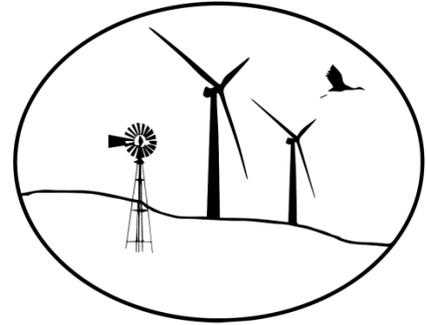


## Wind Energy and Wildlife News

February 24, 2016



### Around Nebraska...

#### *Nebraska Legislative Bills (Updates are in red).*

**LB736** - *Change provisions relating to electric utilities and electric suppliers under the Rural Community-Based Energy Development Act.* Introduced by Senator Friesen on 1/6/16; Referred to Natural Resources Committee on 1/7/16; Notice of Hearing for 2/4/16; **Natural Resources AM2074 filed and Placed on General File with AM2074 on 2/18/16.**

**LB824** - *Exempt privately developed renewable energy generation facilities from regulation as prescribed.* Introduced by Senator McCollister on 1/8/16; Referred to Natural Resource Committee on 1/11/16; Notice of Hearing for 1/27/16; Natural Resources Hearing Transcripts available; **Natural Resources priority bill on 2/19/16.**

**LB863** - *Adopt the Wind Energy Expansion Act.* Introduced by Senator Schilz on 1/11/16; Referred to the Natural Resources Committee on 1/12/16; Notice of Hearing for 2/4/16.

**LB881** - *Change provisions relating to energy financing contracts.* Introduced by Senator Schilz on 1/11/16; Referred to the Natural Resources Committee on 1/12/16; Notice of Hearing for 1/28/16; **Placed on General File on 2/19/16.**

**LB1012** - *Adopt the Property Assessed Clean Energy Act.* Introduced by Senator Mello on 1/15/16; Referred to Urban Affairs Committee on 1/20/16. Notice of Hearing for 2/9/16; **Haar priority bill on 2/19/16; Urban Affairs AM2253 filed and Placed on General File on 2/24/16.**

**LB1047** - *Change sales tax exemption provisions relating to purchases of energy and fuel.* Introduced by Senator Harr on 1/20/16; Referred to Revenue Committee on 1/22/16. Notice of Hearing for 2/19/2016.

**LB1069** - *Provide duties for the state investment officer relating to investment in energy-related companies or funds.* Introduced by Senator Haar on 1/20/16; Referred to Nebraska Retirement Systems Committee on 1/22/16. Notice of Hearing for 2/9/2016; **Indefinitely postponed on 2/17/16.**

**LB1071** - *Adopt the Solar Energy Economic Development Act.* Introduced by Senator Haar on 1/20/16; Referred to Natural Resources Committee on 1/22/16. Notice of Hearing for 2/11/2016.

**LB1085** - *Change a renewable energy tax credit.* Introduced by Senator Davis on 1/20/16; Referred to Revenue Committee on 1/22/16; **Notice of Hearing for 2/25/16.**

## News

[\*\*Marshall family conserves history and native grasslands on the Niobrara River\*\*](#). A carpet of grassland stretches toward a riverbank lined with woodlands and wetlands. The grassland was fundamental in funding the easement's purchase. As part of the Prairie Breeze Wind Energy Project in nearby Boone and Antelope Counties, the developers agreed to provide funding to the NLT for an easement that protected habitat for grassland wildlife and bats. With its riparian woodlands and native prairie, the land was an ideal site to achieve this goal. Additional funding has also been provided for grassland restoration and enhancement on the property. Thanks to Laura and Gary Marshall and their family, a long-running love affair with the land will continue to flourish for generations to come.

[\*\*Sandhill Cranes migration underway\*\*](#). One of the oldest family gatherings in the world is getting underway in the Platte River valley. Half a million Sandhill cranes will stop in the valley through mid-April to feast on leftover field corn and turn over cow pies with their long needlelike beaks, looking for tasty bugs, frogs, grubs and snakes. The cranes roost at night in the shallow waters of the Platte during the annual migration and put on about 20 percent of their body weight before flying on to northern Alaska, Canada and Siberia. They'll spend the summer hatching chicks before flying south again next winter.

## Around the Nation & World...

### Wind and Wildlife

[\*\*Impacts of Energy Development, Anthropogenic Structures, and Land Use Change on Lesser Prairie-Chickens\*\*](#), A.M. Bartuszevige and A. Daniels, Chapter in [\*\*Ecology and Conservation of Lesser Prairie-Chickens\*\*](#), D.A. Haukos and C. Boal, 2016.

[\*\*Bats may eat diurnal flies that rest on wind turbines\*\*](#), Rydell et al. 2016, Mammalian Biology. To evaluate if flies and other insects resting on the surface of a wind turbine are available to bats, we ensoufied a house fly (*Musca*) on a smooth (plastic) surface with synthetic ultrasonic pulses of the frequencies used by the bat species that we had sampled. The experiment revealed potentially useful echoes, provided the attack angle was low and the frequency high (50–75 kHz). Hence resting flies and other arthropods can probably be detected by echolocating bats on the surface of a wind turbine. Our findings are consistent with published observations of the behaviour of bats at wind turbines and may actually explain the function of some of these behaviours.

[\*\*Reconciling endangered species conservation with wind farm development: Cinereous vultures \(\*Aegypius monachus\*\) in south-eastern Europe\*\*](#), Vasilakis et al. 2016, Biological Conservation. Novel combination of telemetry and a CRM for wind farm collision mortality assessment. High collision mortality in the cinereous vulture population's core area. Win-win spatial planning for vulture conservation and wind farm development. A tool to improve the quality of EIA studies and national SEAs for wind farms. Species-specific sensitivity maps can resolve conservation conflicts.

[\*\*Environmental and social footprint of offshore wind energy. Comparison with onshore counterpart\*\*](#), Kaldellis et al. 2016, Renewable Energy. The state of the art of the offshore wind power technology is demonstrated. The environmental impacts of offshore wind energy projects are investigated in comparison with the onshore counterparts. The public concern is also discussed in view of further development of offshore wind parks. The mitigation of the offshore wind development impacts is analyzed.

[\*\*Bird collisions at an offshore platform in the North Sea\*\*](#), Hüppop et al. 2016, Bird Study. Collisions with offshore structures in the North Sea could account for the mortality of hundreds of thousands of nocturnally migrating birds. Since offshore industrialization will progress and collision numbers at offshore turbines will consequently increase considerably, we recommend reinforced measures to reduce bird strikes at offshore structures, especially in the light of substantial declines in some migrant species.

## Wind

[\*\*New Oregon Startup Could Cut Wind Farm Concrete Use By 75%\*\*](#). According to research organization Oregon BEST, RUTE Foundation Systems and a research team at Portland State University are developing, and hope to commercialize, new technology which would reduce concrete use in wind turbine construction by up to 75% — which in turn reduces CO2 emissions, decreases wind farm construction time, and lowers the overall cost of wind energy development.

## Wildlife

[\*\*Patterns of nest attendance by female Greater Prairie-Chickens \(\*Tympanuchus cupido\*\) in northcentral Kansas\*\*](#), Winder et al. 2016, Journal of Ornithology. We quantified the timing and duration of incubation bouts to address alternative hypotheses about physiological requirements and predation risk as drivers of incubation behavior. We also identified nest predators and determined timing of predation events, and tested for effects of nest attendance and monitoring technique on nest survival (video vs. telemetry). Female Greater Prairie-Chickens appear to prioritize their metabolic needs and future reproductive potential over current nest survival.

[\*\*A review of survival estimates for raptors and owls\*\*](#), Newton et al. 2016, Ibis. This paper reviews the literature on survival estimates for different species of raptors and owls, examines the methods used to obtain the estimates, and draws out some general patterns arising. Estimating survival usually involves the marking of birds so that they can be recognised as individuals on subsequent encounters.

[\*\*Effects of white-nose syndrome on regional population patterns of three hibernating bat species\*\*](#), Ingersoll et al. 2016, Conservation Biology. Our results suggest, therefore, that white-nose syndrome has affected regional populations differently than previously understood, and not as the sole cause of declines. Specifically, our results suggest that in some areas and species, threats other than white-nose syndrome are also contributing to population declines, declines linked to white-nose syndrome have spread across large geographic areas with unexpected speed, and the disease or other threats led to declines in bat populations for years prior to disease detection. Effective conservation will require further research to mitigate impacts of white-nose syndrome, renewed attention to other threats to bats, and improved surveillance efforts to ensure early detection of white-nose syndrome.

[\*\*The role of the US Great Plains low-level jet in nocturnal migrant behavior\*\*](#), Wainwright et al. 2016, International Journal of Biometeorology. The movements of aerial animals are under the constant influence of atmospheric flows spanning a range of spatiotemporal scales. The Great Plains nocturnal low-level jet is a large-scale atmospheric phenomenon that provides frequent strong southerly winds through a shallow layer of the airspace. The jet can provide substantial tailwind assistance to spring migrants moving northward, while hindering southward migration during autumn. We investigate the altitudinal selection behavior of migrants over Oklahoma during two spring and two autumn migration seasons. In general, migrants choose to fly within the jet in spring, often concentrating in the favorable wind speed maximum.

[\*\*Harmonizing Biodiversity Conservation and Productivity in the Context of Increasing Demands on Landscapes\*\*](#), Seppelt et al. 2016, BioScience. Biodiversity conservation and agricultural production are often seen as mutually exclusive objectives. Strategies for reconciling them are intensely debated. We argue that harmonization between biodiversity conservation and crop production can be improved by increasing our understanding of the underlying relationships between them.

## Policy

[\*\*Double Surprise: Energy Bill is Bipartisan and Good News for Sportsmen\*\*](#). There are some reports coming out of Congress that will be shocking to many sportsmen: Bipartisanship may be breaking out over the new energy bill, and fish, wildlife, and outdoors folks could be the big winners.

**[Why Clean Energy Needs National Action](#)**. Increasingly, U.S. states and cities are choosing to go out ahead of the Feds on climate action. But according to research published last month in the journal Nature Climate Change, building a sustainable green-energy future might still require Congress' help.

**[Future cost-competitive electricity systems and their impact on US CO2 emissions](#)**, MacDonald et al. 2016, Nature Climate Change. In the present study, we calculate the cost-optimized configuration of variable electrical power generators using weather data with high spatial (13-km) and temporal (60-min) resolution over the contiguous US. Our results show that when using future anticipated costs for wind and solar, carbon dioxide emissions from the US electricity sector can be reduced by up to 80% relative to 1990 levels, without an increase in the levelized cost of electricity. This reduction in carbon emissions is achieved by moving away from a regionally divided electricity sector to a national system enabled by high-voltage direct-current transmission.

**[Supreme Court Deals Blow to Obama's Efforts to Regulate Coal Emissions](#)**. In a major setback for [President Obama's climate change](#) agenda, the [Supreme Court](#) on Tuesday temporarily blocked the administration's effort to combat global warming by regulating emissions from coal-fired power plants. The brief order was not the last word on the case, which is most likely to return to the [Supreme Court](#) after an appeals court considers an expedited challenge [from 29 states](#) and dozens of corporations and industry groups.

**[Pacific Power Analysis of Clean Electricity and Coal Transition Plan Shows HB 4036 is Affordable and Workable](#)**. Pacific Power's analysis of legislation that would advance Oregon's clean energy goals finds that House Bill 4036 would result in cost savings of up to \$600 million through 2030 versus the cost of the proposed ballot measures. Relative to current Oregon policy, HB 4036 results in an average annual cost increase of less than 1 percent between now and 2030.

**[Have we reached the tipping point for investing in renewable energy?](#)** Divestment – the decision to voluntarily reduce one's fossil fuel investments – has been a hot button [topic of discussion](#) since 2011, when university students began calling on their institutions to remove fossil fuels from their portfolios. Divestment arguments have often focused on the [morality of investments](#), but the economic value of divestment has recently become hard to ignore.

## Other

**[Establishing Pollinator Habitat at Solar Farms in North Carolina: a Feasibility Study](#)**, A.O. Swanson 2015, Master's Thesis. This study addresses how land is being converted to accommodate for solar farms, and the potential for pollinator habitat to be established at solar farms in NC. Feasibility for the establishment of pollinator habitat was assessed based on previous land use, vegetation selection, and cost comparison with current management techniques. Based on previous land use, alternative vegetation selection, and cost comparison with current vegetation management techniques, the potential to create pollinator habitat at solar farms in North Carolina is likely to be feasible.

**[Adaptable, Ecology-Based U.S. National Vegetation Classification For Monitoring Multi-Scale Change Debuts Today](#)**. Public Release Of A 20-Year Collaborative Effort To Devise A Unified And Consistent National Reporting System For Plant Communities Opens New Avenues For Broad-Scale And Long-Term Analyses Of Landscape Change. The [U.S. National Vegetation Classification](#) (USNVC), a reporting standard organized around ecological principles for the study of plant communities, launches today. It is the first classification of its kind designed to adapt to new ecological knowledge and expand to absorb new vegetation types. The organizing framework of the classification helps independent and federal scientists speak the same language, whether they monitor the high elevation [red spruce forests](#) of the Great Smoky Mountain National Park or conduct broad scale analyses of [forest](#) trends across the North American continent.

**[Coastal Resilience mapping portal](#)**. Coastal Resilience supports a community of practitioners around the world who are applying spatial planning innovations to coastal hazard risk, resilience and adaptation issues. This is a

global network providing access to peer practitioners, tools, information and training focused on nature-based solutions. For more information see our [Coastal Resilience website](#).

### **Webinars**

[\*\*\*Species Conservation & ESA Initiative Webinar: The Role of Conflict and Litigation in the ESA\*\*\*](#), February 25, 10:30-noon MST. The webinar will examine how litigation shapes the implementation of the Endangered Species Act and affects species conservation efforts. Panelists representing a diverse range of interests will participate in a moderated discussion, as well as a question and answer session. [Register here](#).

[\*\*\*WINDEXchange Webinar: Wind Permitting Toolkit and Model Zoning Ordinance\*\*\*](#), March 16, 2016, 3 p.m. ET. The permitting process for wind energy projects can vary greatly from county to county, and this lack of uniformity often leads to inefficiencies for permitting agencies and their constituents. Mia Devine, project manager at Northwest SEED, will present the [Wind Permitting Toolkit](#). Dana Peck, executive director at the Greater Goldendale Chamber of Commerce, will share a rural county's experience on creating a programmatic environmental impact statement and related planning changes to shape renewable energy project permitting and the subsequent development of 1.2 gigawatts of wind projects, which doubled the county tax base and underpinned many ranching families financial viability. The webinar is free but [registration](#) is required.

[\*\*\*Species Conservation & ESA Initiative Webinar: Voluntary Species Conservation Incentives and Collaboration\*\*\*](#) – recording available.

[\*\*\*How to Prioritize Key Areas for Conservation Efforts in a Changing Climate: A Look at "Climate Refugia"\*\*\*](#) webinar - recording available.

### **Upcoming Conferences, Trainings & Events**

[\*\*\*Nebraska Chapter of the Wildlife Society Annual Meeting\*\*\*](#), March 8-10, 2016, Kearney, NE. The theme for the meeting is "50 Years of Wildlife Conservation and Management". The meeting will include a student-professional workshop, oral presentations, a student poster competition, our regular business meeting, banquet, auction, and a Student-Professional Quiz Bowl.

[\*\*\*Nebraska Planning and Zoning Association Conference\*\*\*](#), March 9-11, 2016, Kearney, NE. NPZA Celebrates 50 years as an organization supporting local planning in Nebraska!

[\*\*\*Audubon's Nebraska Crane Festival\*\*\*](#), March 17-20, 2016, Kearney, NE. We are already anticipating with great excitement the internationally celebrated migration of 500,000 Sandhill Cranes through central Nebraska. Thousands of people from all over the world come to witness this amazing, life-changing wildlife event. We hope this year you will choose to be part of this experience.

[\*\*\*AWEA Wind Project Siting and Environmental Compliance Conference\*\*\*](#), March 22-23, 2016, Charleston, SC. where leaders from the wind industry, environmental permitting and compliance sector, the scientific community and regulatory officials come together for a robust discussion about the current state of siting and environmental compliance, and network.

[\*\*\*Nebraska Prairie Chicken Festival\*\*\*](#), April 8-10, 2016, Burwell, NE. The Nebraska Prairie Chicken Festival aims to celebrate prairie grouse species, the grasslands they inhabit and the culture that surrounds them.

**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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