



"VARIETY IN HUNTING AND FISHING"

# NORTH DAKOTA GAME AND FISH DEPARTMENT

100 NORTH BISMARCK EXPRESSWAY BISMARCK, NORTH DAKOTA 58501-5095 PHONE 701-328-6300 FAX 701-328-6352

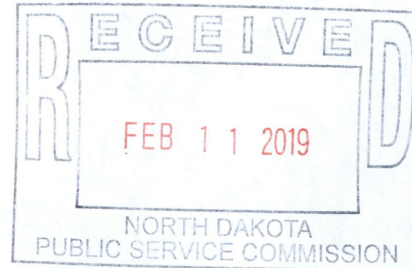
GOVERNOR, *Doug Burgum*

DIRECTOR, *Terry Steinwand*

DEPUTY, *Scott A. Peterson*

December 7, 2018

ND Public Service Commission  
600 E. Boulevard, Dept. 408  
Bismarck, ND 58505-0480



SUBJECT: Aurora Wind Project and Associated Transmission Line in Williams and Mountrail Counties, ND

Mr. Kahl,

The North Dakota Game and Fish Department (Department) has been in discussion with proponents of the Aurora Wind Project since January of 2018. In early consultations, the Department applauded Tradewind Energy, as the majority of the project was within a relatively low sensitive area with respects to native habitats. However, we emphasized the importance of careful placement or micro-siting of turbines, roads, and other associated infrastructure, and asked that any impacts to native unbroken prairie, woodlands, and wetlands be avoided to the extent possible.

To assist the Public Service Commission (Commission) in their review of wind energy development, the Department quantifies all potential impacts to wildlife associated with turbines, roads, and other infrastructure. To do this, we use the best available science on habitat loss, avoidance, and displacement. Habitat loss has been shown to be the number one driver of species declines (Wilcove et al., 1998) and is easily quantified by calculating the total acreage of native habitats that are broken (i.e. native vegetation removed, top soil removed, wetlands filled, etc.). However, calculating avoidance and displacement is not as straightforward. Loesch et al., 2013 assessed the displacement of breeding waterfowl pairs on wetlands associated with wind farms in the Prairie Pothole Region. This study found an average rate of 21% displacement by five waterfowl species within a half mile of turbines. Shaffer and Buhl, 2016, used a Before-After-Control-Impact (BACI) method to evaluate grassland bird displacement associated with turbines. In grasslands, they found avoidance from turbines by seven grassland bird species and a 55% displacement rate by the 5<sup>th</sup> year post-construction. By using the parameters within these studies, impacts can be estimated for both grassland birds and breeding ducks, indicator species that reflect the use of habitats for a variety of other species. Using this scientific information, we believe there will be adverse environmental impacts that should be offset.

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**Comments**

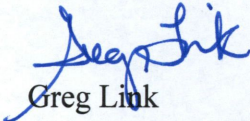
North Dakota Game and Fish  
Greg Link, Chief

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In a January 2019 meeting, Tradewind Energy acknowledged the impacts associated with this project and indicated to the Department they were developing a voluntary offset package to address the impacts to grassland and wetland habitats but would not be able to provide us with specifics prior to the hearing. The Department has been encouraged by Tradewind's commitment to mitigating their impacts and we are hopeful that a successful project can be achieved through our continued collaboration. However, until we are presented with the specific details of this offset package, it is difficult for the Department to provide a full assessment of this project.

Sincerely,

A handwritten signature in blue ink, appearing to read "Greg Link".

Greg Link  
Chief, Conservation and Communications Division

Cc: Jennifer Dean, Tradewind Energy  
Scott Larson, U.S. Fish and Wildlife Service