

**MIMS gives Cape Wind favorable review except for
birds, navigation and visual impacts**

By Rich Eldred

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REGIONAL - The Minerals Management Service's 800 page Final Environmental Impact Statement on Cape Wind was released on Friday and in a largely favorable review found nearly all impacts to be negligible or minor.

The few exceptions, where the 130 turbine wind farm would potentially or certainly have moderate to major impact were on birds, especially marine birds such as terns or sea ducks, on navigation and safety of recreational or commercial fishing boats, although those effects could be mitigated, and on visual resources of Nantucket Sound.

Cape Wind hopes to produce up to 454 megawatts of electricity although the average is expected to be 182.6 megawatts. The individual turbines should operate for 20 years or perhaps longer. The electricity will be transmitted to the shore in Lewis Bay via a pair of submarine 12.5 mile-long cables, installed by jet plowing, that will come ashore near New Hampshire Ave.

The MMS received 42,000 comments (42,000) during last year's comment period.

"The (FEIS) has addressed all comments to the extent that are applicable and necessary to reach conclusions," the report said.

The report found negligible or minor impact regarding noise, currents, waves and other oceanographic factors, air quality, coastal vegetation, shellfish, whales, fisheries (other than navigation), economics, tourism, recreation, airport facilities and most vessel traffic.

Impact on birds

The animals most likely to be injured are birds, which can fly into the turbines or become distracted or attracted by navigational lights at night.

"The proposed project would result in minor to moderate cumulative impacts on roseate terns," the report noted.

Roseate terns are endangered and terns, that breed and feed around Nantucket Sound, are potentially the most imperiled. One submitted estimate was that 200 common, roseate and least terns could be killed each year via collisions with the towers or spinning blades.

Surveys indicated sea duck (common eiders, long-tailed duck and scoters) densities on Horseshoe Shoals, the location of the project, ranged between 4-1000 per acre and they appeared to be foraging. On average there were 60-280 eiders within survey area and flocks of up to 500 scoters. Cormorants could potentially roost on the platforms. Marine birds were most common from Oct. though April.

In the Netherlands, at an offshore wind farm, the documented rate of songbird, waterbird and shorebird documented fatalities ranged from 0.4 to .14 per turbine per day and those rates were higher than those for onshore turbines. Translating those numbers to Cape Wind would produce a maximum of 6643 bird kills a year. The report concluded the sea ducks did have the ability to avoid the turbines while migrating or flying during the day. However if they are flying in a flock it could be more difficult to take evasive action.

A survey over Cape Cod in the 1960's indicated most bird migration took place at over 600 feet (the turbines are 440 feet tall) but birds do fly lower over water. Most bird collisions occur at night during inclement weather. A study in Belgium found 6.7 terns killed per turbine per year but turbines were built within 98 meters of a breeding colony and most collisions were at the turbines nearest the colony.

The turbines plus blades would be 440 feet tall. At the perimeter the towers will be lit at night to aid navigation. The lights would be visible from shore. During the day the wind farm would be visible from Falmouth to Chatham and from Martha's Vineyard, Nantucket and Monomoy. The best view, as it were, would be between

Cotuit and Hyannis Port.

Cape Wind will also have an adverse visual impact on 28 historic properties including the Kennedy compound, Nantucket historic district, Nobiska Point lighthouse, Monomoy Point lighthouse and several other light houses and proposed or existing historic districts.

But, as the report observed, interpretation of visual impact is subjective.

“The proposed action would change the views out to Nantucket Sound from a mostly natural ocean setting to a setting with manmade features present across a substantial portion of the horizon,” the report declared. “The visual impacts are unlikely to affect the viability of the recreational areas,” as the public is unlikely to cease, “sitting on the beach, viewing the expanse of Nantucket Sound, swimming, fishing, sailing.”

Navigational safety for vessels operating within the wind farm by radar is expected to be “moderately impaired,” but “The USCG determined the effects could be mitigated.”

Reflections of the radar off the turbines can create “ghost turbines” on a vessels radar screen. The ghosts come and go and can make it difficult to differentiate ships within the farm from false obstacles and shifting sizes of the reflections from the turbines themselves.

“Vessel operators will need to take more caution when navigating the area of the (turbines) to avoid the (turbines) and other boaters,” the report said.

Mitigation in the form of education and navigational aid could reduce any problems.