

EcoFocus: OUT OF SIGHT, OUT OF MIND . . . Long Island's Offshore Wind Energy Dilemma

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LI residents have been inundated with both federal and state media campaigns claiming that offshore wind energy--which will be controlled by giant industrial corporations--is a panacea that will bring clean energy and will help solve carbon pollution and global warming issues, as well as offer extensive economic benefits. Nowhere is it mentioned that this can only be accomplished at the expense of impacting animal and plant life and disrupting another ecosystem—the offshore LI waters. New York State with NYSERDA (NYS Energy Research & Development Authority) and federal BOEM (Bureau of Ocean Energy Management) currently plan industrial offshore wind energy development just south of LI in the NY Bight (overlapping the Atlantic Flyway for migratory birds); this area covers one million acres and will include hundreds of turbines by 2030.* Marine environments are dynamic and unpredictable, changing dramatically with differing weather conditions; marine animal populations are also fluid, dependent on marine water, wind and food sources for their movement. With unchecked industrial wind energy growth, LI could be opening a Pandora's Box of environmentally negative consequences for its ocean waters and for both vertebrate and invertebrate marine species which inhabit them. Once this degradation process begins, its long-term environmental impact may be irreversible. Virtually no research exists regarding an offshore wind energy program designed like the one for LI: built in deep offshore waters with towers over 600 ft tall, larger blade sweep and different environmental conditions, not comparable to European ones.

Industrial offshore wind energy is not a benign energy solution. In operation, these offshore wind farms produce heavy vibration, sustained noise and lighting pollution, as well as restricted area access; they cause benthic and pelagic habitat alteration, leading to ecosystem damage of diverse species. They can cause injury and death to marine mammals (such as whales, seals and dolphins), turtles and fish from: exposure to electromagnetic sound waves from undersea electric cables, building construction and pile driving noise, daily operation, ship collisions and resultant pollution. They're also responsible for sea bird and migratory bird kills, as well as bat kills, from collision with moving wind turbine blades; mortality numbers are virtually invisible and undocumented when the kills sink into surrounding waters. Limited data is available for marine avian species and flying height--wind speed and direction can sweep them into the turbine blade vortex. Since marine animal populations are not static, no amount of mitigation can ever be fully effective.

National environmental regulations are currently being dismantled piece by piece to allow "takes" or kills of protected species--marine mammals, birds and bats--in order to avoid impacting growth of the offshore wind energy industry. Federal accountability is nonexistent for them.

Environmental input from the scientific community lacks long-term investigation on cumulative environmental effects. Eastern LI's controversial South Fork Wind Farm, to be located 30 miles off Montauk Pt. at Cox's Ledge (proposed opening by Deepwater Wind: 2022), will initially have 15 turbines but can potentially support over 200. A single offshore wind farm with limited turbines will have individualized negative environmental impacts, but impact from the future addition of multiple facilities with turbines numbering in the hundreds regionally over time is unknown. Cumulative negative effects on vertebrate and invertebrate species, their migration patterns and on the food web, itself, could be catastrophic. Unfortunately, this remains a looming and worrisome future environmental question.

Considered a high-risk industry, safety issues with industrial offshore wind farms commonly include: undersea electric cable failures, blade-throw and "ringing" (wave vibration that can fracture wind turbines). Major storms and hurricanes can also cause devastation. As offshore wind facilities age, they

require additional maintenance expense, and power generation becomes less effective. With a limited 20-25 year life expectancy, decommissioning and some form of recycling will be required, diminishing their cost-effectiveness and adding to future ocean environmental degradation.

LI residents want and need a solution that provides clean, environmentally safe energy in today's world. Alternative wind energy technology is now available that causes less environmental destruction, does not need placement in wind-driven areas and can produce more power per unit cost-effectively than conventional industrial offshore wind energy. It can also protect bird and bat populations, whose healthy existence is vital for mankind. Conventional bladed wind turbines have an inherently flawed design, which will always kill birds and bats.

Giant industrial corporations will control LI offshore wind energy development, reaping profits that won't benefit local communities. Diversifying LI's power supply with small, renewable clean energy technology companies can offer safer options not dominated by one major energy industry. Other renewable clean energy solutions are available that provide an environmentally safer energy product and also offer LI job and economic benefits. Besides utilizing localized alternative wind energy technology, small scale solar power can be used in parking lots, on rooftops, in disturbed/abandoned areas; California is leading the way in requiring solar on all new buildings. Shallow geothermal energy (common in Europe) is also a safer local approach, and other alternative renewable energy sources need to be investigated. Mandating lower appliance electricity consumption levels, as well as establishing LI public school education programs on environmentally responsible energy use could also assist in reducing future LI energy requirements. A new mindset is required to find more diversified and environmentally safer renewable energy solutions for our future LI energy needs—solutions that make LI residents responsible participants in our world's environmental protection.

***Appendix: "LI Area Industrial Offshore Wind Development Background"**

The first US operational industrial wind farm, controversial Block Island Wind Farm off coastal Rhode Island, opened in 2018. It presently has five 560' tall turbines (twice the height of the Statue of Liberty). Eastern LI's controversial South Fork Wind Farm, to be located 30 miles off Montauk Point at Cox Ledge—construction 2019, proposed start date 2023--will initially have 15 turbines over 600' tall, but can potentially support 200 turbines.

In early 2018 New York State, led by New York State Energy Research and Development Authority--NYSERDA, proposed two areas for offshore wind energy development just south of LI in the New York Bight. This includes over one million acres located 21 miles offshore, to eventually consist of hundreds of turbines developed in stages by 2030. These facilities will be out of shore sight to avoid impacting tourism and to decrease resident objections. The federal Bureau of Ocean Energy Management--BOEM-- has issued ocean leases for renewable wind energy development on the eastern seaboard's Outer Continental Shelf. BOEM is soliciting public comments through July 29 about its proposed New York Bight offshore wind development areas, which are larger than NYSERDA's and partially visible from land (see BOEM.gov/New-York/). Both state and federal plans overlap the Atlantic Flyway for migratory birds, a poor site choice for avian protection.

For further information:

www.abcbirds.org See "Position Paper---Offshore Wind"

www.aquaticbiosystems.org/content/10/1/8 (Bailey, et.al. "Assessing Environmental Impacts of Offshore Wind Farms")

www.ssaudubon.org/pdfs/Offshore-Wind-Energy-Development-and-Birds-in-NY.pdf.