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PO Box 496
Fergus Falls, Minnesota 56538-0496
218 739-8200
www.otpc.com (web site)



December 6, 2007

State of North Dakota
Public Service Commission
Illona A. Jeffcoat-Sacco
Executive Director
600 East Boulevard, Dept. 408
Bismarck, ND 58505-0480

Re: Comments - Wind Turbine Decommissioning Proposed Rules (PU-07-642)

Dear Ms. Jeffcoat-Sacco,

On behalf of Otter Tail Power Company please find below comments to the Proposed Rules for Wind Turbine Decommissioning.

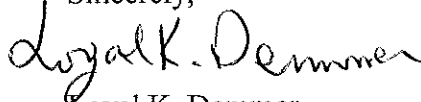
While we generally support the proposed rules for Wind Turbine Decommissioning, our initial comments center on wording in Article 69-09-10-05, Decommissioning Requirements. Our recommendation is that the portion of this sentence that states "to a depth of four feet:" be changed to, "to a depth of *three* feet:." We have 6 primary reasons that support our recommended change as follows:

- Our Conditional Use Permit with Cavalier County which was granted on May 1st, 2007 and basically agrees with Chapter 69-09-10-05, calls for removal to a depth of "three" feet in paragraph # 9 (see attachment).
- Our standard landowner easements call for removal of Wind Farm Improvements to a depth of thirty-six inches ("36") in accordance with the Cavalier County Conditional Use Permit.
- The standard wind tower foundation engineering design accommodates the best engineering practice to remove the top 36" "Pedestal" portion of the foundation. Based on engineering estimates removing twelve additional inches from the spreading foundation base exponentially increases decommissioning costs by 50%.
- We know of no environmental impact or public safety concern that is mitigated by removal of an extra 12" below the 36" already planned for.

- In a decommissioning event it appears compliance with the removal of Wind Facility Improvements to 36” below grade would not interfere with current agricultural practices, the most drastic of which (deep tillage) is not recommended by the North Dakota Extension Service and only goes to depths 18”. Per the NDSU extension service, soil surveying probe depths can go as deep as four feet, but these are only done rarely and randomly across a field. Normal soil testing is usually less than 12”, but can go to a depth of 24” depending on the testing needs.
- The additional 50% increase in incremental cost to remove the last 12” of the proposed 48” depth for which no environmental, public safety or economic benefit is realized and for which retail electric customers would pay through cost of service rates is not good stewardship of the resources entrusted to our care. Otter Tail Power Company is mindful that electric energy consumers are affected by decommissioning costs included in retail electric rates and we desire to keep rates as low as possible.

If you have any questions on the above comments to the Proposed Wind Turbine Decommissioning Rules (PU-07-642) please contact me at (218) 739-8659 or ldemmer@otpc.com.

Sincerely,



Loyal K. Demmer
Depreciation Accountant
Otter Tail Power Company

Enclosures:

Cavalier County Conditional Use Permit (Section 9 Highlight)
NDSU Extension Service, ProCrop – Exploring Deep Tillage, webpage and follow-up e-mail.

**Cavaller County, North Dakota
Conditional Use Permit**

1. Langdon Wind, LLC having submitted an Application for the construction of a "Wind Farm" to include wind turbine generators with associated towers, foundations, substation, operation and maintenance building and other improvements upon the following described property:

Manila Township:

All of Sections 27 and 34

Northwest quarter and West half of the Northeast quarter of Section 26

ALL in Township 161N, Range 59W

Easby Township:

All of Sections 3, 4, 5, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30, 31, 32 and 33

North half of Section 2

All of Section 6, except the East half of the Southwest quarter

North half and Southwest quarter of Section 10

ALL in Township 160N, Range 59W

Osnabrock Township:

All of Sections 3, 4, 8, 17, 18, 20, 21, and 22

North half and Southeast quarter of Section 5

North half and Southwest quarter of Section 6

North half and Southeast quarter of Section 7

North half and Southwest quarter of Section 9

West half of Southwest quarter of Section 14

South half of Section 15

Southwest quarter of Section 16

Section 19 (except Waterfowl Production Area)

Northwest quarter, except the Northeast quarter of the Northwest quarter of Section 23

ALL in Township 159N, Range 59W

Perry Township:

All of Sections 12, 13, 24, 25, 35 and 36

South half and Northeast quarter of Section 1

East half of East half of Section 11

Northeast quarter of Section 14

East half of Section 26

ALL in Township 160N, Range 60W

Nekoma Township:

All of Sections 1, 13 and 24

Northeast quarter of Section 11

North half and North half of South half of Section 12

ALL in Township 159N, Range 60W

2. Said "Wind Farm" being a conditional use as defined by the Cavalier County Zoning Regulations.
3. Dawn Roppel, the Cavalier County Zoning Administrator, having denied the permit and having referred the Application to the Cavalier County Zoning Commission.
4. Notice of a Public Hearing regarding the Application having been published in the Cavalier County Republican on April 9 and April 16, 2007, a hearing was held April 24, 2007, at 2:00 p.m. in the meeting room of the Cavalier County Courthouse before the Cavalier County Zoning Commission.
5. Langdon Wind, LLC having presented testimony regarding its Application and the Commission having given opportunity to all present to question or comment on the Application, and the Commission having made the following Findings of Fact:

- A. The conditional use will not be a detriment or endanger public health, safety, morals or general welfare. The Applicant's proposed conditional use will be compliant with all federal, state and local regulations to protect public safety and welfare including, but not limited to, the U.S. Game and Fish Department, the North Dakota Department of Game and Fish, the North Dakota State Water Commission and the State Historical Society.

Further, the project will provide up to \$500,000.00 per year in property taxes to the County of Cavalier and will provide significant economic benefits to the local community and the affected landowners.

- B. The existing permitted use in the property affected is agriculture and said use will be impacted minimally by the proposed construction.
- C. The proposed conditional use will not impede the normal and orderly development of the surrounding property.
- D. The Applicant will be responsible for providing adequate roads, drainage and other necessary site improvements for the proposed construction.
- E. The Applicant will provide gated access roads to the proposed construction to minimize traffic congestion.
- F. No construction will be in a floodway or flood plain.
- G. The conditional use complies with all applicable regulations.
- H. Cavalier County will not be required to provide any infrastructure for the project.

The Commission having made said findings and upon motion of Bill Hardy and a second by Lawrence Henry, the Commission moved to grant Langdon Wind, LLC's Application for construction of the "Wind Farm" upon the following conditions:

1. Langdon Wind LLC shall locate all wind turbines so as to maintain a setback distance from the right of way line of all existing public roads and above-ground utility

easements equal to or greater than the maximum height of the wind turbine measured with a blade tip at its highest point, except in specific instances that may be allowed in the special use permit.

2. Langdon Wind LLC shall locate all wind turbines so as to maintain a setback distance of 1400 feet or more from any existing, occupied residence, whether located within or outside the Project area. New structures built adjacent to wind power facilities shall maintain these same minimum setbacks requirements.
3. Langdon Wind LLC shall construct the Project in accordance with generally accepted engineering practice and in accordance with all applicable federal, state and local regulations.
4. Langdon Wind LLC shall obtain all required permits from other governmental agencies (such as the Federal Aviation Administration) prior to commencing construction or as otherwise required by the applicable laws and regulations.
5. Langdon Wind LLC shall provide final site location information to the applicable Zoning Administrator prior to commencing construction.
6. Langdon Wind LLC will work with local rescue authorities to provide training (at Langdon Wind LLC's expense) to personnel who can assist with a rescue from a wind turbine or tower.
7. Langdon Wind LLC will provide a graphic Site Plan Exhibit including the easement boundaries for each property to the Zoning Administrator for approval before construction begins. Langdon Wind LLC will furnish the Zoning Administrator with certified "As-Built" site plans and easement descriptions showing the location of wind turbines, roads, transmission lines and all other improvements.
8. Langdon Wind LLC shall provide dust control measures as may be reasonably required by the County during construction and shall repair any roads, drainage facilities or other infrastructure damaged by Project construction or maintenance facilities.
9. Within one year after the end of the term (including extensions and renewals) of an easement agreement with any landowners participating in the Project, Langdon Wind LLC shall remove all physical materials pertaining to the Project located on such landowner's property (except for roads participating landowners do not want removed) to a depth of three feet below the surface of the ground. After removal, Langdon Wind LLC shall restore the ground as nearly as possible to the condition it was in prior to construction of the Project.
10. The intention of this Application is to complete construction of 106 wind turbines with associated roads and electric cables by December 31, 2007. To allow for contingencies in securing permits and contracts, Langdon Wind LLC shall be required to begin construction of the Project within three (3) years and complete the full expansion of the Project within five (5) years of the granting of this Conditional Use Permit. The Permit will continue as long as wind turbines are operational within the permit area.

11. All wind turbines and other equipment shall be new equipment commercially available from a reliable manufacturer.
12. Langdon Wind LLC will approve all haul routes with the County Road Supervisor.
13. Langdon Wind LLC will restore all roads to their original condition after construction is complete, unless otherwise agreed to by the County, and repair any road damaged during ongoing maintenance of the Project.

Said Motion having passed unanimously upon a vote of the Commission, the Zoning Administrator was directed to issue the building permit to the Applicant.

Dated this the 1st day of May, 2007.

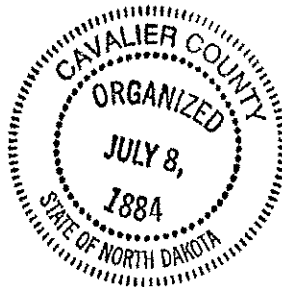
Cavalier County Zoning Commission

Richard Flanders
By: Richard Flanders
Its: Chairman

Building Permit

The fee of \$25.00 having been submitted, Langdon Wind LLC is hereby issued a Building Permit for the construction of a "Wind Farm" upon the property and subject to the conditions set forth above.

Dated this the 1st day of May, 2007.



Dawn Roppel
Dawn Roppel
Cavalier County Zoning Administrator

Demmer, Loyal

From: Terry Gregoire [terry.gregoire@ndsu.edu]
Sent: Wednesday, December 05, 2007 10:38 AM
To: Demmer, Loyal
Subject: Re: FW: Emailing: tildep09.htm

Hi Loyal,

Deep tillage in our area is typically no deeper than 18". Soil testing probes may go as deep as four feet or deeper in soil survey sites. Otherwise it is rare for tillage to be deeper than 9 inches for routine ag practices.

Sincerely,

Terry

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<<tildep09.htm>>
> > Hi Terry,
> >
> > I'm doing some research on tillage depth's in regard to utility
> > installations of underground services for wind facilities. In your
> > article (attached) what is the depth of deep tillage mentioned?
> >
> > Thanks for your input!
> >
> > Loyal K. Demmer
> > Depreciation Accountant
> >
> > Otter Tail power Company
> > 215 South Cascade Street
> > Fergus Falls, MN 56538-0496
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> > ldemmer@otpc.com
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> >
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Devils Lake Area Office
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Devils Lake ND 58301-2571
tgregoir@ndsuent.nodak.edu
tel (701) 662-1364
fax (701) 662-1365

Demmer, Loyal

From: Demmer, Loyal
Sent: Monday, December 03, 2007 4:03 PM
To: 'tgregoir@ndsuxext.nodak.edu'
Subject: Emailing: tildep09.htm

Attachments: tildep09.htm



tildep09.htm (11
KB)

Hi Terry,

I'm doing some research on tillage depth's in regard to utility installations of underground services for wind facilities. In your article (attached) what is the depth of deep tillage mentioned?

Thanks for your input!

Loyal K. Demmer
Depreciation Accountant

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NDSU EXTENSION SERVICE

NORTH DAKOTA STATE UNIVERSITY

ProCrop

Exploring Deep Tillage

Deep tillage can break up subsoil layers which impede root penetration. Studies over 10 years ago at NDSU showed that there was little benefit to deep tillage in the heavy clay soils of the valley following sugarbeet and potato, nor was there a benefit to these crops with deep tillage following small grains. Although deep tillage seems like it would be most useful in heavy valley soils, it may be the area of least benefit. Heavy valley soils crack when dry, expand when wet, and break apart rapidly under freezing and thawing. Nature usually prepares the soil adequately without intervention by deep tillage equipment. Some areas of the state have a high sodium content. Regardless of tillage, these soils become hard when dry and impermeable when wet. In other areas of North Dakota deep tillage may be more useful if the tillage is performed on dry soils. If tillage is performed on wet soils, the soils do not breakup and create slits within the soils that do not solve the compaction layer problems.

[Back to Environmental Damage Menu](#)

[Back to Main ProCrop Index](#)

Terry Gregoire, Area Extension Specialist/Crop Production NDSU Extension Service 509 5th Street NE, Suite #6 Devils Lake, ND 58301-2571	Phone No.(701) 662-1364 FAX (701) 662-1365 terry.gregoire@ndsu.edu
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