

Oct 2008

Searches from Web of Science and Ovid Databases for Wind energy and eagles

=====

PT J  
TI Adverse impacts of wind power generation on collision behaviour of birds and anti-predator behaviour of squirrels  
AU Kikuchi, R  
SO JOURNAL FOR NATURE CONSERVATION  
VL 16  
IS 1  
BP 44  
EP 55  
PY 2008  
TC 0  
UT WOS:000254693900004  
SN 1617-1381  
DI 10.1016/j.jnc.2007.11.001  
ER

PT J  
TI Spatial association as an indicator of the potential for future interactions between wind energy developments and golden eagles  
Aquila  
  chrysaetos in Scotland  
AU Fielding, AH  
  Whitfield, DP  
  McLeod, DRA  
SO BIOLOGICAL CONSERVATION  
VL 131  
IS 3  
BP 359  
EP 369  
PY 2006  
TC 0  
UT WOS:000239139400002  
SN 0006-3207  
DI 10.1016/j.biocon.2006.02.011  
ER

PT J  
TI Exploitation of wind energy - A problem for larger birds?  
AU Hoetker, Hermann  
  Thomsen, Kai-Michael  
  Jeromin, Heike  
SO Ornithologischer Anzeiger  
VL 44

IS 2-3  
BP 185  
EP 192  
PY 2005  
TC 0  
UT BIOSIS:PREV200600363199  
SN 0940-3256  
ER

PT J  
TI Migrating birds and offshore-windfarms: conflicts and solutions.  
AU Hueppop, Ommo  
Dierschke, Jochen  
Wendeln, Helmut  
SO Berichte zum Vogelschutz  
VL 41  
BP 127  
EP 218  
PY 2004  
TC 0  
UT ZOOREC:ZOOR14112071007  
SN 0944-5730  
ER

PT J  
TI Golden Eagles in a multiple land-use environment: A case study in  
conflict management  
AU Madders, M  
Walker, D  
SO JOURNAL OF RAPTOR RESEARCH  
VL 36  
IS 1  
SU S  
BP 55  
EP 61  
PY 2002  
TC 2  
UT WOS:000174979700012  
SN 0892-1016  
ER

EF

Ovid Technologies, Inc. Email Service

-----

Search for: wind energy and eagles {No Related Terms}

Results: 9-13

Result <1>

Score

\*\*\*\_\_

Accession Number

BACD200700221047

Author/Editor/Inventor

Barclay, Robert M. R. [Author, Reprint Author; E-mail: barclay@ucalgary.ca]; Baerwald, E. F. [Author]; Gruver, J. C. [Author].  
Institution

Univ Calgary, Dept Biol Sci, 2500 Univ Dr 1 NW, Calgary, AB T2N 1N4,  
Canada.

Title

Variation in bat and bird fatalities at wind energy facilities:  
assessing the effects of rotor size and tower height

Source

Canadian Journal of Zoology. 85(3). MAR 2007. 381-387.

Abstract

Wind energy is a rapidly growing sector of the alternative energy industry in North America, and larger, more productive turbines are being installed. However, there are concerns regarding bird and bat fatalities at wind turbines. To assess the influence of turbine size on bird and bat fatalities, we analyzed data from North American wind energy facilities. Diameter of the turbine rotor did not influence the rate of bird or bat fatality. The height of the turbine tower had no effect on bird fatalities per turbine, but bat fatalities increased exponentially with tower height. This suggests that migrating bats fly at lower altitudes than nocturnally migrating birds and that newer, larger turbines are reaching that airspace. Minimizing tower height may help minimize bat fatalities. In addition, while replacing older, smaller turbines with fewer larger ones may reduce bird fatalities per megawatt, it may result in increased numbers of bat fatalities.

Result <2>

Score

\*\*\*\_\_

Accession Number

BACD200700143426

Author/Editor/Inventor

Hueppop, Ommo [Author, Reprint Author; E-mail: hueppop@vogelwarte-helgoland.de]; Dierschke, Jochen [Author]; Exo, Klaus-Michael [Author]; Fredrich, Elvira [Author]; Hill, Reinhold [Author].

Institution

Inst Avian Res Vogelwarte Helgoland, Inselstn Helgoland, POB 1220, D-27494 Helgoland, Germany.

Title

Bird migration studies and potential collision risk with offshore  
wind turbines

Source

Ibis. 148(Suppl. 1). MAR 2006. 90-109.

Abstract

Worldwide, Germany is the leading country in the use of wind energy. Since sites for the erection of wind turbines became scarce on land, ambitious plans for the offshore regions have arisen. There have been applications for 33 sites within the German Exclusive Economic Zone in

the North and Baltic Seas, some of which entail several hundred individual turbines. Eleven pilot projects are approved, and two others rejected. As several hundred million birds cross the North and Baltic Seas at least twice every year, the Offshore Installations Ordinance says that licensing will not be given if the obstacles jeopardize bird migration. Birds are potentially endangered by offshore wind farms through collisions, barrier effects and habitat loss. To judge these potential risks, the occurrence of birds in space and time as well as details on their behaviour in general ( migration, influence of weather) and their behaviour when facing wind farms ( flight distances, evasive movements, i!

nfluence of light, collision risk) need to be determined. Furthermore, the influences of construction and maintenance works must be considered. Since 2003, we have investigated year-round bird migration over the North Sea with regard to offshore wind farms. The main objectives were to assess data on the aforementioned aspects of bird migration over sea. These data can contribute to, for example, estimations of collision risks at offshore wind farms, the possible impacts on bird populations and possible mitigation measures. Results from measurements with different techniques, including radar, thermal imaging, and visual and acoustic observations, were compiled. The findings confirm that large numbers of diurnal and nocturnal migrants cross the German Bight. Migration was observed all year round but with considerable variation of intensity, time, altitude and species, depending on season and weather conditions. Almost half of the birds fly at 'dangerous' altitudes with regard!

to future wind farms. In addition, the number of individuals in reverse migration is considerable, which increases the risk of collision. We demonstrated that, especially under poor visibility, terrestrial birds are attracted by illuminated offshore obstacles and that some species collide in large numbers. Passerines are most frequently involved in collisions. Even if the findings regarding collisions at a research platform cannot be directly applied to offshore wind farms, they do show that on a few nights per year a large number of avian interactions at offshore plants can be expected, especially in view of the number and planned area of projected wind farms. We suggest abandonment of wind farms in zones with dense migration, turning off turbines on nights predicted to have adverse weather and high migration intensity, and actions to make wind turbines more recognizable to birds, including modification of the illumination to intermittent rather than continuous light, as the most appropriate mitigation measures. We further conclude that a co!

mbination of methods is necessary to describe the complex patterns of migration over the sea. The recordings are to be continued with the aim of refining the results presented here, and of developing a model for 'forecasting' bird migration over the German Bight. We expect more information on avoidance behaviour and collisions after the construction of a pilot wind park.

Result <4>

Score

\*\*\*--

Accession Number

BACD200700143422

Author/Editor/Inventor

Drewitt, Allan L. [Author, Reprint Author; E-mail:  
Allan.drewitt@english-nature.org.uk]; Langston, Rowena H. W. [Author].  
Institution

Northminster House, Peterborough PE1 1UA, UK.

Title

Assessing the impacts of wind farms on birds

Source

Ibis. 148(Suppl. 1). MAR 2006. 29-42.

Abstract

The potential effects of the proposed increase in wind energy developments on birds are explored using information from studies of existing wind farms. Evidence of the four main effects, collision, displacement due to disturbance, barrier effects and habitat loss, is presented and discussed. The consequences of such effects may be direct mortality or more subtle changes to condition and breeding success. The requirements for assessing the impact of future developments are summarized, including relevant environmental legislation and appropriate methods for undertaking baseline surveys and post-construction monitoring, with particular emphasis on the rapidly developing area of offshore wind farm assessments. Mitigation measures which have the potential to minimize impacts are also summarized. Finally, recent developments in the monitoring and research of wind energy impacts on birds are outlined and some areas for future work are described.

Result <5>

Score

\*\*\*\_\_

Accession Number

BACD200000069637

Author/Editor/Inventor

Osborn, Robert G. [Reprint author]; Higgins, Kenneth F. [Author];  
Usgaard, Robert E. [Author]; Dieter, Charles D. [Author]; Neiger, Regg  
D. [Author].

Institution

Texas Agricultural Experiment Station, Texas A and M University  
System, Uvalde, TX, 78801, USA.

Title

Bird mortality associated with wind turbines at the Buffalo Ridge  
wind resource area, Minnesota

Source

American Midland Naturalist. 143(1). Jan., 2000. 41-52.

Abstract

Recent technological advances have made wind power a viable source of alternative energy production and the number of windplant facilities has increased in the United States. Construction was completed on a 73 turbine, 25 megawatt windplant on Buffalo Ridge near Lake Benton, Minnesota in Spring 1994. The number of birds killed at existing windplants in California caused concern about the potential impacts of the Buffalo Ridge facility on the avian community. From April 1994 through Dec. 1995 we searched the Buffalo Ridge windplant site for dead birds. Additionally, we evaluated search efficiency, predator

scavenging rates and rate of carcass decomposition. During 20 mo of monitoring we found 12 dead birds. Collisions with wind turbines were suspected for 8 of the 12 birds. During observer efficiency trials searchers found 78.8% of carcasses. Scavengers removed 39.5% of carcasses during scavenging trials. All carcasses remained recognizable during 7 d decomposition trials. !

After correction for biases we estimated that approximately 36 +- 12 birds (<1 dead bird per turbine) were killed at the Buffalo Ridge windplant in 1 y. Although windplants do not appear to be more detrimental to birds than other man-made structures, proper facility siting is an important first consideration in order to avoid unnecessary fatalities.