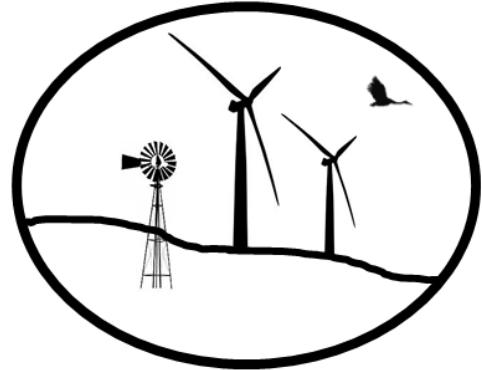


## Wind Energy and Wildlife News

September 15, 2015



### Around Nebraska...

**[Poll: Rural Nebraskans ready to act on climate change.](#)** Many rural Nebraskans are concerned about potential weather problems in their area and most believe the state should develop a plan for adapting to climate change to reduce its impact on agriculture, communities and natural resources, the Nebraska Rural Poll shows. Rural Nebraskans are also very supportive of renewable energy sources. Eighty percent agree that more should be done to develop solar or wind energy in Nebraska and about three-quarters believe the state should invest more in both wind and solar energy.

**[Climate and Energy: Opinions of Nonmetropolitan Nebraskans.](#)** Vogt et al. 2015. Nebraska Rural Poll Research Report 15-3, September 2015. This report details 1,991 responses to the 2015 Nebraska Rural Poll. Respondents were asked a series of questions about their climate change and energy sources. Comparisons are made among different respondent subgroups, that is, comparisons by age, occupation, region, etc.

**[Development Review Commercial Wind Energy Text Amendment.](#)** Link to the Lincoln/Lancaster County Planning Commission website with information about the recent planning actions for wind energy. The next meeting will be at 4:30 on October 20, 2016.

**[Editorial, 9/8: The case for a wind tax credit.](#)** A bill that would establish a state tax credit for wind and solar energy was a good idea when it was introduced at the start of the legislative session this year. It's an even better idea now, with the Obama administration's Clean Power Plan threatening to end Nebraska's reliance on coal-burning power plants.

**[Renewable energy forum Sept 10 in Norfolk.](#)** The forum will focus on the importance and potential of farm based renewable energy, including wind and solar from farm to commercial scale use. The public is encouraged to attend.

**[8th Annual Nebraska Wind and Solar Conference and Exhibition.](#)** November 4-5, 2015. Omaha, NE. Since 2008, volunteers from farmer and rancher organizations, state agencies, public power utilities and higher education professionals have shaped this educational networking conference and exhibition to advance the wind and solar industry of Nebraska. The conference has included top quality speakers and timely presentations.

## Around the Nation & World...

### Wind and Wildlife

[Quantifying impacts of onshore wind farms on ecosystem services at local and global scales.](#) Wang et al. 2015. Energy technologies have both local and global impacts on ecosystem services, with local impacts occurring where the energy is generated, and global impacts occurring where energy feedstock or raw materials for energy infrastructure are sourced. Assessing these impacts in both local and remote locations is important but challenging. Results show that onshore wind farms tend to have significant positive local impacts on primary production and air quality, and tend to have negative local impacts on soil, water and livestock. At global scale, onshore wind farms tend to have negative impacts on a number of ecosystem services.

### Birds

[A unifying framework for the underlying mechanisms of avian avoidance of wind turbines.](#) May 2015. Biological Conservation. I present a conceptual movement framework for wind-turbine avoidance by birds. Different forms of the avoidance process are distinguished at different spatial scales. I apply the risk-disturbance hypothesis to elucidate cost-benefit trade-offs. This facilitates understanding of the causes and mechanisms of avoidance responses. Formalizing the avoidance process facilitates study design and guides mitigation.

[Using spatial analyses of bearded vulture movements in southern Africa to inform wind turbine placement.](#) Reid et al. 2015. We demonstrate the value of habitat use models for identifying intensively used areas, in order to greatly reduce conflicts with developments such as wind turbines. This tool is operable at the scale of regional and national development plans informed by the habitat use of potentially vulnerable species. Such models should provide important supplementary assessments of site-specific development proposals.

[Statistical guidelines for assessing marine avian hotspots and coldspots: A case study on wind energy development in the U.S. Atlantic Ocean.](#) Zipkin et al. 2015. We developed a power analysis approach to identify seabird hotspots/coldspots in marine environments. Our method accounts for the extreme distributions observed in seabird count data. We apply the method to “lease blocks”, which have been proposed for offshore wind energy development, using historical data. Results indicate that power is generally low in the Atlantic to determine hot/coldspots for seabirds. Species data may need to be pooled or the spatial grain enlarged to obtain adequate power for marine spatial planning.

[Game birds do not surrogate for raptors in trials to calibrate observed raptor collision fatalities.](#) Urquhart et al. 2014. Using game birds as surrogate carcasses for raptors could significantly bias calibration searches for wind turbine collision fatalities. NOTE: although this study came out last year, I thought it was valuable to share.

[Birds and Wind-Energy Best-Practice Guidelines:](#) Best-Practice Guidelines for assessing and monitoring the impact of wind energy facilities on birds in southern Africa. The Birds and Renewable Energy Specialist Group (BARESG), convened by the Wildlife and Energy Programme of the Endangered Wildlife Trust, and BirdLife South Africa, proposes the following guidelines and monitoring protocols for evaluating wind-energy development proposals, including a tiered assessment process.

### Bats

[Behavior of the Hawaiian Hoary Bat \(\*Lasiurus cinereus semotus\*\) at Wind Turbines and its Distribution across the North Ko’olau Mountains, O’ahu.](#) Gorresen et al. 2015. Technical Report HCSU-064. We studied the landscape

distribution of endemic Hawaiian hoary bats (*Lasiurus cinereus semotus*) on the north Koʻolau Mountains of Oʻahu, Hawaiʻi, from May 2013 to May 2014, while simultaneously studying their behavior at wind turbines within the broader landscape.

**[Wind turbines killing more hoary bats than expected.](#)** SunEdison, which owns the Kaheawa Wind Projects I and II, has found that the number of bats killed during its operations so far is significantly higher than predicated in 2006 and wants to increase limits on the number of Hawaiian hoary bats and nene allowed to die accidentally in its machines.

**[Wind energy industry announces new voluntary practices to reduce overall impacts on bats by 30%.](#)** The U.S. wind energy industry announced a best management practice establishing a new voluntary operating protocol, which is expected to reduce impacts to bats from operating wind turbines by as much as 30%. The agreement, developed by the American Wind Energy Association (AWEA) with the initial support of 17 of its member companies, involves wind operators' voluntarily limiting the operations of turbines in low-wind speed conditions during the fall bat migration season, when research has shown bats are most at risk of collision. The new protocols are based on over 10 years of research by the [Bats and Wind Energy Cooperative \(BWEC\)](#) and others.

**[Bat and Wind Energy Cooperative e-Newsletter v. 14 August 2015.](#)** Contains updates on pre- and post-construction surveys, impact reduction research, and more.

## Policy

**[Wind, Birds And Bats: Recent Legal Migrations.](#)** Wind energy has rapidly migrated from a small to significant source of energy generation, resulting in increased attention to and regulation of wind energy's impact on birds and bats. Given the recent activity in environmental law, now is a good time to review all of the recent developments pertaining to wind power and wildlife protection.

**[WAPA Streamlines Midwestern Environmental Process To Accelerate Wind Development.](#)** The Western Area Power Administration (WAPA) is [offering](#) a new environmental review process that is expected to reduce the time it takes to review wind project proposals in six Midwestern states known for favorable wind conditions.

**[Judge takes lesser prairie chicken off endangered species list.](#)** U.S. District Judge Robert A. Junell ruled Tuesday that the U.S. Fish and Wildlife Service failed to follow its own procedures in determining whether the bird should receive protection under the Endangered Species Act.

## Wildlife & Habitats

**[Predicting Greater Prairie-Chicken Lek Site Suitability to Inform Conservation Actions.](#)** Hovick et al. 2015. We found that when land features and vegetation cover are suitable for Greater Prairie-Chickens, fragmentation by anthropogenic sources such as roadways and transmission lines are a concern. Therefore, it is our recommendation that future human development in Kansas avoid areas that our models identified as highly suitable for Greater Prairie-Chickens and focus development on land cover types that are of lower conservation concern.

[\*\*Do Raptors React to Ultraviolet Light?\*\*](#) Hunt and McClure 2015. Journal of Raptor Research. Although results within our small sample of test subjects cannot exclude the possibility of reaction to higher UV doses or different modes of projection, the weight of evidence from the trials suggests no tendency toward avoidance, even at very close distances.

[\*\*Automatic classification of flying bird species using computer vision techniques.\*\*](#) Atanbori et al. 2015. Pattern Recognition Letters. We classify flying birds by species from video using a new set of appearance features. We demonstrate that our feature set significantly outperform current state-of-art system. We also investigate use of motion features for classification. We present a framework for combining appearance and motion features.

[\*\*The Flight of Birds and Other Animals.\*\*](#) Colin J. Pennycuik 2015. Aerospace. Methods of observing birds in flight now include training them to fly under known conditions in wind tunnels, and fitting free-flying birds with data loggers, that are either retrieved or read remotely via satellite links. Animals, when seen from a zoological point of view, are adapted to whatever problems they had to deal with in earlier times.

[\*\*Will the Sage Grouse win the West?\*\*](#) The sage-grouse issue “is really a question about the future of the sagebrush ecosystem. Where sage grouse thrive, most of nature’s clocks are still working.

[\*\*Marine Life Needs Protection from Noise Pollution.\*\*](#) An international group of scientists is calling for stricter regulations to protect marine wildlife from noise pollution. In a study published last week in the journal Frontiers in Ecology and the Environment, researchers argue that action is needed to tackle excessive ocean noise from industrial activities such as shipping and seismic surveys, which use loud sound pulses fired from compressed air guns to explore the sea floor and find natural resources.

[\*\*Scientists discover that the world contains dramatically more trees than previously thought.\*\*](#) In a [blockbuster study](#) released Wednesday in Nature, a team of 38 scientists finds that the planet is home to 3.04 trillion trees, blowing away the previously estimate of 400 billion. The study emerges even as new research has highlighted alarming rates of global deforestation.

## **Wind**

[\*\*New atlas could help wind energy sweep across Great Lakes.\*\*](#) By compiling meteorological wind data – derived from several sources – Cornell University and the Technical University of Denmark scientists have assembled the first full observational wind atlas of the Great Lakes. The atlas bolsters the chances for developing wind energy in the region.

[\*\*Lattice Tower Covering for Wind Turbine.\*\*](#) United States Patent Application 20150247334. The present subject matter is directed to a lattice tower covering and/or assembly for a wind turbine. The lattice tower assembly also includes a tower covering having one or more panel elements retained in position between the supports.

## **Other**

[\*\*What if we could solve our CO2 Problem by Making Stuff with it?\*\*](#) To most of us, carbon dioxide (CO2) is the most important greenhouse gas contributing to global climate change, an unwanted, unloved ugly duckling of a

molecule. To certain chemists, CO<sub>2</sub> could be the next big thing, a cheap and readily available source of raw material for useful products.

**Bat Week 2015 Bat House Building Challenge** (see attached). On October 31, 2015 join us in our goal to build a record of 5,000 bat houses in the USA and Canada all in one day! Sign up as a host site. Contact Danielle Todd, Organization for Bat Conservation, at [dtodd@batconservation.org](mailto:dtodd@batconservation.org).

## Tools

**[New Mapping Tool Shows Woody Encroachment in LEPC Habitat](#)**. A new woody encroachment data layer — available through the Southern Great Plains Crucial Habitat Assessment Tool (CHAT) web map — provides a broad-scale planning tool for resource managers to more effectively target Lesser Prairie-Chicken (LEPC) habitat improvement strategies.

**[Free Learning Sources for GIS and Geospatial Analysis](#)**. Here is a list of FREE learning sources, including GIS software training courses and tutorials, applied learning materials, workshops and webinars related to GIS and/or Geospatial analysis, etc. All of them are Free of Cost .

## Upcoming Conferences & Trainings & Webinars

### **[Maine Ocean & Wind Industry Initiative Webinar Recordings](#)**.

**[Electric Transmission 101 Workshop](#)**. October 6-8, 2015. Grand Rapids, MI. This workshop is designed to train state fish and wildlife agency and federal agency personnel who review and comment on electric transmission line projects. This will be a good opportunity for state and federal agency staff to meet members of the electric utility industry and better understand the planning and design process for electric transmission. Register at the following link: <http://www.cvent.com/d/xrqc4y/4W>.

**[8th Annual Nebraska Wind and Solar Conference and Exhibition](#)**. November 4-5, 2015. Omaha, NE. Since 2008, volunteers from farmer and rancher organizations, state agencies, public power utilities and higher education professionals have shaped this educational networking conference and exhibition to advance the wind and solar industry of Nebraska. The conference has included top quality speakers and timely presentations.

**The Wildlife Society Renewable Energy Working Group – LinkedIn**. Connect with other resource professionals involved in renewable energy – wildlife work. To join, go to:

[http://www.linkedin.com/groups?gid=4433729&trk=my\\_groups-b-grp-v](http://www.linkedin.com/groups?gid=4433729&trk=my_groups-b-grp-v), click Join.

Check out the Nebraska Wind Energy and Wildlife Project website at: <http://snr.unl.edu/renewableenergy/wind/> and Wind Energy and Wildlife news at: <http://www.scoop.it/t/wind-energy-and-wildlife>.

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In the Message Field (NOT Subject): UNSUBSCRIBE wind\_wildlife

