ABSTRACT

Off the eastern coast of the United States lies a unique and untapped natural resource, one that until recently has received little public attention: offshore wind power. Offshore wind power offers a clean, renewable source of energy that has the potential to reduce dependence on fossil fuels and provide cleaner air, clearer skies, and improved public health. The promises of offshore wind, however, are not without pitfalls, and many groups have been formed to oppose offshore development on the grounds of aesthetics, damage to sensitive coastal habitats, and adverse effects on local and migrating species of marine wildlife.

The U.S. Commission on Ocean Policy addresses offshore sources of renewable energy in Chapter 24 of its April 2004 preliminary report to Congress, and recognizes that the United States currently lacks a "comprehensive and coordinated federal regime…to regulate offshore wind energy development" (U.S. Commission on Ocean Policy 2004). Additionally, the Commission calls for an analysis of the benefits of offshore wind development as compared to the "potential adverse effects on other ocean users, marine life, and the ocean's natural processes" (U.S. Commission on Ocean Policy 2004).

My proposed research will focus a) on identifying potential impacts (both positive and negative) of offshore wind development on marine wildlife species; b) examining how other energy producing activities, such as offshore oil development and fossil-fuel burning power plants, affect wildlife species, and c) determining where offshore wind development "ranks" in terms of effects on marine species as compared to other sources of energy production, so as to provide policy-makers with an improved understanding of the effects of offshore wind development on wildlife species.

The methodology will consist primarily of secondary data analysis, including analysis of the first environmental impact assessment for an offshore wind development in the United States (the Nantucket, MA site; to be released in the fall of 2004) and the environmental impact assessments for power plants and offshore oil platforms. Other data that will be used include environmental studies and reports that have been conducted on existing European offshore wind development sites.

I believe this research project will contribute to the limited existing knowledge on environmental effects of offshore wind development, and further current research in the field by providing a context through which to better understand the ramifications of offshore wind development on marine wildlife species. Additionally, I hope to provide policy-makers with useful information that may assist them in their decision-making processes related to offshore wind development, which is certain to become an important – yet contentious – issue in the energy and environmental policy realm.