

# **Five Ways to Make Sure Offshore Wind Energy Blows in the Right Direction**

By Steve Kelton

Five miles off the coast of Cape Cod in Nantucket Sound is a tranquil spot called Horseshoe Shoal. Revered for both its beauty and its fishing, the area has become the center of one of the hottest environmental controversies to grip the region for years: should we use these waters as the site of the nation's first offshore wind farm.<sup>1</sup> What started as a local question debated at town meetings has grown into a national issue. Whether the parties face off in the courtroom or in the press, the fundamental inquiry remains the same—how to best develop America's wind resources.<sup>2</sup> By following the five steps outlined below, we can minimize the negative aspects of the offshore wind energy (OWE) development that lies ahead.

## **1. Define clear permitting procedures.**

The United States needs clear procedures for OWE facilities. Unfortunately, because no OWE facility has ever been permitted for U.S. waters, no one knows exactly what steps must be taken. At least one agency believes that legislators and regulators—not private enterprise—should take the lead in planning the location and size of a project because “[e]ncouragement of wind and other renewables is a public policy issue.”<sup>3</sup> This approach is more like the current offshore oil and gas leasing program, which tells industry where available areas are and allows companies to bid for those lands.

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<sup>1</sup> A wind farm is a collection of energy-producing windmills (known as turbines).

<sup>2</sup> Interview with Patrick Parenteau, Professor, Vermont Law School, in South Royalton, Vt. (Nov. 20, 2003).

<sup>3</sup> U.S. DEP'T OF ENERGY, NAT'L RENEWABLE ENERGY LAB., STATE WIND WORKING GROUP HANDBOOK 77 (Aug. 2003), *available at* [http://www.eere.energy.gov/windpoweringamerica/pdfs/wpa/34600\\_wind\\_handbook.pdf](http://www.eere.energy.gov/windpoweringamerica/pdfs/wpa/34600_wind_handbook.pdf) (last visited Oct. 26, 2004).

Without permitting, there is no lease, easement, right-of-way, or other property interest for the wind developer. This lack of defined property interests will be detrimental to the government's—and ultimately the taxpayers'—interests. Because current procedures do not include rents or royalty payments, the government will receive no compensation for use of the land or the wind. Massachusetts Attorney General Tom Reilly describes this phenomenon as the government “giving away an invaluable public resource to the very first private developer to seek its use.”<sup>4</sup>

**2. The government should place a moratorium on OWE facilities until the permitting program is finalized; only then should a pilot project be rolled out.**

With one OWE project in the permitting stage, and two dozen more waiting to begin the less-than-ideal regulatory process, many industry experts are calling for a moratorium on all development.<sup>5</sup> Since America is not faced with an energy crisis per se, it does not make sense to compound the unresolved problems of permitting and property rights.<sup>6</sup> A temporary hold on development would also allow all parties to find a non-controversial location for the first OWE facility.

This new location should have a significant demonstration project designed to test OWE technology and environmental impacts.<sup>7</sup> As unfortunately demonstrated by the first land-based wind farms, implementing a full-scale system risks unacceptably high bird kills, inefficient

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<sup>4</sup> ALLIANCE TO PROTECT NANTUCKET SOUND, ANALYSIS OF DEFICIENCIES UNDER CURRENT LAW FOR THE REVIEW OF COASTAL AND OFFSHORE WIND ENERGY PROJECT DEVELOPMENT AND A PROPOSED COMPREHENSIVE REGULATORY PROGRAM 3 (Jan. 30, 2003), available at <http://www.mtpc.org/offshore/Appendices/perkinscoie3.pdf> (last visited Oct. 26, 2004).

<sup>5</sup> *Id.* at 33.

<sup>6</sup> Congress has so far failed to pass the Energy Policy Act of 2003. See H.R. 6, § 321, 108<sup>th</sup> Cong. (2003), available at [http://energy.senate.gov/legislation/energybill2003/oil\\_gas3.pdf](http://energy.senate.gov/legislation/energybill2003/oil_gas3.pdf) (last visited Oct. 26, 2004).

<sup>7</sup> Parenteau, *supra* note 2.

technology, and issues resulting from insufficient planning.<sup>8</sup> An OWE moratorium could actually prove useful in improving mitigation techniques and technology. The passage of time makes it more likely that the Nantucket Sound developer will end up installing more efficient 5.0 megawatt (MW) turbines instead of today's soon-to-be-outdated 3.5 MW machines.

Another alternative to immediate, full-scale development is to incrementally develop an OWE site. A slower build-out will “allow a certain period of adjustment. If people express misgivings, a large wind farm can be developed sequentially, making adjustments easier . . . Just because a so-called wind farm can be erected quickly does not mean that it should.”<sup>9</sup>

### **3. Royalty payments should be required and should go back to the states that are affected by OWE.**

Royalties should be charged on all offshore power generation. The turbines impact common space that Americans currently use for fishing, boating, or recreation. Professor Patrick Parenteau of Vermont Law School recommends using a royalty to improve the resource—in this case, marine habitat.<sup>10</sup> By “taxing” the exploiting industry, a royalty serves as a funding mechanism for the public good, similar to the Telecommunication Act of 1996’s<sup>11</sup> support of Internet service to rural and inner-city schools and libraries.<sup>12</sup>

This discussion about royalties is not just philosophical; it has a real, practical side involving large sums of money. Presuming OWE pays at the same rate as an onshore project, and using the lower of the “\$2000-\$4000 per MW of installed capacity” paid for land-based

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<sup>8</sup> See, e.g., Paul Gipe, *Design as if People Matter: Aesthetic Guidelines for a Wind Power Future*, in WIND POWER IN VIEW 193 (Martin J. Pasqualetti et al. eds., 2002).

<sup>9</sup> Karin Hammarlund, *Society and Wind Power in Sweden*, in WIND POWER IN VIEW 108 (Martin J. Pasqualetti et al. eds., 2002).

<sup>10</sup> Parenteau, *supra* note 2.

<sup>11</sup> Pub. L. No. 104-104, 110 Stat. 56 (1996).

<sup>12</sup> Ronald Wigington, *The Legal Foundation for Electronic Information: How Will It Affect Scientists?* AMERICAN ACADEMY OF ARTS & SCIENCES, available at <http://www.amacad.org/publications/trans12.htm> (last visited Oct. 26, 2004).

systems,<sup>13</sup> one can calculate that the proposed 420 MW Nantucket Sound project would contribute a hefty \$840,000 per year in royalty payments.

#### **4. All OWE facilities should take simple steps to minimize aesthetic impacts.**

The aesthetics of offshore towers and turbines are so important that one researcher called them “the primary factor underlying public acceptance of wind power projects.”<sup>14</sup> Though aesthetics are by definition subjective, the following objective criteria should be written into all OWE bid documents in order to lessen aesthetic objections: 1) operators must “keep the turbines turning” through quick maintenance of broken blades and by using only free wheeling turbines<sup>15</sup>; and 2) operators must install turbines that look alike and rotate in the same direction—that is, be visually uniform.<sup>16</sup> Such easy measures will go a long way toward overcoming aesthetic concerns.

#### **5. America’s vision of OWE must borrow heavily from European successes.**

Europe has been working with OWE since 1990, when the first facility was built off the coast of Sweden.<sup>17</sup> Denmark has been particularly successful with wind energy, achieving its goal of providing ten percent of electricity from wind four years ahead of schedule in 2001.<sup>18</sup> If our government wants to develop OWE, it should have clear policy goals that are long-term and independent of the party in power. Denmark, for example, created a “planning horizon set at the

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<sup>13</sup> U.S. DEP’T OF ENERGY, *supra* note 3, at 23.

<sup>14</sup> A.L. Rogers et al., *A Year 2000 Summary of Offshore Wind Development in the United States*, 44 ENERGY CONVERSION & MGMT. 215, 225 (2003).

<sup>15</sup> A free-wheeling turbine allows the blades to turn even in low wind speeds, as opposed to requiring a minimum wind speed. This feature prevents the public from questioning why the blades “aren’t working” if the wind is blowing—a perception which reinforces negative opinions on aesthetic impacts.

<sup>16</sup> Paul Gipe, *Design as if People Matter: Aesthetic Guidelines for the Wind Industry*, in WIND ENERGY AND LANDSCAPE 45 (Corrado F. Ratto et al. eds., 1998).

<sup>17</sup> Jaime Steve, *Testimony of the American Wind Energy Association Before the House Resources Committee Subcommittee on Energy and Mineral Resources 2*, AMERICAN WIND ENERGY ASS’N, July 25, 2002, available at [http://www.insideepa.com/secure/data\\_extra/dir\\_03/epa2002\\_2692c.pdf](http://www.insideepa.com/secure/data_extra/dir_03/epa2002_2692c.pdf) (last visited Mar. 19, 2004).

<sup>18</sup> Svend Auken, *Answers in the Wind: How Denmark Became a World Pioneer in Wind Power*, 26 FLETCHER F. WORLD AFF. 149, 151 (Spring 2002).

year 2030” which provided the “very long-term planning [needed] to ensure consistency in policy and to send strong signals to market actors about the policy scenario in which they will operate.”<sup>19</sup>

Our government should further require OWE developers to share ownership of a project with the local population. One Danish wind farm is half-owned by 8500 individual investors, the other half owned by the utility.<sup>20</sup> The developer of the site claims “[t]he main reason for our success is local ownership . . . . If it is just a big company doing a wind farm, the community doesn't feel it owns it. And then they will resist.”<sup>21</sup> The lesson is that where local residents have a property interest or can see a direct benefit, they are less likely to complain about development.<sup>22</sup>

Lastly, OWE development should be motivated by our global responsibilities and leadership. Europeans, for example, have committed to decreasing greenhouse gas emissions per the Kyoto Protocol, of which the United States is not a signatory.<sup>23</sup> Notably, the European approach is based on a forward-looking assumption: “Wind Power is environmentally preferred. How can we best accommodate it within the existing power system?”<sup>24</sup>

## Conclusion

Offshore wind energy has great potential for the United States. However, before the government haphazardly distributes permits, it should first create a moratorium on all OWE

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<sup>19</sup> *Id.* at 151.

<sup>20</sup> Charles M. Sennott, *Danes Make Offshore Windmills Their Proud Symbol*, BOSTON GLOBE, Sept. 23, 2003.

<sup>21</sup> *Id.*

<sup>22</sup> See Brian Stempeck, *New Barrier Emerges; New England Battle Could Set Tone*, GREENWIRE, July 31, 2002, available at [http://www.eenews.net/Greenwire/searcharchive/test\\_search-display.cgi?q=%22offshore+wind%22&file=%2FGreenwire%2Fsearcharchive%2FNewsline%2F2002%2FJuly31%2F07310204.htm](http://www.eenews.net/Greenwire/searcharchive/test_search-display.cgi?q=%22offshore+wind%22&file=%2FGreenwire%2Fsearcharchive%2FNewsline%2F2002%2FJuly31%2F07310204.htm) (last visited Mar. 17, 2004).

<sup>23</sup> Belgium has committed to reduce its greenhouse gas emissions by 7.5% by 2010. See C-POWER, GLOBAL CLIMATE, at <http://www.c-power.be> (last visited Oct. 26, 2004).

<sup>24</sup> U.S. DEP'T OF ENERGY WORKING GROUP, *supra* note 3, at 76.

facilities. This extra time will allow Congress to resolve the property rights questions by passing § 321 of the Energy Policy Act of 2003. Furthermore, royalties should be charged and aesthetic concerns mitigated by requiring developers to sell shares of the investment to local residents and to build turbines that are uniform in appearance. Even then, the lead agency must begin slowly, using one demonstration site to test the success of the program.

By following these suggestions, we will improve the OWE program and make it easier for the American public to accept this new technology.