

# ENVIRONMENTAL STEWARDSHIP

Our Commitment

Kaheawa Wind, Maui

## WORKING WITH NATURE TO PRODUCE CLEAN ENERGY

Wind energy is one of the most environmentally friendly forms of generating electricity, burning no fossil fuels and producing no harmful pollutants. When sited properly, wind energy facilities have minimal impact on habitats and wildlife.

At First Wind, the protection and preservation of local natural resources are a top priority when siting, constructing, and operating the wind energy projects we develop. With a team of environmental scientists, we consider habitat and wildlife impacts during every step of the development process — from initial planning to erecting turbines to constructing transmission lines.

## RESPONSIBLE DEVELOPMENT AND OPERATION

Responsible development guides every First Wind project. From development through construction and operation, First Wind looks for environmentally responsible ways to coexist with the surrounding landscape. Before we break ground, our dedicated team of specialists conducts detailed environmental surveys to analyze and document existing conditions, from bird migration to wetlands. When siting wind turbines, we carefully take these resources into account in order to protect local habitats. During construction,

leading methods are employed to minimize environmental impacts. Once construction is complete and the wind energy project is operational, we continue to care for and maintain each site, monitoring the environment and restoring affected areas.

As operators of the wind energy projects we develop, First Wind makes a long term commitment to the communities in which we work to produce clean, renewable energy while protecting local species and habitats.



# ENVIRONMENTAL BENEFITS OF WIND POWER

## **Preserves natural resources**

Using wind to generate electricity does not deplete natural resource stocks or fossil fuel reserves.

## **No greenhouse gas emissions**

Unlike conventional power generation, wind energy facilities emit no carbon dioxide (CO<sub>2</sub>) or nitrogen oxide (NO<sub>x</sub>)

## **No air or water pollution**

Wind energy facilities generate electricity without emitting particulate matter, sulfur dioxide (SO<sub>2</sub>) and other criteria pollutants associated with smog, contamination of waterways, and negative impacts on public health.

## **Conserving valuable water resources**

Conventional power generation requires large quantities of water and can result in mercury contamination of rivers, lakes, and oceans. In contrast, wind energy facilities do not use or pollute sources of fresh water.



First Wind staff and volunteers replant native plant species at Kaheawa Wind.



# BUILDING MILFORD WIND

## Safeguarding the Desert's Ecosystem



America's West is generally thought of as a rugged place. Though often harsh, the desert ecosystem is also fragile, requiring extra care and special considerations when building a wind energy facility. Prior to the construction of our project in Milford, Utah, we consulted with a team of biologists to analyze the local habitat and reduce environmental impacts.

Milford proved a unique challenge. To avoid any unnecessary damage to the desert ecosystem, we enforced strict rules during the construction phase. As just one example, driving on desert topsoil was prohibited in order to protect the landscape, and transportation onto the site was limited to designated access roads.



## Protecting Raptor Nests

Before construction began in Milford, First Wind biologists discovered nine active raptor nests that could be disturbed by the construction of transmission lines for the project. To protect these birds, we created a Raptor Action Plan, which included a monitoring and reporting program for known and new nests, and prescribed alternative construction methods. In one case, we halted construction completely until the young birds were able to fly and were no longer dependent on their nest.





The Nene continue to thrive near Kaheawa Wind, using the area for social interaction, foraging, and breeding.

# THE KAHEAWA WIND PROJECT HABITAT CONSERVATION PLAN

## Protecting the Fragile Hawaiian Ecosystem



Preserving Hawaii's unique environment was essential to First Wind when planning and building the Kaheawa Wind project on the island of Maui. Before beginning construction, First Wind's environmental surveys revealed that there were four threatened and endangered species living in the area: the Hawaiian Petrel, Newell's Shearwater, Nene, and the Hawaiian Hoary Bat. To minimize the impact construction would have on these species, First Wind worked with both the State of Hawaii's Department of Land and Natural Resources and the U.S. Fish and Wildlife Service to develop a Habitat Conservation Plan – the first of its kind for a wind project in the United States.

Thanks to that plan, today Kaheawa Wind operates in harmony with the native plant and animal species of Maui while providing a clean, renewable energy source to island residents.

### What is a Habitat Conservation Plan?

The Habitat Conservation Plan prescribes specific measures that will be implemented by First Wind to ensure that the project results in an overall benefit for the four species covered. Some examples include captive propagation and release of Nene, protection of a seabird colony, and funding research to better understand the ecology of Hawaiian Hoary Bats.

---

First Wind is working with the Hawaii Division of Forestry and Wildlife to support the construction of a new Nene captive-release pen. The pen will enable Nene that are raised in a captive propagation program to enter the wild population in a setting that affords the highest likelihood of survival to adulthood.

---

First Wind conducts an ongoing wildlife education and outreach program that will increase staff and visitor awareness of the Habitat Conservation Plan's species and how to protect them.

---

# CLEAN ENERGY FROM A BROWNFIELD

## Making What's Old New Again

On the windy shores of Lake Erie, the abandoned remnants of a long-closed steel manufacturing plant sat in ruin. The land was useless to most other industries, and the soil was too polluted with arsenic and semi-volatile organic compounds for the site to be easily reclaimed. However, the location had one major attribute that had been overlooked in the past: an excellent wind resource.

## Making the land safe

Before construction could begin, the site needed to be capped and stabilized to ensure it was safe for our workers. Our site reclamation experts conducted a detailed environmental assessment of the entire 1,100-acre site and then placed 40,000 cubic yards of clean soil over the area to help protect wind farm workers from chemical contact.

## Reclaiming the environment

With the soil in place, First Wind graded the surface to improve drainage and reduce the potential for erosion. Once we

addressed the major threats to the area, we began revegetating the site with plants that would thrive on the windy lakeshore.

Today, Steel Winds generates over 50 million kilowatt hours of clean electricity each year, enough to power 9,000 homes in New York. First Wind not only reclaimed a ruined environment, but transformed it into a symbol of economic and industrial rebirth.

---

“Unlike conventional methods of electricity production, wind power uses little water and emits no mercury, a leading cause of contamination to our rivers and lakes.”

– Dave Cowan, VP of Environmental Affairs, First Wind

---





# MONITORING THE HEALTH OF STETSON MOUNTAIN

## Helping to Prevent Harm to Birds and Bats



When First Wind began planning a wind energy project on the long ridgeline of Stetson Mountain in Maine, a top priority was protecting the welfare of native wildlife, and nearby wetlands and waterways.

Before construction of Stetson Wind commenced, a team of biologists from our Environmental Department studied the area, tracking nocturnal and diurnal bird and bat migration patterns with radar and other technology. With this data in hand, our engineers were able to place and operate turbines in ways that would minimize the danger to birds and bats.

Once Stetson Wind was completed, we focused our attention toward reclaiming the site. First Wind rebuilt and revegetated the area with native shrubs and trees, replenishing the habitat for local species and reducing the impact of erosion on the windy mountaintop. Only one quarter of an acre remains permanently cleared for each wind turbine.

The Stetson Wind Project has received support from leading environmental groups such as Maine Audubon, Natural Resources Council of Maine, the Appalachian Mountain Club, and the Conservation Law Foundation. In addition, the project has garnered regional endorsements from local officials and groups including the Washington County Commissioners and the Sunrise County Economic Council.

---

“We have a well-established environmental department staffed by biologists to take a look at these issues not only in the short-term, prior to or just after construction, but in the long-term as well.”

– Bob Roy, Director of Ecological Services,  
First Wind

---

Cohocton Wind, NY

To learn more about clean,  
renewable wind energy,  
visit [www.firstwind.com](http://www.firstwind.com).

First Wind  
179 Lincoln Street  
Suite 500  
Boston, MA 02111

