

AVIAN IMPACT

Background on wind project impacts to birds and bats:

There have been many claims that wind turbines pose a significant threat to birds and wildlife. But in actuality, wind turbines and wildlife can and do co-exist successfully.

The wind industry has been conducting avian studies at wind sites across the country for more than twenty years. Over this period, pre- and post-construction monitoring of bird kills at many wind sites in a wide variety of geographic locations has found that modern wind turbines have very minimal bird and bat impacts. Specifically bird studies have found bird kills per turbine average two to five per year, or less. Even at the wind farm at Altamont Pass, California, one of the first and oldest wind projects in the U.S., the overall number of bird kills has been very low: approximately one bird for every five turbines per year. These studies have been conducted at sites where millions of birds migrate each year. Some sites have documented no kills at all. Bat studies, while the number of studies is smaller, have found a similarly small impact.

Small, community-sized projects typically pose much smaller, if any bird and wildlife impacts as compared to the mega-wind developments with dozens or hundreds of turbines. Because of their small footprint and easier and closer accessibility to transmission lines - small projects tend not to cause as many impacts, and when they do, they are typically less significant. Smaller footprints allow for the continued use of surrounding land, such as in farming, ranching, and other traditional and historical uses of proposed sites. In most cases, these dual uses are entirely compatible: the historical uses can continue up to the foot of the turbines without sacrificing the wind turbines' efficiency.

For Beaver Ridge, CES has met with an international expert on migratory birds and has concluded based on the best evidence available that there is no likelihood of significant bird or bat impacts at the proposed site. It is a very small site that would encompass no more than 3 turbines, and is not located in any migratory corridors in Maine.

Putting bird kills caused by wind turbines into perspective with other sources:

Bird kills caused by wind turbines have been greatly overemphasized. A reasonable, conservative estimate is that of every 10,000 human-related bird deaths in the U.S. today, wind plants cause less than one. Leading human-related causes of bird kills, in the U.S. alone, include:

- o cats (1 billion per year)
- o buildings (100 million to 1 billion per year)
- o hunters (100 million per year);
- o vehicles (60 million to 80 million per year)
- o communications towers (10 million to 40 million per year)
- o pesticides (67 million per year)
- o power lines (10,000 to 174 million per year)

The wide ranges cited for sources of avian deaths reflect the low level of research work done on those sources. As previously mentioned, the wind industry has spent over twenty years studying avian impacts, and in comparison to the other sources, wind energy is by far the most thoroughly studied.

To verify that wind developments pose little impacts to birds, and to validate the industry's ability to assess risk to birds and build safe projects, numerous post-construction monitoring studies of bird kills at several wind sites in a wide variety of geographic locations have been conducted, including Vansycle Ridge, Oregon; Ponnequin, Colorado; Foote Creek Rim, Wyoming; Buffalo Ridge, Minnesota; Searsburg, Vermont; Garrett, Pennsylvania. All have reached generally the same conclusion: two to five bird kills per turbine per year.

Early generations of wind turbines were smaller and located closer together than current styles and configurations. They used lattice towers which attracted birds to perch, and had rapidly spinning blades. Over the last twenty years, the wind industry has come a long way toward minimizing impacts. It continues to fund research on bird kills and in response to a few heavily sensationalized and unfortunate bird kills, has adopted mitigation practices, such as equipment changes including: larger blades that spin at a very slow 10 to 20 rpms and tubular towers with no place for birds to perch.

Wind Turbine Benefits to Birds and Bats

Wind projects can help preserve sensitive bird habitat from suburban sprawl and other habitat encroachments. In places such as upstate New York and Kansas, installing a wind project has allowed families to stay on farms and ranches, preserving the open space important to many bird and wildlife species as well as allowing local folks to maintain traditional land uses such as farming.

By reducing air pollution associated with generating electricity with fossil fuels, wind turbines reduce perhaps the most serious threat to birds and bats. Global warming, acid rain, mercury poisoning of our lakes and rivers are taking now taking a significant toll on Maine's wildlife. The impact associated with these pollutants is growing as we increase our reliance on coal, oil and natural gas fired generation. Wind turbines in Freedom would measurably reduce emissions of these pollutants directly into the New England airshed.

In addition to the direct impacts associated with air pollution by burning fossil fuels to generate our electricity there are significant impacts associated with mining, transporting and refining fossil fuels including habitat destruction and oil spills.

Bird deaths due to air pollution and habitat destruction are not as readily visible as those associated with collisions with wind turbines but they are more debilitating to bird populations in many ways.