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**From:** Doug Paulson

**Sent:** Friday, 06 April 2018 15:57:09 (UTC-06:00) Central Time (US & Canada)

**To:** PUC

**Subject:** [EXT] Comments about articles for EL-17-055

Dear PUC, I am writing you today to talk about 1 article and 2 study articles about wind turbines and birds.

FACT#1 (May 16, 2013 Argus Leader, article by staff and wire reports) Article Title: (Wind turbines deadly for eagles, pheasants; Protected birds die without prosecution of energy companies.) The article states: In Converse County, Wyoming more than 4 dozen eagles have been killed by turbines since 2009. Also stated was that in South Dakota, other birds, including pheasants, mallards and smaller species have been killed. Natalie Gates, a fish and wildlife biologist with US Fish and Wildlife Service states there have been reports of a wide range of species colliding with wind turbines in the state, including pelicans and pheasants. Gates states, avian collisions are an issue with wind turbines and collisions are an issue wherever you have wind turbines. She also states, "They're going to kill birds, it's pretty much a given." Silka Kempema and Gates state that the best recommendation is for companies to focus on wind farms in already disturbed areas such as cropland rather than grass or wetlands.

Fact#2 (Article about STUDY) CREDIT (author: Brianna J Graff) (Jonathon A Jenks, Joshua D Stafford, Kent C Jensen, and Troy W Grovenburg) (Department of Natural Resource Management, South Dakota State University, and South Dakota Cooperative Fish and Wildlife Research Unit, US Geological Survey, Brookings, S.D.) Study Article Title: (Assessing Spring Mortality to Avifauna from Wind Energy Facilities in the Dakotas) The article from the study states that their objectives were to estimate avian and bat fatality rates for wind turbines situated in cropland and grassland dominated landscapes, document species at high risk to direct mortality and assess the influence of habitat variables on waterfowl mortality at 2 wind farms in the Northern Great Plains. The article states that there were 30 different species killed at the Tatanka Wind Farm (predominately grassland) and that 9 different species were killed at the Edgeley-Kulm Wind Farm (predominately agricultural fields). Finally the article stated that the results suggest that future wind facility siting decisions consider avoiding grassland habitats and locate turbines in preexisting fragmented and converted habitat outside of high densities of breeding waterfowl and major migration corridors.

Fact#3 (Article about study) Credit: (Jill A Shaffer and Deborah A Buhl) (US Geological Survey, Northern Prairie Wildlife Research Center, Jamestown, N.D.) Article Study Title (Effects of Wind-Energy Facilities on Breeding

Grassland Bird Distributions) The article stated that they conducted a before -after control impact assessment to determine if wind facilities placed in native mixed grass prairies displaced breeding grassland birds. Also stated was that they observed displacement of 7 of 9 species, one species unaffected by wind facilities and one species exhibited attraction and displacement and attraction generally occurred within 100 meters and extended up to 300 meters, a few instances displacement extended beyond 300 meters. Finally the study article states that the avoidance distance metrics they estimated can facilitate future development of models evaluating impacts of wind facilities under differing land use scenarios. (original reference documents) "Effects of wind-energy facilities on breeding grassland bird distributions" "Assessing Spring Direct Mortality to Avifauna from Wind Energy Facilities in the Dakotas" These are my comments about these articles .

Sincerely Doug Paulson 16349 423rd ave Clark, S.D. 57225 [dapsd1@hotmail.com](mailto:dapsd1@hotmail.com) 605-532-5190