

To: North Dakota Public Service Commission
Commissioners Julie Fedorchak, Brian Kroshus, and Randy Christmann
re: Northern Divide Wind Project in Burke County

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APR 21 2020

April 20, 2020

NORTH DAKOTA
PUBLIC SERVICE COMMISSION

The question that comes to mind in regard to this application for the Northern Divide Wind project in Burke County is: What is it that has really changed? First, the name has been changed. Second, there are now 74 turbines proposed compared to the 76 for the Burke Wind Farm that was previously denied by the PSC. Of these 74 turbines, 47 of the sites were previously permitted for the Burke Wind Farm (the same plan that was denied by the PSC). Third, this project does not include the eastern portion of the Burke Wind Farm, but now the 74 turbines have been condensed into a much smaller area which now only includes Harmonious, Keller, Leaf Mountain, and Fay townships. The footprint may be smaller, but the footprint is now much heavier. Therefore, the noise level and impact of this proposed wind farm will actually be greater in those four townships and surrounding area.

North Dakota citizens and their government officials have a duty to not only be good stewards of the land but also good stewards of the wildlife. We need to preserve the natural resources that we have while those resources are still here. This western portion of Burke County is covered with wetlands and wildlife habitat, and turbines will be a major problem for the migrating birds and the other birds that nest and live in this prairie pothole region. Birds do not pay any attention to manmade boundaries and will not calculate that they will have to fly around farther to the east of the wind farm or to the west in order to avoid the many turbines proposed. In the June 19, 2019 issue of the Burke County Tribune, the article about the Burke Wind Farm being denied quoted a Nov. 2017 letter from the North Dakota Game and Fish stating that NextEra "could not have picked a worse spot in the state," relating to the nature conservation in the Missouri Coteau region. Also in that same issue, another quote from a NDGF letter dated March 2019 said "Despite NextEra's efforts to minimize impact, their initial site selection and succeeding resolve to proceed in this extremely resource-rich landscape show poor resource regard

and should not be rewarded.” This was dated only a year ago and this area is still an “extremely resource-rich landscape”. The revised wind farm proposal will continue to be a huge detriment to the health of the birds and other wildlife of this Coteau region which extends from east to west across all of Burke County. The Northern Divide Wind farm has not changed or eliminated the endangering effects to the birds and other wildlife and will still fragment habitat in this critical region which the NDGF has cited will result from wind energy development. (See attached NDGF website info.) This is a prime wildlife area---let’s protect it while we have it.

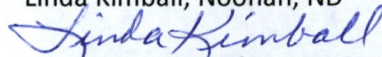
The turbines may also affect the health and well-being of the people who live near the turbines. Keep in mind that wind turbine farms are relatively recent and therefore there are not many years of research that have been done on the effects of sound, vibrations, and light flicker on people. Various locations in the US, the Netherlands, New Zealand, and Canada have reported turbine noises ranging from whooshing to chopping to low pitched thumping even on nights with little wind. These noises may be intolerable especially to people who are sensitive to noise because these people often have higher expectations of quiet since they live in peaceful areas and that is what they are accustomed to and enjoy. Therefore, noise from the wind turbine industry can cause stress, sleep loss, negative emotions, and related health impacts. (1,2) Wind turbines cause lower sound frequency than traffic. Frequency that is lower than 20 Hz or infrasound is not heard by the human ear and some studies have noted resulting symptoms of sleeplessness, fatigue, and irritability. (3) A study entitled “More Attention Must Be Paid to Harmful Effects” by Dr. Amanda Harry in England stated that people have more trouble with headaches, sleeping, and anxiety symptoms when they live near the wind turbines. In Mars Hill, Maine, Dr. Michael Nissenbaum compared residents who lived 3500 feet (2/3 mile) to those living 3 miles away from the 28 wind turbines located there. He found a clear correlation between the wind turbines and health complaints such as headaches, dizziness, stress, and depression. (4) After interviewing people from around the world, Dr. Nina Pierpont of New York named the health effects felt by people due to the turbines as “wind turbine syndrome”. Along with the other symptoms previously mentioned, tinnitus, vertigo, nausea, tachycardia, and problems with concentration and memory were issues for people. (5) These health concerns are very real to the people who

experience them. The Northern Divide Wind Farm does not change or negate the possibility of future health issues to people who live near the turbines.

The health and welfare of the wildlife and all the people living in this area should be taken into consideration when making the decision about this proposed wind farm. Present and future generations of landowners in the vicinity of the wind farm will be adversely affected by the devaluation of property and reduction in the uses and enjoyment of their property. There is no financial gain for those who oppose the wind turbines and only negative consequences for the wildlife population. Another very prominent 2020 issue is the coronavirus pandemic. If the wind farm proceeds, people from out of the area will be working and living in Burke County and the surrounding areas. This part of the state has had very few confirmed cases of the coronavirus. Wind farm employees will pose a health and safety issue for those area citizens who are observing the social isolation recommendations. This would not be wise and truly throws caution and health safety to the wind.

These are just a few of the reasons to say “No” to NextEra’s request for the Northern Divide Wind project. Please consider all the repercussions that will result from a wind farm located in the unique and distinctive Missouri Coteau region in Burke County and deny this permit application. Thank you.

Linda Kimball, Noonan, ND



Landowner in Leaf Mountain and Fay Townships

REFERENCES

- (1) Zaharna M, Guilleminault C. Sleep, noise and health: review. *Noise Health* 12(47):64-69 (2010); <http://dx.doi.org/10.4103/1463-1741.63205>.
- (2) Knopper LD, Ollson CA. Health effects and wind turbines: a review of the literature. *Environ Health* 10 (1):78 (2011); <http://dx.doi.org/10.1186/1476-069X-10-78>.
- (3) Roberts M, Roberts J. Evaluation of the Scientific Literature on the Health Effects Associated with Wind Turbines and Low Frequency Sound. Wood Dale, IL:Exponent, Inc. (20 October 2009). Available: <http://goo.gl/R31PVy> [accessed 4 December 2013].
- (4) Nissenbaum et al., 2012, Health Effects of Noise from Large Wind Turbines by Eric Rosenbloom published in *Wind Energy: A Reference Handbook, ABC-CLIO, 2014*.
- (5) Pierpont, 2009, Health Effects of Noise from Large Wind Turbines by Eric Rosenbloom published in *Wind Energy: A Reference Handbook, ABC-CLIO, 2014*.

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Mixed-grass Prairie (Missouri Coteau)



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Area: 10,215,000 acres or 15,960 mi²

Description and Overall Condition: This landscape component includes the mixed-grass prairie of the Missouri Coteau and associated wetlands. This region marks the boundary of the western limits of glaciation in North Dakota. The hummocky, rolling hills of the Missouri Coteau dramatically rise 150 to 500 feet above the Drift Prairie. A high concentration of wetlands are present, roughly 800,000 basin acres. Alkaline lakes are also more prevalent here.

Streams and rivers are nearly absent, as are upland deciduous forests but tracts of aspen parkland occur in the north. A considerable amount of native prairie remains and there is extensive cattle grazing. Areas of reduced slope, particularly the western edge, have been converted to cropland such as small grains, sunflowers, corn, and alfalfa hayland. The Coteau is known for supporting some of the highest numbers of breeding ducks in North America. Due to the large amount of grassland and wetlands which remain or have been restored, this area is especially crucial to many species of grassland wildlife and constitutes the focus area "Missouri Coteau Breaks." Much of the Coteau is classified as good to outstanding for wind energy potential, which could pose the threat of habitat fragmentation. Irrigation and new advances in cropland could allow for native prairie to be farmed. Oil and gas activity is established in the extreme northwest.

Predominant Natural Vegetation

Grasses

prairie junegrass, little bluestem, needle-and-thread, blue grama, green needlegrass, porcupine grass, prairie cordgrass, Northern reedgrass, plains muhly, Western wheatgrass, Kentucky bluegrass

Forbs

pasque flower, torch flower, yarrow, gumweed, golden aster, prairie rose, Missouri milkvetch, purple loco, lead plant, Indian breadroot, purple prairie-clover, gaura, hairy puccoon, harebell, goldenrod, smooth fleabane, perennial ragweed, purple coneflower, upland wormwood, green sage and fringed sage.

Associated Species of Conservation Priority**Birds**

American bittern, northern pintail, lesser scaup, northern harrier, american kestrel, swainson's hawk, ferruginous hawk, sharp-tailed grouse, willet, upland sandpiper, marbled godwit, wilson's phalarope, franklin's gull, black tern, short-eared owl, loggerhead shrike, sedge wren, sprague's pipit, lark bunting, grasshopper sparrow, baird's sparrow, le conte's sparrow, nelson's sparrow, chestnut-collared longspur, dickcissel, bobolink, western meadowlark

Mammals

arctic shrew, richardson's ground squirrel

Reptiles/Amphibians

plains spadefoot, canadian toad, smooth green snake, plains hog-nosed snake

Insects

dakota skipper, monarch butterfly, regal fritillary

Other Characteristic Wildlife**Birds**

American wigeon, green-winged teal, mallard, blue-winged teal, Northern shoveler, gadwall, lesser caup, red-tailed hawk, American kestrel, gray partridge, ring-necked pheasant, spotted sandpiper, killdeer, mourning dove, common nighthawk, Western

kingbird, Eastern kingbird, horned lark, American crow, Eastern bluebird, common yellowthroat, clay-colored sparrow, vesper sparrow, Savannah sparrow, Western meadowlark, brown-headed cowbird

Mammals

white-tailed jackrabbit, snowshoe hare, thirteen-lined ground squirrel, Northern pocket gopher, olive-backed pocket mouse, Western harvest mouse, deer mouse, Northern grasshopper mouse, prairie vole, meadow vole, meadow jumping mouse, coyote, red fox, raccoon, badger, striped skunk, white-tailed deer

Reptiles/Amphibians

Great Plains toad, Woodhouse's toad, Northern leopard frog, chorus frog, tiger salamander, plains garter snake, common garter snake, yellowbelly racer, bullsnake

For more detailed information about this topic, please see the [North Dakota Wildlife Action Plan](#).

[Return to Habitat Types](#)



North Dakota Game and Fish Department

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