

Commentary: Questioning the Wisdom of Offshore Wind

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On April 20, 2010, the oil rig, Deepwater Horizon, exploded in the Gulf of Mexico, releasing millions of barrels of oil into pristine ocean waters. Desperate to contain the spill, the U.S. government applied unprecedented amounts of chemical dispersants. While the dispersants helped diffuse the petroleum, they significantly magnified (52x) the toxicity of the spill, killing millions of additional fish and other wildlife. Such is the law of unintended consequences.

After years of inaction, the U.S. is now aggressively intervening in another crisis: global warming. The federal government hopes to establish offshore wind farms along 22 million acres of the Atlantic continental shelf. It is providing billions of dollars worth of subsidies to develop these massive complexes. Extensive offshore wind arrays may seem like a promising solution; yet, no country has industrialized the ocean to this extent. No state has constructed a wind farm amidst one of the most productive fisheries in the world, nor within the critical habitat of five endangered whale species. 1700-2000 offshore turbines, each taller than an 85-story building, will soon dominate the coastal waters of RI and MA. Situated just 9-13 miles from land, the planned turbines will extend over 900,000 acres—an area almost 1.5 times the size of Rhode Island.

To date, the US has installed just seven offshore wind turbines. The Block Island Wind Farm boasts five, Virginia's coast, two. The small scale of both farms cannot possibly provide the critical evidence required to assure the safety and efficacy of the planned projects. People often cite Europe's extensive developments as proof of offshore wind energy's harmlessness and success. The North Sea, however, differs significantly from the Atlantic continental shelf. Moreover, recent studies from Europe warn of unanticipated environmental impacts, and current wind and natural gas shortages highlight the unreliability of wind energy.

Years of pile-driving, increased shipping activity, and the disruption of the fragile sea bed will cause damage—potentially irreparable—to the environment. Adverse impacts include noise and water pollution, biodiversity loss, seafood contamination, viewshed degradation, disruption of ocean currents, and diminished wind. These changes will threaten fish stocks, endanger marine mammals, destroy phytoplankton, and risk the safety of our food supply chain. Given our sense of urgency, we may accept these damages as necessary sacrifices to combat climate change. However, the planned turbine fields, like the dispersants in the Gulf of Mexico, may come at an environmental cost that far outweighs any potential benefit.

Despite the tax-payer-funded largess of the federal government, some companies have sought to renegotiate their Power Purchase Agreements, citing supply chain interruptions, rising costs of raw materials, and climbing interest rates. Any renegotiation will offer RI and MA an

opportunity to re-evaluate these projects and question whether jumping into the waters of offshore wind makes sense.

Desperate times often require desperate measures, but large-scale, unproven, and invasive measures, often cause unforeseen harm. The ocean's finite and irreplaceable resources can disappear. Wind can dissipate. Once destroyed, uniquely productive habitats and breeding grounds that sustain life on earth may not return.

Over the next several weeks, this column will examine the "greenness" of offshore wind projects and compare alternative options. We will calculate the actual net carbon equation and discuss the undetermined fate of the turbines at the end of their twenty-year lifespan. The essays will present the newest scientific studies that suggest wind farms, at the scale planned off the eastern seaboard, could generate a cascade of unintended consequences that could, in the worst-case scenario, even accelerate climate change. We welcome reader input and hope this series promotes a constructive discussion.

The signed are members of and are writing on behalf of Green Oceans. Contact info@green-oceans.org with questions or comments.