. 60.

97. *Id.* *See also* UNCLOS, *supra* note 11, at art. 60(1–2).

98. The state has the exclusive right to build wind turbines since they would easily be classified as structures or installations under Articles 60 and 80.



This has been one of the justifications for the United Kingdom's claim to an REZ despite the absence of a claim to an EEZ.<sup>99</sup>

Currently, proposed offshore wind projects are located within the territorial waters. But as technology improves and the incentives for wind power increase, installations will be pushed further offshore into what would be the EEZ. But before such development can be contemplated, UNCLOS must be implemented to secure the rights to develop wind power and provide clarity in the law that governs such sites. The rights currently enjoyed by the United States to its continental shelf are not sufficient to adequately protect the exclusive and positive right to develop offshore wind projects in those waters. But ratification of UNCLOS will guarantee U.S. rights to develop the EEZ.

If the US fails to ratify UNCLOS, it can still build offshore turbines within the EEZ. The problem is that there would be no internationally recognized governing law. Unsettled law leads to poor economic efficiency. The lack of a governing law in the EEZ limits the incentive to develop offshore wind projects. Current offshore projects within the territorial waters already face uncertainty in U.S. law, which has been a significant obstacle to their success. Uncertainty in the international law applicable to the EEZ may be too great a risk for developers. Developers have no reason to believe the United States would protect their interests over diplomatic relations or shipping concerns. UNCLOS provides, at the very least, a suggestion for how those disputes should be resolved and an indication for how they can be avoided, so constructing a coherent approach to developing offshore wind in the EEZ is possible.

### 3. *Arbitration Forum*

An important feature in UNCLOS is how disputes under the convention are settled. Part XV of UNCLOS specifically addresses this issue.<sup>100</sup> First and foremost, parties are required to settle disputes in a peaceful manner.<sup>101</sup> States are free to

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Therefore, the right of the State to develop wind energy on the continental shelf is coextensive with the exclusive right to construct installations there. See UNCLOS, *supra* note 11, at arts. 60, 80.

99. Scott, *supra* note 12, at 96.

100. UNCLOS, *supra* note 11, at pt. XV.

101. *Id.* at art. 279. Article 279 provides:

States Parties shall settle any dispute between them concerning the

agree how the dispute will be settled.<sup>102</sup> When the states do not agree on how to settle the dispute, UNCLOS provides a gap-filler that determines the means for settling the issue.<sup>103</sup> Under the gap-filler, the dispute is assigned to the appropriate international tribunal determined by the Convention.<sup>104</sup> The forum having jurisdiction will apply the law of UNCLOS and other relevant international law.<sup>105</sup>

The inclusion of arbitration within UNCLOS has a stabilizing effect; should an international dispute arise in the construction of offshore wind turbines that raises questions about the law of the sea, there will be a predetermined forum for its resolution.<sup>106</sup> The disputes would necessarily be between

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interpretation or application of this Convention by peaceful means in accordance with Article 2, paragraph 3, of the Charter of the United Nations and, to this end, shall seek a solution by the means indicated in Article 33, paragraph 1, of the Charter.

*Id.*

102. *Id.* at art. 280 (“Nothing in this Part impairs the right of any States Parties to agree at any time to settle a dispute between them concerning the interpretation or application of this Convention by any peaceful means of their own choice.”).

103. *Id.* at art. 286 (“Subject to section 3, any dispute concerning the interpretation or application of this Convention shall, where no settlement has been reached by recourse to section 1, be submitted at the request of any party to the dispute to the court or tribunal having jurisdiction under this section.”).

104. *Id.* at art. 287. Article 287 provides:

The tribunal is either one the parties both agree on, or failing that, the tribunal defaults to arbitration under Annex VII (“1. When signing, ratifying or acceding to this Convention or at any time thereafter, a State shall be free to choose, by means of a written declaration, one or more of the following means for the settlement of disputes concerning the interpretation or application of this Convention: (a) the International Tribunal for the Law of the Sea established in accordance with Annex VI; (b) the International Court of Justice; (c) an arbitral tribunal constituted in accordance with Annex VII; (d) a special arbitral tribunal constituted in accordance with Annex VIII for one or more of the categories of disputes specified therein . . . . 3. A State Party, which is a party to a dispute not covered by a declaration in force, shall be deemed to have accepted arbitration in accordance with Annex VII. 4. If the parties to a dispute have accepted the same procedure for the settlement of the dispute, it may be submitted only to that procedure, unless the parties otherwise agree. 5. If the parties to a dispute have not accepted the same procedure for the settlement of the dispute, it may be submitted only to arbitration in accordance with Annex VII, unless the parties otherwise agree.”).

*Id.*

105. *Id.* at art. 293 (“A court or tribunal having jurisdiction under this section shall apply this Convention and other rules of international law not incompatible with this Convention.”).

106. *Id.* at art. 286. For more on arbitration under UNCLOS see Michael A. Becker, *International Law of the Sea*, 41 INT’L LAW. 671 (2007).

state parties, as opposed to non-state parties such as corporations, as the language of the UNCLOS makes clear.<sup>107</sup> Disputes between non-state parties would be resolved according to the laws of the state having jurisdiction over that section of the sea.<sup>108</sup> Such a provision for arbitration of disputes does not exist in the 1958 Conventions and states are left to resolve any conflict themselves.

The arbitration provision does not come without downsides however. Wind power can encounter unexpected opposition. In Nantucket, the Cape Wind project received opposition from politically salient groups, such as the Kennedy family, claiming aesthetic and environmental damage.<sup>109</sup> While it is nearly impossible that the arbitration forum would be used to contest offshore wind installations for aesthetic reasons, the arbitration forum could be used to challenge such installations for politically motivated reasons in disputes between sovereigns. As such, the international arbitration provided for by UNCLOS could have the potential to derail offshore wind projects. Such an occurrence is unlikely, but the possibility that U.S. sovereign interests could be disputed in an arbitration forum is one of the reasons some people oppose ratification of UNCLOS.

The presence of a clause providing binding arbitration should not be viewed as a limitation on U.S. sovereignty. The United States retains, as do all countries ratifying UNCLOS, the right to resolve conflicts through diplomatic means. The arbitration provision provides further means for countries to resolve disputes. In essence, it provides additional rights and capabilities to the states that would not normally exist. As such, it serves as an extended means of enforcing sovereignty when diplomatic solutions fail. Therefore, arbitration is not a limit on the sovereignty of states, but rather a guardian of state sovereignty.

## B. POSSIBLE CONCERNS WITH UNCLOS

Part XI of UNCLOS has been the major sticking point for U.S. ratification and will present concerns for offshore wind

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107. See UNCLOS, *supra* note 11, at pt. XV. The language of the articles refers to the resolution of disagreements between "States Parties" and not private ones. See, e.g., *id.* at art. 279 ("States Parties shall settle any dispute between them concerning the interpretation or application of this Convention . . .").

108. *Id.* at art. 60(2). The State has jurisdiction over installations within its EEZ. *Id.*

109. Kaplan, *supra* note 8, at 203-05.

energy whether the United States ratifies or not. Additionally, environmental and shipping concerns in UNCLOS pose two possible restrictions on the development of offshore wind power. UNCLOS requires commitment to the protection of the marine environment. UNCLOS also requires that states not interfere with the innocent passage of ships traveling along recognized sea lanes. These restrictions, however, will not create new obstacles for development of offshore wind power as existing U.S. law already requires similar considerations for offshore projects.

### 1. Part XI of UNCLOS

The United States has not ratified UNCLOS because it initially objected to part XI of the treaty, as did many other developed nations.<sup>110</sup> The objections to part XI were based on economic and security concerns.<sup>111</sup> Part XI recognized the region of seabed and ocean floor beyond the jurisdiction of any state to be the common heritage of humankind.<sup>112</sup> Part XI, therefore, requires states to share the financial benefits<sup>113</sup> from activities within the region as well as the related technology.<sup>114</sup> In response to the objections to these provisions, the U.N. General Assembly adopted a resolution to encourage the United States and other objecting states to ratify UNCLOS.<sup>115</sup> This resolution, known as the Agreement Relating to the Implementation of Part XI of the U.N. Convention on the Law of the Sea of 10 December 1982, allows countries to ratify UNCLOS without being bound to part XI.<sup>116</sup> Given that the United States may ratify UNCLOS without part XI, the benefits to the development of offshore wind power are one of the many reasons for the United States to ratify UNCLOS.<sup>117</sup>

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110. Status of UNCLOS, *supra* note 63.

111. Statements on United States Actions Concerning the Conference on the Law of the Sea, 2 PUB. PAPERS 911, 911-12 (July 9, 1982) ("Provisions that would actually deter future development of deep sea-bed mineral resources . . . provisions that would allow amendments to enter into force for the United States without its approval . . . stipulations relating to mandatory transfer of private technology and the possibility of national liberations movements sharing benefits."). For further discussion on the issue see Malone, *supra* note 63, at 31-32.

112. UNCLOS, *supra* note 11, at art. 136.

113. *Id.* at art. 140(2).

114. *Id.* at art. 144(2).

115. G.A. Res. 48/263, *supra* note 64, at pmbl.

116. *Id.*

117. Ratification of UNCLOS is now advocated by the oil industry and the

Ultimately, any downside part XI may present to the United States in terms of wind development are already in place and will not be affected by U.S. ratification of UNCLOS. Offshore wind power is a technically sophisticated industry. As wind energy continues to develop, so will the enabling technology. Currently, many of the producers of wind turbines are located in Europe, but the U.S. wind industry is beginning to grow, especially with collaboration from its European counterparts. The effect of part XI may impact how technology is owned between U.S. and foreign companies.

The United States may be exempt from the technology sharing provisions in part XI, but some of the European countries are subject to the terms of these provisions.<sup>118</sup> Part XI mandates that the states cooperate in promoting the transfer of technology and scientific knowledge relating to seabed activities in the area of the ocean beyond the jurisdiction of any state.<sup>119</sup> This requirement may affect how technological developments are kept proprietary by companies and hence affect how technology is developed, owned and shared between U.S. and foreign companies.

This concern may create an advantage for U.S. companies, as it is in the interest of the companies involved to maintain control over their intellectual property. Therefore, wind turbine manufacturers may find it preferential to locate in the United States to take advantage of the protections. The downside is that U.S. companies must exercise care when transferring technology rights, or engaging in foreign direct investment since it could result in UNCLOS mandated technology sharing.

The enjoyment of such protections or concern thereof, however, is not conditioned on ratification of UNCLOS. The United States enjoys immunity to the technology sharing provisions whether it ratifies or not. Similarly, U.S. companies must be wary of the technology sharing provisions when investing in other countries as UNCLOS would apply with or without U.S. ratification.

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military. This change in attitude indicates that UNCLOS no longer presents a threat to U.S. security or its economic interests. For information on the oil industry's support for UNCLOS see Kelly, *supra* note 27. For information on the national security reasons to ratify UNCLOS see James C. Kraska, *UNCLOS, a National Security Success*, 39 GEO. WASH. INT'L L. REV. 543, 545 (2006).

118. Status of UNCLOS, *supra* note 63.

119. UNCLOS, *supra* note 11, at art. 144.

## 2. Environmental Concerns

Part XII of UNCLOS addresses the issues of the marine environment.<sup>120</sup> The convention imposes a duty on the states to protect and preserve the marine environment.<sup>121</sup> States maintain the sovereign right to exploit their natural resources but must do so in a manner that conforms to their environmental policy and their duty to protect the marine environment.<sup>122</sup> Under UNCLOS, states are required to take all measures necessary to prevent, reduce, and control pollution of the marine environment using the best practical means.<sup>123</sup> In doing so, the states must ensure that activities within their jurisdiction or control do not cause pollution damaging the environment of other states.<sup>124</sup> These measures must deal with all sources of pollution, including pollution from installations and devices operating at sea.<sup>125</sup>

120. *Id.* at pt. XII.

121. *Id.* at art. 192 (“States have the obligation to protect and preserve the marine environment.”).

122. *Id.* at art. 193 (“States have the sovereign right to exploit their natural resources pursuant to their environmental policies and in accordance with their duty to protect and preserve the marine environment.”).

123. *Id.* at art. 194(1). Article 194(1) provides:

States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practicable means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection.

*Id.*

124. *Id.* at art. 194(2). Article 194(2) provides:

States shall take all measures necessary to ensure that activities under their jurisdiction or control are so conducted as not to cause damage by pollution to other States and their environment, and that pollution arising from incidents or activities under their jurisdiction or control does not spread beyond the areas where they exercise sovereign rights in accordance with this Convention.

*Id.*

125. *Id.* at art. 194(3). Article 194(3) provides:

The measures taken pursuant to this Part shall deal with all sources of pollution of the marine environment. These measures shall include, *inter alia*, those designed to minimize to the fullest possible extent:

....

(d) pollution from other installations and devices operating in the marine environment, in particular measures for preventing accidents and dealing with emergencies, ensuring the safety of operations at sea, and regulating

Offshore wind turbines would be subject to the environmental controls of part XII.<sup>126</sup> UNCLOS would require the United States to consider the environmental impact of offshore wind turbines and their construction on the marine environment.<sup>127</sup> Since offshore wind turbines can be an alternative to more environmentally damaging power sources such as coal, offshore wind turbines could be included within the environmental policy of the United States.<sup>128</sup> Article 193 of UNCLOS recognizes the importance of the state's environmental policies in the exploitation of natural resources.<sup>129</sup> Additionally, Article 194 requires that the best means necessary within state's capabilities to control pollution be used.<sup>130</sup> Therefore, the United States could elect to determine that, in accordance with national policy, it was using offshore wind power as one of the best practical means of limiting pollution in the marine environment as wind power has the potential to significantly reduce fossil fuel emission.<sup>131</sup> This position is supported by the fact European countries have been developing wind power, including offshore wind, as a means to comply with the Kyoto Protocol.<sup>132</sup> While there would still be the requirement to limit pollution from wind turbines in the marine environment, the use of wind turbines as a pollution reduction tool would promote their development and limit potential objections under UNCLOS.<sup>133</sup>

The United Kingdom has implemented the environmental protections by requiring environmental assessments of offshore wind projects.<sup>134</sup> Similarly, in the United States, offshore wind

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the design, construction, equipment . . .

*Id.*

126. See *id.* at art. 194(3). Offshore wind turbines are installations and would be covered by subarticle (d).

127. *Id.* at art. 194(2).

128. See Cape Wind, *supra* note 9, at <http://www.capewind.org/article37.htm>.

129. See UNCLOS, *supra* note 11, art. 193.

130. *Id.* at art. 194.

131. REEVES, *supra* note 16, at 15.

132. See Kaplan, *supra* note 8, at 189-90. ("Europe also has aggressive government policies promoting green energy, evidenced by European support of the Kyoto agreement.")

133. See UNCLOS, *supra* note 11, at art. 194. It should also be noted that the construction of offshore wind turbines would already be governed by a broad array of U.S. environmental laws. For further discussion of the environmental laws that would apply to the construction of offshore wind turbines, see Dinnel & Russ, *supra* note 20.

134. Scott, *supra* note 12, at 97.

projects have been subject to the Environmental Impact Statement (“EIS”) procedures under the National Environmental Policy Act.<sup>135</sup> An EIS is being prepared for the Cape Wind project and environmental assessments were prepared for the investigatory stages of the project.<sup>136</sup> As such, the current environmental regulatory structure in the United States should be sufficient to meet the environmental requirements of UNCLOS.

### 3. Shipping Concerns

Maintaining the freedom of innocent passage within the seas and oceans is of major concern in UNCLOS.<sup>137</sup> Innocent passage is protected even within the territorial sea under the treaty.<sup>138</sup> The state may determine the sea lanes for innocent

135. Kaplan, *supra* note 8, at 197–98.

136. *Id.*

137. See UNCLOS, *supra* note 11, pt. II sec. 3. Innocent Passage is defined in article 19:

1. Passage is innocent so long as it is not prejudicial to the peace, good order or security of the coastal State. Such passage shall take place in conformity with this Convention and with other rules of international law.

2. Passage of a foreign ship shall be considered to be prejudicial to the peace, good order or security of the coastal State if in the territorial sea it engages in any of the following activities:

(a) any threat or use of force against the sovereignty, territorial integrity or political independence of the coastal State, or in any other manner in violation of the principles of international law embodied in the Charter of the United Nations;

....

(g) the loading or unloading of any commodity, currency or person contrary to the customs, fiscal, immigration or sanitary laws and regulations of the coastal State;

(h) any act of wilful and serious pollution contrary to this Convention;

(i) any fishing activities;

(j) the carrying out of research or survey activities;

(k) any act aimed at interfering with any systems of communication or any other facilities or installations of the coastal State;

(l) any other activity not having a direct bearing on passage.

*Id.* at art. 19.

138. *Id.* at art. 17 (“Subject to this Convention, ships of all States, whether coastal or land-locked, enjoy the right of innocent passage through the territorial sea.”).



passage in the territorial sea but may not prohibit it.<sup>139</sup> As such the state may regulate and control innocent passage to protect installations in the territorial sea.<sup>140</sup> Beyond the territorial sea, the state may not require that sea lanes accommodate installations, but rather installations must accommodate the sea lanes. Installations built within the EEZ are not allowed to interfere with the innocent passage of ships along established sea lanes.<sup>141</sup> This same rule applies to installations built on the continental shelf outside the EEZ.<sup>142</sup>

Constructing wind turbines within the territorial sea will not be an issue in terms of innocent passage under UNCLOS

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139. *Id.* at art. 22. Article 22 provides:

1. The coastal State may, where necessary having regard to the safety of navigation, require foreign ships exercising the right of innocent passage through its territorial sea to use such sea lanes and traffic separation schemes as it may designate or prescribe for the regulation of the passage of ships.
2. In particular, tankers, nuclear-powered ships and ships carrying nuclear or other inherently dangerous or noxious substances or materials may be required to confine their passage to such sea lanes.
3. In the designation of sea lanes and the prescription of traffic separation schemes under this article, the coastal State shall take into account:
  - (a) the recommendations of the competent international organization;
  - (b) any channels customarily used for international navigation;
  - (c) the special characteristics of particular ships and channels; and
  - (d) the density of traffic.
4. The coastal State shall clearly indicate such sea lanes and traffic separation schemes on charts to which due publicity shall be given.

*Id.*; see also *id.* at art. 24 (stating that coastal States shall not impose requirements that have the practical effect of denying innocent passage to foreign vessels).

140. *Id.* at art. 21. Article 21 provides:

1. The coastal State may adopt laws and regulations, in conformity with the provisions of this Convention and other rules of international law, relating to innocent passage through the territorial sea, in respect of all or any of the following:
  - (a) the safety of navigation and the regulation of maritime traffic;
  - (b) the protection of navigational aids and facilities and other facilities or installations.

*Id.*

141. *Id.* at art. 60(7) ("Artificial islands, installations and structures and the safety zones around them may not be established where interference may be caused to the use of recognized sea lanes essential to international navigation.")

142. *Id.* at art. 80.

since the state will be able to regulate shipping traffic around them.<sup>143</sup> Building wind turbines within the EEZ will raise more issues of innocent passage since the installations will not be allowed to interfere with existing sea lanes.<sup>144</sup> Therefore, it will be necessary to determine whether a proposed installation will interfere with a sea lane before it is constructed.

The United Kingdom has dealt with the potential problem of restricting innocent passage by requiring offshore wind projects to comply with the International Maritime Organization's guidance on preventing restriction of passage.<sup>145</sup> This compliance has been accomplished by involving the Secretary of State in the approval process for offshore projects.<sup>146</sup> A similar provision can easily be implemented in the United States whereby the State Department is involved in the approval process.

It should also be noted, however, that the right of innocent passage already exists within the territorial and adjacent seas under the 1958 Conventions.<sup>147</sup> The construction of wind turbines is already required not to interfere with innocent passage. With respect to shipping, UNCLOS would not pose a new obstacle to offshore energy development.

## CONCLUSION

The benefits UNCLOS could provide to securing offshore wind energy interests is a reason to favor U.S. ratification. UNCLOS would protect the United States' alternative energy interests within the EEZ and continental shelf.<sup>148</sup> Wind energy is a resource that is explicitly recognized as enjoying exclusive protection within the EEZ.<sup>149</sup> UNCLOS also provides protections

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143. *Id.* at art. 22.

144. *Id.* at art. 60(7).

145. Scott, *supra* note 12, at 100–01.

146. *Id.* at 101–02.

147. *See supra* notes 36, 47. The right of innocent passage is not as defined in the 1958 Conventions, meaning that the law will be much more difficult to resolve. This may be a benefit of UNCLOS over the current law of the sea for the United States in regard to the development of offshore wind power.

148. *See* UNCLOS, *supra* note 11, arts. 60, 80. The protection of the exclusive right to the resources of the EEZ including wind power, as well as the right to control the construction of installations at sea will provide the security of the law to any proposed offshore wind farms.

149. *Id.* at art. 60. This is a particular advantage of UNCLOS over the 1958 Conventions which do not recognize wind energy as a resource which the state has an exclusive right over.

for wind turbine installations within the EEZ and continental shelf.<sup>150</sup> Furthermore, should there be a dispute between the United States and another country involving wind energy and the law of the sea, there is an established tribunal that will have jurisdiction to hear the dispute.<sup>151</sup> Additionally, part XI of UNCLOS is no longer an obstacle to the United States.<sup>152</sup> In light of the benefits it would provide to the development of offshore wind power by securing U.S. interests, the United States should ratify UNCLOS.<sup>153</sup>

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150. *Id.* at arts. 60, 80. U.S. jurisdiction over the wind turbines built within the EEZ is vital. While this benefit does exist under the 1958 Conventions, UNCLOS provides a far more extensive guarantee of control over offshore installations.

151. *Id.* at art. 281. This is a benefit that would be difficult to claim under the President's proclamation recognizing UNCLOS as customary international law.

152. *See generally* G.A. Res. 48/263, *supra* note 64. The Agreement Relating to the Implementation of Part XI has removed many of the provisions in Article XI that the United States has found objectionable.

153. The primary objections to UNCLOS are not based on specific issues with the law contained within the treaty, but largely stem out of objections to treaties and international law being applied in the United States. *See Kelly, supra* note 27, at 9–10. The Senate Foreign Relations Committee has recommended that UNCLOS be adopted. *See Marjorie Ann Browne, The U.N. Law of the Sea Convention and the United States: Developments Since October 2003, CRS Report for Congress at CRS-1 (June 14, 2007).*