

Name \_\_\_\_\_

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## Case Study: Cape Wind Project

Read the case study below and take notes as you read, using the Cornell Note Taking worksheet.

### Geography

Nantucket Sound is located off the coast of Massachusetts in the Atlantic Ocean. It is defined by Cape Cod in the north, Nantucket Island to the south, and Martha's Vineyard to the west. Nantucket Sound is about 48 kilometers (30 miles) by 40 kilometers (25 miles) in area. The population of the surrounding areas varies greatly seasonally, as much as tripling in the summer months.

Horseshoe Shoal is a shallow area in Nantucket Sound located 8 kilometers (5 miles) south of Cape Cod. Water depth in Horseshoe Shoal ranges from 15 centimeters (6 inches) to around 18 meters (60 feet). The surrounding islands of Martha's Vineyard and Nantucket help to buffer Horseshoe Shoal from large waves. The Horseshoe Shoal area is visible from some parts of Cape Cod, Martha's Vineyard, and Nantucket Island.

### Assessment

The primary industry in the Nantucket Sound area is tourism. The area is known for its mild summer weather, scenic attractions, beautiful beaches, and outdoor recreation opportunities. Fishing is a popular pastime as well as a commercial occupation.

The land areas around Nantucket Sound are largely summer tourist destinations, and a number of celebrities and wealthy families have second homes there. Cape Cod has more than 885 kilometers (550 miles) of coastline, and offers more than 60 public beaches that are popular with tourists. The island of Martha's Vineyard has a small year-round population, but it is best known as a relaxing summer retreat for the rich and famous. More than half of the homes on the island are only occupied during the summer. The island is not accessible by land, and the cost of living is about 60% higher than on the nearby mainland.

Nantucket Sound is uniquely situated to combine both northern and southern wildlife ranges. Both the cool Labrador Current and the warm Gulf Stream flow through the Sound. Because of this, the Sound is home to a large diversity of marine species, including a number of endangered species. Some endangered species living in the area include humpback whales, North Atlantic right whales, loggerhead turtles, and leatherback turtles.

### Conflict

In November 2001, developers proposed the Cape Wind project, which would locate a large-scale wind farm on Horseshoe Shoal in Nantucket Sound. Cape Wind would be the first offshore

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wind farm in the United States. The project would include 130 wind turbines spaced over almost 65 square kilometers (25 square miles). Cape Wind would have a maximum electrical output of 468 megawatts, with an average output of 174 megawatts. Electricity from the wind farm would be carried to the mainland through underwater cables.

For over ten years, the project has faced government hurdles, numerous impact studies, and legal opposition from an action group formed to protect the Sound. The project needed both state and federal approval because the turbines would be located in federal waters, while the cables carrying the electricity would travel over Massachusetts land.

Proponents say the wind farm will increase desirable renewable energy capacity, which can help reduce greenhouse gasses affecting global climate change. They also believe the project can help Massachusetts keep up with energy demands. They describe Nantucket Sound as the best available location for the project because of a combination of strong, less turbulent winds, shallow waters, and low wave heights.

While most people agree that the United States should develop additional sources of wind energy, those opposing the Cape Wind project insist that Nantucket Sound is not the place to build such a large project. Opponents argue that the project is too large and will be unsightly, negatively affecting tourism and property values. Opponents have also raised both wildlife and historical conservation issues. A significant unknown issue is the cost of the project, if and by whom the project will be subsidized, and the ultimate cost to the consumer. Opponents argue that the higher-priced electricity from the wind farm will raise prices for electricity in the region. Advocates for the project insist that any increased costs to consumers would be minimal.

The difficulties with getting the project approved have moved into the political arena. Among the opponents of the project were the former Senator Ted Kennedy and former Massachusetts governor Mitt Romney, as well as other politicians from the area. Kennedy cited environmental and economic concerns about the project. Romney pointed to the environment and the legacy of Nantucket as his reasons for opposing the project. Some advocates for the wind farm have suggested that political pressures held up key permits and approvals on both the state and federal levels.

Even after gaining the last of the necessary permits and approval from the federal level in 2010, the Cape Wind project still faced legal challenges from groups ranging from environmental groups to nearby towns to the Wampanoag Tribe.

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## Stakeholders

*Energy Management, Inc.:* Energy Management, Inc. is the developer of the Cape Wind project. The company first proposed the project in 2001, and company spokespeople estimate that over \$50 million has been spent on the project, even before actual development has begun. After years of investment and delays, Energy Management, Inc. would like to get started installing the turbines and making the system operational.

*Electric Utility Companies:* In order for the project to be feasible, Cape Wind has to have buyers for the electricity it expects to generate. National Grid agreed to buy half of the wind farm's electricity and, in 2012, Northeast Utilities and NStar contracted to buy another quarter of the projected supply.

*Wampanoag Tribe:* The Native American tribe's ancestors once lived on land now covered by the waters of Nantucket Sound, and the tribe claims the area should be protected as sacred land. They also maintain that the area is in the path of sunrise rituals important to the tribe. The tribe would like to see the Cape Wind project blocked before it disturbs their ancestral lands.

*Permanent Residents:* Year-round residents of the areas surrounding Nantucket Sound earn most of their living from the tourism industry. Some residents are concerned that the visibility of the wind turbines will negatively affect tourism. Others believe that they will have little, or even a positive, effect on the industry. Residents are also split on costs. Some believe that the wind farm will result in lower electric costs, while others believe it will result in higher costs. A December 2009 poll by the University of Delaware found that 57% of Cape Cod, Martha's Vineyard, and Nantucket residents supported the Cape Wind project, though public opinion about the project has varied throughout the more than 10-year process.

*Vacation Home Owners:* Many vacation home owners are concerned about the impact the wind turbines will have on the scenic environment of the Sound, and they seek to preserve the beautiful landscape of the area. They are also concerned that the wind farm will drive property values down. One owner of a vacation home on Martha's Vineyard even filed suit to stop the project based on the "adverse effects" the project would have on his views and property values. The suit was denied by the State Department of Justice in 2012. Former U.S. Senator Ted Kennedy, whose family property in Hyannis Port would overlook Cape Wind, was vocal in his opposition to the project.

*Federal Government:* Since taking office, President Obama has been an advocate for renewable energy, including wind energy. The administration has advocated for the use of offshore areas and federal lands for generating renewable energy. In 2010, Interior Secretary Ken Salazar gave the final necessary federal approval to the Cape Wind project.

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*Wildlife Conservationists:* Wildlife conservation groups are split on their opinions of the Cape Wind project. Some wildlife conservation and animal rights groups oppose the project because they fear it will negatively impact endangered species, such as the piping plover, least tern, North Atlantic right whale, and four protected species of sea turtles. They also fear the impact on other wildlife in the area, such as birds using the Atlantic Flyway, of which Horseshoe Shoal is a part. The Humane Society of the United States, the Massachusetts Society for the Prevention of Cruelty to Animals, and the International Marine Mammal Project are among the groups that oppose the project. Among the conservation groups supporting the project is the Massachusetts Audubon Society. Although effects on bird populations are often a concern with wind turbines, the Massachusetts Audubon Society gave their support to the project after reviewing intensive impact studies.

### **Conflict Mitigation**

Throughout the more than ten-year span between the initial proposal and the final federal approvals, numerous compromises and solutions to problems have been incorporated into the Cape Wind project. Extensive environmental impact studies were done in response to concerns raised by conservation groups. Cape Wind developers agreed to mitigation and monitoring suggestions from the Massachusetts Audubon Society to lessen the wind farm's impact on birds. Similarly, developers worked with state and federal officials to adjust their plans in order to get necessary permits throughout the process. Cape Wind developers also worked with the Department of Justice and the utility companies Northeast Utilities and NStar to develop a contract that would allow Cape Wind to sell electricity to the utility companies while ensuring a relatively stable price for consumers.

Conflict still remains among groups opposed to the project. Many of these conflicts will eventually be worked out in court cases filed to halt the project on the basis of laws such as the Migratory Bird Treaty Act, the Endangered Species Act, and the Outer Continental Shelf Lands Act.