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# Upstream Wind Energy Center

## Antelope County, Nebraska



Record of Proceeding

Invenergy

April 29, 2016



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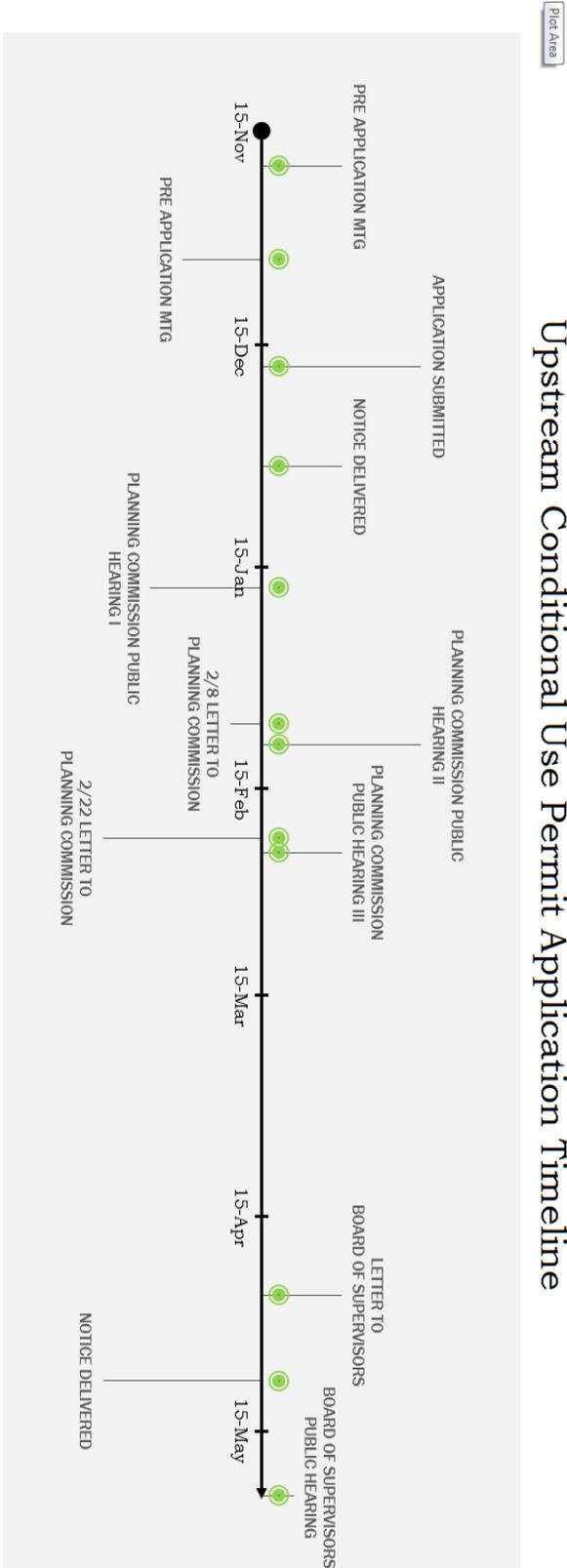
## Antelope County Article 15 Wind Regulations

### Application Requirement Checklist

<b>1504.03 Commercial Utility Grade Wind Energy Systems Application Requirements</b>		
<b>#</b>	<b>Requirement</b>	<b>Location in Binder</b>
1	The name(s) of project applicant	Application Tab Pg. 20
2	The name of project owner	
3	The legal description and address of the project	
4	A description of the project including; Number, type, name plate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnection with the feeder lines.	Application Tab Pg. 20-21
5	Site layout, including the location of property lines, wind turbines, electrical grid, and all related accessory structures. This site layout shall include distances and be drawn to scale.	Application Tab Pg. 21 Exhibit D Pg 47
6	Certification by an Engineer competent in disciplines of WECS	Application Tab – Pg. 21 Exhibit E: Pg. 49-51
7	Documentation of land ownership or legal control of the property.	Application Tab – Pg. 21 Exhibit B: Pg. 35-42
8	The latitude and longitude of individual wind turbines. Included in the submitted permit will be area or zone in close proximity and meets setbacks.	Application Tab – Pg. 21 Exhibit C: Pg. 43-46 Exhibit D: Pg. 47
9	A USGS topographical map, or map with similar data, of the property and surrounding area, including any other Wind Energy Conversion System not owned by the applicant, within 10 rotor distances of the proposed Wind Energy Conversion System.	Application Tab – Pg. 21 Exhibit D: Pg. 47
10	Location of wetlands, scenic, and natural areas (including bluffs) within 1,320 ft. of the proposed Wind Energy Conversion System.	Application Tab – Pg. 21-22 Exhibit F: Pg. 53
11	An Acoustical Analysis that certifies that the noise requirements within this regulation can be met.	Application Tab – Pg. 22 Exhibit G: Pg. 55
12	FAA and FCC permit: Applicant shall submit permits from the appropriate agency prior to any power being produced.	Application Tab – Pg. 22 Exhibit C: Pg. 43-46

13	Location of an evidence that there will be no interference with any commercial and/or public safety communication towers within two miles of the proposed Wind Energy Conversion System.	Application Tab – Pg. 22 Exhibit H: Pg. 57-71
14	Decommissioning Plan as required by this regulation	Application Tab – Pg. 22-23 Exhibit K: Pg. 111-125
15	Description of potential impacts on nearby Wind Energy Conversion Systems and Wind Resources on adjacent properties not owned by the applicant.	Application Tab – Pg. 23-28

# Upstream LLC CUP Application Timeline





Upstream LLC 5/4/2016  
Letter to Board of Supervisors















# Upstream Wind Energy Center LLC 12/18/2015

## Application for Conditional Use Permit

### Application

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- Exhibit A: Conditional Use Permit Application
- Exhibit B: Current Landowner Team
- Exhibit C: FAA Determinations
- Exhibit D: Project Area and Preliminary Layout
- Exhibit E: Engineering Certification
- Exhibit F: Wetland Location Map and Home Location Map
- Exhibit G: Noise Analysis Certification
- Exhibit H: Comsearch and National Telecommunications and Information Administration Report
- Exhibit I: Economic Development Report
- Exhibit J: Letters of Support
- Exhibit K: Decommissioning Plan Letter

## 1.0 EXECUTIVE SUMMARY

On behalf of Upstream Wind Energy LLC (“Upstream” or “Applicant”), Invenergy Wind Development LLC (“Invenergy”) is pleased to present this application for a conditional use permit to the Antelope County, Nebraska (“Antelope County”) Board of Supervisors and Planning Commission, in accordance with the Antelope County, Nebraska Zoning Regulations dated July 2012 (the “Zoning Regulations”), for the purposes of approving a Wind Energy Conversion System (“WECS”), as defined in Article 15 of the Antelope County Zoning Regulations. Such WECS are comprised of wind generation towers and other comparable uses and structures, including the Upstream Collector Substation and associated transmission line to transmit energy generated to Nebraska Public Power District (“NPPD”)’s Antelope County Substation (the “Use”) and related interconnection facilities. As proposed, all underground electric lines will be at 34.5kV voltage and associated with delivery of energy generated from the Wind Turbines (as described below) to the Upstream Collector Substation, and all aboveground lines would be at 115kV or 345kV voltage for delivery to NPPD’s Antelope County Substation.

Upstream hereby submits the completed Application for Conditional Use Permit form, attached as Exhibit A (the “Application”), seeking a conditional use permit for the Use (a “Wind CUP”) in connection with a proposed WECS (the “Upstream Project” or “Project,” as more completely described below). Upstream is providing the following information, exhibits and materials, which are hereby incorporated into and made part of the Application.

### PROJECT SUMMARY

The Upstream Project is planned to be up to 350 MW of capacity and located within a project boundary of approximately seventy thousand acres, mostly in north central Antelope County and possibly a small area in western Pierce County, Nebraska. The Project will include up to 168 Wind Turbines (as described below) sited within the boundaries shown on the Project Area and Preliminary Layout attached as Exhibit D (the “Project Area”). This Application is limited to WECS to be located within Antelope County.

The Project will include (i) consistent with § 1504.02(15), wind turbines, including towers, hubs, nacelles, rotor blades, foundations and other associated equipment and structures (together, “Wind Turbines”); (ii) overhead and underground electrical distribution, collection, transmission and communications lines, electric transformers, an electric substation, energy storage facilities, telecommunications equipment, and other necessary interconnection facilities; (iii) roads and crane pads; (iv) meteorological towers and wind measurement equipment; and (v) operations and maintenance buildings, control buildings, maintenance yards, and related facilities and equipment. It is anticipated that the Upstream Project will require a separate conditional use permit for the construction of an operations and maintenance building, if the building is located outside the Project Area as shown in Exhibit D.

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Attached as Exhibit B is (1) a list of landowners (collectively “Current Landowners”) within the Project Area that have entered into agreements (“Land Leases”) whereby the landowner grants and conveys to Upstream or its affiliate an easement and lease to convert, maintain and capture the flow of wind and wind resources over, across and through the surface estate of the real property which is the subject of the Land Lease (the “Lease Parcel”); and (2) a list of the Lease Parcels with respect to each Current Landowner (collectively, the “Current Parcels”). Upstream may enter into additional Land Leases with landowners within the Project Area as Project development continues.

The following sections of this Application will demonstrate why the Upstream Project is ready to be Antelope County’s next renewable Wind Energy Conversion System and newest source of economic development in the community. All capitalized terms not defined herein shall have the definitions given in §1504.02 of the Zoning Regulations, as applicable.

**Name of Company and Contact Information:**

Upstream Wind Energy LLC  
One South Wacker Drive  
Suite 1800  
Chicago, IL 60606

Emily Kobylarczk  
Business Development Associate  
Invenergy LLC  
2580 West Main Street  
Littleton, CO 80127  
(303) 800-9342  
ekobylarczyk@inverenergyll.com

2.0 CONDITIONAL USE PERMIT CONDITIONS

Upstream hereby proposes inclusion of the following terms and conditions in the Wind CUP sought through this Application.

Proposed Terms and Conditions to Conditional Use Permit  
In Connection with the Upstream Project

1. Prior to erection of any individual Wind Turbine, Upstream shall provide the Antelope County Zoning Administrator (the “Zoning Administrator”) a Determination of No Hazard issued by the Federal Aviation Administration for each individual Wind Turbine at its final turbine location.
2. Prior to commencement of construction of any individual Wind Turbine, Upstream shall provide exact global positioning system locations to the Zoning Administrator.
3. Upstream shall be allowed to cross or run parallel to any County Roads within the Project Area utilizing the Road Right-of-Way wherever necessary for the Project’s ancillary facilities, including aerial construction or burial of components of the electrical collection and fiber-optic system (including overhang or line-sway of aerial lines located on adjacent private property), provided such crossing or use of Road Right-of-Way shall be in compliance with Antelope County’s Criteria for Permit to Use Road Right-of-Way dated May 11, 1998.
4. The Conditional Use Permit shall permit the Use only on the Current Parcels. Upon the filing of a memorandum with the Antelope County register of deeds documenting a Land Lease with respect to land which is within the Project Area but not a Current Parcel (a “Future Parcel”), the Conditional Use Permit shall be automatically amended to apply to the Future Parcel, provided that all landowners adjacent to any Future Parcel must have been provided notice in accordance with Sections 1004 and 1006 of the Zoning Regulations prior to the public hearings held in connection with this Conditional Use Permit. Such Future Parcel shall thereafter be treated as a Current Parcel under the Conditional Use Permit.
5. Section 1504.05 (as amended on October 6, 2015) shall constitute the setback requirements applicable to the Project. Any applicable property line setback does not apply when adjoining properties are within the same Aggregate Project if the adjoining property is a Current Parcel (including if the adjoining parcel is a Future Parcel subject to the treatment as a Current Parcel due to the filing of a memorandum of lease with the register of deeds, as described in the previous paragraph). Section 15, Figure 2 in the Zoning Regulations applies to planned/future rights-of-way, and setbacks will be measured from the edge of the planned/future right-of-way to ensure rotor blades do not overhang the planned/future right-of-way.
6. A detailed final site layout shall be provided to the Zoning Administrator within a reasonable period after completion of final siting and design; however, all Wind Turbines will be located within 900-feet of the locations proposed in Exhibit D.
7. Prior to commencement of construction, a noise analysis shall be provided, to the Zoning Administrator certifying that the Project can meet the Zoning Regulations’ noise requirements.
8. Any environmental permits required by law to be in place prior to commencement of construction shall be properly obtained before construction begins.

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9. This Conditional Use Permit shall run with the land. The ownership of the land and the identity of the developer and operator of the Use shall not affect the right to conduct the Use in accordance with this Conditional Use Permit. In the event the Project is constructed in phases, Upstream may submit notice to Antelope County detailing the project company which will own that phase and the size of each Project phase.

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### 3.0 CONDITIONAL USE PERMIT REQUIREMENTS AND INFORMATION

**1504.03 Requirements: Commercial/utility grade wind energy systems shall be permitted as a conditional use within any district where the use is listed and allowed. The following requirements and information shall be met and are hereby supplied:**

**1. The name(s) of project applicant.**

Submitted by Invenergy Wind Development LLC on behalf of the applicant Upstream Wind Energy LLC.

**2. The name of the project owner.**

Upstream Wind Energy LLC

**3. The legal description and address of the project.**

Project Address:  
 Upstream Wind Energy LLC  
 One South Wacker, Suite 1800  
 Chicago, IL 60606

The address of the operations and maintenance building will be provided to the Zoning Administrator after completion of construction, if it is within the Project Area.

The Project Area and adjacent property to the Project Area in Antelope County, Nebraska are shown in Exhibit D and included within the following townships:

- Blaine Township 26N 7W Sections 8-18, 20-29, 35-36 ALL
- Custer Township 26N 6W Sections 7S2, 18-36 ALL
- Neligh Township 25N 6W Sections 1-6, 10-13, 24-25 ALL
- Elm Township 25N 5W Sections 1-30 ALL, 31 N2; SE4, 32-36 ALL
- Willow Township 26N 5W Sections 16-17 ALL, 18 E2, 19-21 ALL, 22 S2, 27-36 ALL

**4. A description of the project including: number, type, name plate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the feeder lines.**

The Upstream Project will include up to 168 General Electric, or similar tier-1 manufacturer, Wind Turbines. The nameplate generating capacity of each wind turbine will likely be between 1.7 MW – 2.3 MW for a total of up to 350 MW of capacity in Antelope County. The typical GE tower height is 80-meters with a rotor diameter of up to 116-meters. The total height of the Wind Turbines will be approximately 138-meters (when top rotor blade is directly above and parallel to the tower), pending final turbine selection. As currently planned, the Wind Turbines will be connected through the electric

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collection system (34.5 kV) to the Project collector substation. The Project collector substation will then step-the power up to 115kV voltage and a single 115 kV transmission line will connect the collector substation to the Antelope County Substation.

**5. Site layout, including the location of property lines, wind turbines, electrical grid, and all related accessory structures. This site layout shall include distances and be drawn to scale.**

A proposed Wind Turbine layout is attached in [Exhibit D](#). On-site surveying is currently being completed and a detailed site layout (the “Site Plan”) will be provided to the Zoning Administrator upon completion of final siting and design, which Site Plan will show the proposed final location for all Wind Turbines and related facilities.

**6. Certification by an Engineer competent in disciplines of WECS.**

Please see [Exhibit E](#) letter of certification for design of the WECS by Electrical Consultants, Inc., professional engineers with experience building utility-scale WECS.

**7. Documentation of land ownership or legal control of the property.**

Please see sample agreement and the current Landowner list in [Exhibit B](#). Upon request, Upstream will provide copies to the Zoning Administrator of the memoranda filed with the Antelope County register of deeds documenting each Land Lease.

**8. The latitude and longitude of individual wind turbines. Included in the submittal will be an area or zone in close proximity and meets setbacks.**

A proposed layout of all Wind Turbine locations is included as [Exhibit D](#) and [Exhibit C](#) for latitude and longitude of individual Wind Turbines. [Exhibit D](#) indicates compliance with the setback requirements applicable to surveyed locations of houses and wetlands in the proposed Project Area. Prior to commencement of construction of each individual Wind Turbine, Upstream will provide the Zoning Administrator with the exact latitude and longitude of the selected final layout.

**9. A USGS topographical map, or map with similar data, of the property and surrounding area, including any other Wind Energy Conversion System not owned by the applicant, within 10 rotor distances of the proposed Wind Energy Conversion System.**

There are no other WECS within 10 rotor diameters of the proposed Project. Please see [Exhibit D](#) for the proposed Wind Turbine locations.

**10. Location of wetlands, scenic, and natural areas (including bluffs) within 1,320 feet of the proposed Wind Energy Conversion System (see table below).**

In accordance with §1504.05 of the Zoning Regulations, no Wind Turbines will be located within 600 feet of wetlands, USFW Types III, IV, or V. In reference to the Conditional Use Permit Application Item 7, no Wind Turbines will be located in a floodplain. There are no state or federally designated scenic or natural areas, including bluffs, within 1,320 feet of the proposed Wind Turbines. Wetland delineations were conducted by Olsson Associates. Olsson has mapped the location of wetlands, as depicted by the National Wetlands Inventory (NWI) and conducted field verification for the entire Project area. Updates for any Future Parcels will be provided if necessary.

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Please see [Exhibit F](#) for the location of wetlands and setback requirements within the Project Area.

**11. An Acoustical Analysis that certifies that the noise requirements within this regulation can be met.**

Please find attached in [Exhibit G](#) an acoustical analysis letter indicating that Hankard Environmental has the capability to conduct an acoustical analysis that certifies that the Project will meet the noise requirements set forth in the Zoning Regulations. A noise analysis will be provided to the Zoning Administrator certifying that the Project's final Wind Turbine layout will meet the WECS' noise regulations set forth in § 1504.06(11).

**12. FAA and FCC permit: Applicant shall submit permits from the appropriate agency prior to any power being produced.**

Prior to erection of any individual Wind Turbine, Upstream shall provide the Zoning Administrator a Determination of No Hazard issued by the Federal Aviation Administration for each final turbine location. A copy of the Federal Aviation Administration ("FAA") case numbers for Form 7460-1 Study Submittal is included in [Exhibit C](#).

Upstream does not anticipate the Project will trigger Federal Communications Commission permitting requirements. See Item 13 below for additional communication related information.

Upon receipt of CUP approval, the Applicant shall request Certificates of no Zoning Violation from Antelope County Zoning Administrator to submit to the Nebraska Department of Aeronautics.

**13. Location of and evidence that there will be no interference with any commercial and/or public safety communication towers within two miles of the proposed Wind Energy Conversion System.**

See Comsearch and National Telecommunications and Information Administration reports attached as [Exhibit H](#). Upstream will not materially interfere with any existing commercial and/or public safety communication towers.

**14. Decommissioning Plan as required by this regulation.**

The Land Leases contractually require provision of financial assurance securing removal obligations. The following language appears in each Land Lease in place in Antelope County:

On or by the fifteenth (15<sup>th</sup>) anniversary of the Operation Date, Grantee shall obtain and deliver to Owner a letter of credit, or similar financial assurance, in form and substance reasonably satisfactory to Owner securing performance of Grantee's obligation to remove the Windpower Facilities located on the Property (the "Removal Bond"). The Removal Bond shall be equal to the estimated amount, if any, by which the cost of removing the Windpower Facilities exceeds the salvage value Owner could reasonable obtain for such Windpower Facilities (the "Net Removal Costs"). To the extent that the Net Removal Costs are zero (or negative), a Removal Bond shall not be required on the part of the Grantee, provided, however that Grantee shall re-evaluate the need for a Removal Bond at least annually after the fifteenth (15<sup>th</sup>) anniversary of the Operations Date by a qualified engineer certified in the State of Nebraska reasonably acceptable to Owner. Grantee shall, within fourteen (14) days of Grantee preparation or receipt,

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deliver to Owner the full report(s) (including any documentation that Owner may reasonably request and Grantee reasonably may be able to provide) prepared in regard to such Net Removal Costs. Grantee shall not be required to deliver such Removal Bond to Owner if Grantee (i) is in the process of repowering or otherwise redeveloping the power generating units on the Property with new power generating units (or commits in writing with notice to Owner to do so and actually does redevelop the Property within two (2) years after the fifteenth (15<sup>th</sup>) anniversary of the Operations Date), or (ii) has delivered such financial assurance to a governmental agency with jurisdiction to remove the Windpower Facilities for the sole stated purpose of removing Windpower Facilities from the Project in connection with the permitting of the Property. Once in place, Grantee shall keep such Removal Bond, or similar financial assurance, in force throughout the remainder of the Term. The Net Removal Costs shall be determined by the Grantee acting in good faith. Failure of Grantee to maintain the Removal Bond as described herein shall be deemed a Monetary Default. If Grantee is required to post the removal bond directly for the benefit of the owners in the Project, Grantee will cooperate with Owner to Owner's satisfaction to facilitate an arrangement under which the owners in the Project may negotiate, hold and enforce the Removal Bond through a single person or entity, and Grantee will pay fees reasonably necessary to create such arrangement.

Pursuant to the Zoning Regulations, Section 1504.06(10), Upstream intends to provide the Zoning Administrator with a decommissioning plan prior to commencement of Project construction.

### **15. Description of potential impacts on nearby Wind Energy Conversion Systems and wind resources on adjacent properties not owned by the applicant.**

There are no other WECS in Antelope County which are not owned by Invenergy (i.e., affiliates of Upstream). Land Leases are in place with respect to many adjacent properties and Invenergy will continue to evaluate the viability of placing additional Wind Turbines on these properties in the future. The wind resource on properties adjacent to Wind Turbines could be impacted depending on factors relating to such adjacent properties such as elevation, topography, and location relative to Upstream. See section 9 above for information regarding existing facilities.

### **16. Additional Information.**

The location of the operations and maintenance building has not been determined, and is the only part of the Project that will require water supply and sewage disposal facilities during operation of the Wind Turbines. Upstream staff will manage the appropriate disposal of refuse at the operations and maintenance building and across the project site. Designated parking areas will be located at the operations and maintenance building. Additional information regarding the operations and maintenance will be reflected in the final Site Plan. In addition, please see Section 4 below for additional operations and maintenance information.

An access road to reach each Wind Turbine location and a small gravel pad around each Wind Turbine location with enough space to park a pick-up truck will be constructed. Most access roads will spur off of existing County Roads and will be coordinated with the Antelope County Highway Superintendent. Any access from State Highways will be coordinated with Nebraska Department of Roads. A County Roads Agreement will be negotiated and executed with Antelope County prior to the commencement of construction of Upstream in a form similar to the County Roads Agreement dated April 9, 2013 for the **Prairie Breeze** project. Invenergy acknowledges that adjustments may be made to the form of agreement.

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In addition to using an experienced engineering firm, Invenergy will engage a reputable construction contractor to build the Project and will work with it to obtain necessary construction permits to maintain proper erosion control, soil conditions, and permeability. All towers will adhere to the special safety and design standards set forth in 1504.06 of the Zoning Regulations. During construction there will be an increase in traffic across the area; however, Upstream will seek to reduce impacts as much as reasonably practical, including through dust suppression. Upon completion of construction, Upstream will reclaim temporarily disturbed ground and grade land as close as reasonably possible to original contour, in coordination with the Current Landowners and Future Landowners.

A typical Wind Turbine and its accessory facilities removes approximately one-third to one-half acre of land from production, with the remainder of the property remaining agricultural in use. This equates to minimal permanent disturbance across the project site. The proposed locations of the Wind Turbines, including alternate locations, can be found in [Exhibit D](#). Upstream will have Land Leases in place with all landowners on whose property the Wind Turbines are located.

The Project as a whole is not expected to have any effect surface water drainage patterns after completion of construction. To the extent that, upon completion of final siting and design, Upstream expects drainage patterns to be materially affected, this will be reflected in the Site Plan and Upstream will undertake reasonable efforts to coordinate with the relevant landowners and to manage such changes.

The Project is not anticipated to materially impact levels of odor pollution, air pollution, water pollution or soil pollution and the firm engaged in connection with construction of the Project will address these matters should issues in connection therewith arise, as reasonably appropriate.

Upstream will undertake reasonable measures to address any potential explosion hazard, including coordination with local emergency services and implementation of an internal emergency response plan.

As part of finalizing development and commencing construction, other entities with easement rights on the Current Parcels and Future Parcels will be identified and contacted and any necessary measures will be taken by Upstream to work with and share the property with existing easement-holders. The types and locations of easements will be reflected in the Site Plan upon final design.

Please refer to the information provided in [Exhibit E](#) for the location of homes located within 2 miles of the Project Area and wetlands across the Project Area. The Project is not expected to have any land use impacts on non-agricultural areas within the surrounding area, including within the City of Neligh.

## 4.0 OPERATIONS AND MAINTENANCE

Invenergy Services LLC, an affiliate of Invenergy, operates all of Invenergy LLC's operating projects and also plans to operate the Upstream Project. Invenergy and its affiliates are currently managing over 4,000 MW of wind projects within North America, 98% of which employ GE 1.5 MW wind turbine technology. Invenergy will use its extensive experience with the operations and maintenance to maximize availability and optimize performance of the Project.

As proposed, the Project will be staffed with the following positions:

- Wind Turbine Technicians
- Operations Manager
- Administrative Assistant
- Wind Turbine SCADA Operators (as needed for 7x24 regional monitoring)

Subcontractors may be hired to perform specific tasks, including substation maintenance, collector system maintenance, road maintenance, landscaping, facility studies, trash removal from and upkeep and maintenance of the operations and maintenance building.

### **Wind Turbine Routine Maintenance Schedule**

The routine maintenance program is expected to consist of a 1-month, 6-month and 12-month service plan. The 1-month routine maintenance service will be performed once, 30 days after commercial operation has been achieved. Subsequent maintenance services will be performed at 6 month intervals. Various routine maintenance activities will be performed on the components identified below. The activities performed and the level of service provided will vary depending on the type of service being performed (i.e., 1-month, 6-month or 12-month service).

**Wind Turbine Routine Maintenance includes maintenance activities on the following components:**

- Foundation
- Tower-Mounted Control Cabinets
- Tower
- Nacelle
- Drive Train
- Hub
- Safety Equipment
- SCADA and WFMS software upgrades

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### 5.0 COMPANY BACKGROUND

#### 5.1 Invernergy Experience

Invernergy LLC, the parent company of Upstream (and Invernergy Wind Development), is a leading clean energy company focused on the development, ownership, operation and management of large-scale electricity generation assets in the North American and European markets. The Company's electric generation assets primarily include large scale wind energy and clean natural gas fueled electric generating facilities.

The senior management team has a track record of resounding success and has industry experience averaging over 25 years in diverse areas of the energy industry, including development, engineering, construction, finance, operations, asset management, and energy trading and contracting.

Invernergy LLC is headquartered in Chicago and has North American regional offices located in Denver and Toronto. European development is coordinated through an office in Warsaw, Poland.

Invernergy LLC and its affiliates currently have nearly 10,000 Megawatts (MW) of wind, thermal and solar projects under contract, in construction or operational. The wind portfolio represents over 5,000 MW of this portfolio. Invernergy has constructed projects in the following sixteen states: Nebraska, California, Colorado, Iowa, Illinois, Oklahoma, Montana, Texas, North Dakota, New York, Michigan, Washington, West Virginia, Oregon, Idaho and Wisconsin.

## 6.0 ECONOMIC & COMMUNITY BENEFITS

### 6.1 Economic Development

Invenergy currently operates the 310 MW Prairie Breeze Project located in Antelope County, consisting of 179 turbines in three phases. The Prairie Breeze Project represents an investment in excess of \$500 million to the participating counties and state of Nebraska. Prairie Breeze project includes 19 full-time employees that operate and maintain the project. The Prairie Breeze project is expected to contribute over \$82 million in economic development including tax payments, employment, landowner payments, and local spending over a 25 year period.

Upstream will result in an annual economic development comparable to that of Prairie Breeze. With a capacity of up to 350 MW, the Upstream project anticipates injecting approximately \$3 million annually into the local economy through local taxes, landowner payments, employees' wages, and other local spending. Upstream would also result in the hiring of up to twelve (12) full-time employees and the contribution of approximately \$24 million in local earnings and \$45 million in output for Antelope County during the construction phases. The proposed Project is expected to increase the current economic success of Antelope County and the State of Nebraska.

#### 6.1.1 Antelope County Tax Revenue Estimate

Under current law, a 350 MW project would pay approximately \$1,364,984 annually in taxes. Wind Turbines are exempt from personal property taxation under Nebraska law and Upstream will pay \$3,518/MW nameplate capacity tax on the Project.

#### 6.1.2 Employment

A 350 MW project is expected to create approximately 390 full and part-time jobs during construction. These jobs would occur during the approximately twelve to eighteen month construction timeframe of the Project.

Operations and maintenance of the Upstream Project will require approximately 10-to-12 full-time employees that are typically hired from the surrounding area. An operations and maintenance building would be located on-site or in the local area and is from where the employees would work.

#### 6.1.3 Indirect Economic Benefits

Numerous indirect local economic benefits are expected to be realized through the construction and operation of the Project, mainly through money being spent within the local economies.

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Some of the anticipated beneficiaries in Antelope County include: restaurants, lodging, hardware and provision stores, tourism, banks, recreational activities, schools (through new students and tax revenue), gas and service stations, and many more.

### 6.1.4 Community Support

The community has shown significant support for the project and Invenergy has been pleased to work with the city of Neligh and Antelope County to bring a new driver of economic development to the region. Please find Letters of Support from community members included in [Exhibit J](#).

### 6.2 Road Improvements

Roads will likely be improved throughout the Project Area. Minimum maintenance roads may become gravel roads and other county roads in the area are anticipated to be improved once construction is completed.

### 6.3 Complementary Agricultural Use

The development of a wind farm is very complementary to the agricultural use predominant in the Project Area. Except for the area directly impacted by the Wind Turbine foundation and related roads and other structures of which the WECS is comprised, the Upstream Project will not change the existing use of the land, and will provide significant economic benefits to the individual landowners and community as a whole.

### 6.4 Clean, renewable energy

Wind Turbines do not require water or sewer systems in order to generate electricity. Wind is a free renewable energy source that requires no feedstock or fuel and produces no emissions while generating electricity.



4. On the graph paper, provide a site plan (a sketch or drawing) which includes all of the following information (N/A if not applicable): See attached section 2 and Exhibits.

- a. The size, location, and height of all existing and proposed buildings from the centerlines of any adjoining road or property line and the distance between buildings.
- b. location of all roads adjoining this property and the distance(s) from the centerline of any road(s) to the point of the proposed building location closest to said road(s)
- c. distance to property line(s) of property under different ownership (if less than 300 feet)
- d. The types and locations of any easements affecting the property.
- e. The location and type of water supply and sewage disposal facilities proposed to serve the building/addition proposed and distance between well and septic tank, and the tile field or other sewage disposal system. Applicant shall check with a certified septic system installer concerning septic system.  
 YES NO N/A MB (initials of applicant)
- f. Location of any river, stream or intermittent stream within 300 feet of proposed building addition and distance to proposed building/addition
- g. The number and location of parking spaces for customers or the public.
- h. The location of loading areas.
- i. The type and location of refuse collection and storage facilities.
- j. The location(s) of residential dwelling(s) and other non-agricultural land uses within two (2) miles of the property to be affected by the proposed conditional use.
- k. List the location and distance to any existing confined feeding use within a 2 mile radius.
- l. Location of disposal of dead animals
- m. An indication of proposed surface water drainage onto, through and off of the affected property. Include any areas of the property that are subject to flooding or considered to be wetland.
- n. The type, size, and location of all signs associated with such proposed use

5. **A CERTIFIED copy of adjacent landowners from an Abstractor shall accompany this permit BEFORE a public hearing is scheduled.** Information currently provided by Antelope County Assessors Office - Abstractor information to be provided by Applicant prior to Noticing Deadline, December 7th, 2016.

6. I hereby certify that I have the legal authority to file this application, that I have completed and examined this application and know the same to be true and correct. I further certify that all provisions of law and other regulations governing the type of construction and use proposed in this application will be complied with, whether or not specified in this application, including any building, electrical or plumbing codes set forth in the Architects and Engineers Act.  
MB (initials of applicant)

7. The Zoning Administrator/Flood Plain Administrator has checked the Flood Plain Maps to verify that this property/legal description is not in a flood plain. If said property is located in a Flood Plain then any and all construction shall be built at least one (1) foot above flood stage. Any other applicable flood plain rules shall also apply. \_\_\_\_\_ (Initials of ZA/FPA)

8. **To avoid any trespassing conflicts, upon signing the application, the applicant will allow the Zoning Administrator, with or without others, the right to enter the property for the purpose of an inspection.**  
MB  
 (Initials of applicant)

9. After approval by the County Board the Zoning Administrator will conduct a site visit prior to any footings being poured so as to assure that setbacks have been met. \_\_\_\_\_ (date of site visit/ZA initials)

Upstream Wind Energy LLC	1 South Wacker Dr.	Chicago, IL	60606
Printed name of Applicant	Street address	City/Town	Zip Code
<u>[Signature]</u>	12/18/2015	303-800-9342	
Signature of Applicant	Date of application	Telephone No.	

See Attached Section 2 and Exhibits  
 Printed name of landowner (if different than applicant) \_\_\_\_\_ Signature of Landowner (if not applicant) \_\_\_\_\_  
 Contractor's signature \_\_\_\_\_

**Any incomplete permit will be returned to the applicant.**  
**Must be returned to zoning office and fee paid before a public hearing is scheduled**

## CERTIFICATE OF ZONING COMPLIANCE

### ANTELOPE COUNTY, NEBRASKA

**This portion to be filled out completely by applicant.**

The undersigned hereby applies for a Certificate of Zoning Compliance to occupy and use the premises as follows:

1. Legal description of the property to be affected by the activity proposed: \_\_\_\_\_
2. Proposed use of premises: \_\_\_\_\_
3. I hereby certify that I have the legal authority to file this application, that I have competed and examined this application and know the same to be true and correct. I further certify that all provisions of law and other regulations governing the type of construction and use proposed in this application have been complied with, whether or not specified in this application.
4. **A Certificate of Zoning Compliance, once issued, shall remain in effect so long as the use of the land, buildings and structures are used in accordance with said Certificate.**

\_\_\_\_\_  
Printed name of applicant(s)

\_\_\_\_\_  
complete mailing address of applicant(s)

\_\_\_\_\_  
Signature of applicant(s)

\_\_\_\_\_  
date of application

\_\_\_\_\_  
phone # of applicant(s)

### **This section to be completed by Zoning Administrator**

CERTIFICATE OF ZONING COMPLIANCE APPLICATION NO. \_\_\_\_\_

This certificate of zoning compliance is related to permit no. \_\_\_\_\_ issued to \_\_\_\_\_

1. If proposed occupancy is a change of use where no new building or additions are proposed and no zoning permit is needed, said building and use will comply with all setback distances, water/sewage disposal requirements, parking/sign regulations and other applicable zoning regulations (refer to requirements on permit) YES NO N/A
2. If proposed occupancy is a change of use where a new building or addition is proposed and a zoning permit is needed, said building and use will comply with all setback distances, water/sewage disposal requirements, parking/sign regulations and other applicable zoning regulations (refer to requirements on permit). YES NO N/A
3. Has building permit been issued, and if so, building and proposed use complies with all conditions of approval? YES NO
4. If use required a Conditional Use approval, building/use complies with all conditions of approval. YES NO N/A
5. If use required approval of a Variance by the Board of Adjustment, such use complies with all conditions of approval of the approved variance. YES NO n/a
6. Site inspected on \_\_\_\_\_ to verify compliance with all applicable conditions.
7. Inspection comments: \_\_\_\_\_
8. Certificate of Zoning Compliance issued on \_\_\_\_\_

Copy of approved Certificate of Zoning Compliance mailed to applicant on \_\_\_\_\_

Revised 2-09

ZA Signature \_\_\_\_\_

**This page to be completed by Zoning Administrator**

Application No. \_\_\_\_\_

1. Building complies with setback distances from road(s) and between buildings.    Yes    No
2. Building complies with setback distances from property lines.    Yes    No
3. Building complies with height limitations.    Yes    No
4. Is building located in 100 year flood hazard area?    Yes    No  
     If yes, is ground floor of the building elevated above 100 year flood elevation by at least One (1) foot?    Yes    No
5. Building/Addition/Use requires Conditional use approval    Yes\*    No  
     \*If Yes, Conditional Use approval has been given and application complies with all conditions of approval set forth in the Conditional Use approval    Yes    No
6. If proposed building/use is for commercial or industrial or public use, minimum provisions for parking, loading areas and signs will be complied with    Yes    No    N/A
7. If proposed use requires authorization or permits from the DEQ or State of Nebraska, such permits have been approved:  
     Yes    No    N/A    *copy enclosed*
8. Application fee in amount of \$\_\_\_\_\_ has been paid by applicant.
9. Copy of this permit has been submitted to the Assessors office by the Zoning Administrator    Yes    No
10. Recommendations of the Antelope County Planning Commission  
     \_\_\_\_\_ Approve  
     \_\_\_\_\_ Conditionally Approve

Recommendations: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

11. Action taken by County Board of Supervisors:  
     \_\_\_\_\_ Approve  
     \_\_\_\_\_ Conditionally Approve

Conditions of approval: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Reason(s) for denial:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

12. Notice of decision of County Board of Supervisors mailed to applicant on \_\_\_\_\_  
 Applicant has two (2) years to finish. If after two (2) years construction has not started,  
 this permit shall be made void.

13. \_\_\_\_\_ Zoning Administrators signature

**Check list for public hearings**

**Notices:**

- \_\_\_\_\_ Newspapers: make a copy of email for files
- \_\_\_\_\_ Mailed to
  - \_\_\_\_\_ adjoining landowners,
  - \_\_\_\_\_ applicant,
  - \_\_\_\_\_ village/city clerks,
  - \_\_\_\_\_ school districts
- \_\_\_\_\_ sent 10 days prior
- \_\_\_\_\_ copies place in file

**Copies of permit and applicable papers given to:**

- \_\_\_\_\_ Assessors office
- \_\_\_\_\_ Clerks office
- \_\_\_\_\_ Applicant

**Findings and Recommendation**

- \_\_\_\_\_ original part of file
- \_\_\_\_\_ copy given to Supervisors

**Impact easements**

- \_\_\_\_\_ signed
- \_\_\_\_\_ Notarized
- \_\_\_\_\_ part of file

Revised 10-15



## EXHIBIT B: LANDOWNER TEAM – AGREEMENTS IN PLACE BETWEEN INVENERGY AND THE FOLLOWING ANTELOPE COUNTY PARCELS 12/18/2016

Exhibit B Project Landowner Team

APH	OWNER	LEGAL
000349000	ADAMS,LAUREY B	19-25-5 S130 AC OF SW1/4 123.44 AC ELM TOWNSHIP TD 24
000454900	ADAMS,LAUREY B	19-25-6 NE4 158.20 AC NEIGH TWPSP TD 62"
000348000	ADAMS,TEDD	17-25-5 SE4 EXC NW4SE4 118.76 AC ELM TWPSP TD 29"
000348100	ADAMS, TEDD	17-25-5 W1/2NW1/4 & N 62' NW1/4SW1/4 99 AC ELM TOWNSHIP TD 29
000347900	ADAMS,TEDD R	17-25-5 E1/2NW1/4 NE1/4SW1/4 & NW1/4SE1/4 160 AC ELM TOWNSHIP TD 29
000348200	ADAMS, TEDD R	19-25-5 NE1/4 160 AC ELM TOWNSHIP TD 29
000348500	ADAMS, TEDD R	18-25-5 SW4 155.50 AC ELM TWPSP TD 24"
000449700	ADAMS, TEDD R	3-25-6 TRACT A IN NW4 & N2SW4 126.98 AC NEIGH TWPSP TD 68"
000449800	ADAMS, TEDD R	3-25-6 TRACT B IN SW4 106.98 AC NEIGH TWPSP TD 68"
000449900	ADAMS, TEDD R	4-25-6 NE4 157.63 AC NEIGH TWPSP TD 62"
000450200	ADAMS, TEDD R	4-25-6 SE4 EXC IRR TR SE COR & EXC IRR TR SW COR 145.53 AC NEIGH TWPSP TD 62"
000452601	ADAMS, TEDD R	33-26-6 SW4SE4 38.8 AC CUSTER TWPSP TD 72"
000348600	ANCHUSTEGUI, JANE ELIZABETH HATFIELD	19-25-5 NE4 159.06 AC ELM TWPSP TD 24"
000470600	ANCHUSTEGUI, JANE ELIZABETH HATFIELD	24-25-6 E2SE4 78.66 AC NEIGH TWPSP TD 62"
000448600	ANTELOPE COUNTY	1-25-6 TR NE4NE4 1.08 AC NEIGH TWPSP TD 68"
000449500	BALTIC AMERICAN LAND COMPANY	3-25-6 SE4 159.86 AC NEIGH TWPSP TD 62"
000449600	BALTIC AMERICAN LAND COMPANY	3-25-6 TRACT E2SW4 38.86 AC NEIGH TWPSP TD 68"
000453600	BALTIC AMERICAN LAND COMPANY	10-25-6 N2NE4 60 AC NEIGH TWPSP TD 62"
000354701	BARTOS, LUANN & KENNETH J	30-25-5 TR 10 X 48 RODS NE4SW4 3 AC ELM TWPSP TD 24
000354800	BARTOS, LUANN & KENNETH J	30-25-5 SE1/4 160 AC ELM TWPSP"
000355100	BARTOS, LUANN & KENNETH J	31-25-5 TRACT N2NE4 5 AC ELM TOWNSHIP TD 33
000487500	BENNETT TURKEY FARMS INC	21-26-6 ALL -HWY ON W SIDE - 5 AC TR 218X100' SW4SE4-SE4SW4 - 6.28AC**SW CORNERSW4- 616.94 AC CUSTER TWPSP TD69'616.94**
000490500	BENNETT TURKEY FARMS INC	29-25-6 N2NE4 EXC 1.53 AC HWY 78.58 AC CUSTER TWPSP TD 69"
000451100	BENTLEY, ALAN & LYNDIA KESTER	6-25-6 NE4 EXC N2SE4SE4 & EXC S 50' NE4SE4NE4 149.24 AC NEIGH TWPSP TD 62"
000450500	BENTLEY, ALLAN	5-25-6 NE1/4 EXC 73.3 AC IRR TR IN EAST 77.76 AC NEIGH TWPSP TD 62"
000450700	BENTLEY, ALLAN	5-25-6 NW4 154.63 AC NEIGH TWPSP TD 62"
000451200	BENTLEY, ALLAN	5-25-6 N2SW4 EXC TRI TRACT SW CORNER 73.55 AC NEIGH TWPSP TD 62"
000491600	BENTLEY, JANET R	31-26-6 W2 315.61 AC CUSTER TWPSP TD 69"
000461700	BENTLEY, JANET R	6-25-6 NE4SW4SE4 292.87 AC NEIGH TWPSP TD 62"
000483202	BENTLEY, JANET R	7-26-6 SW4-TR 157.07 AC CUSTER TWPSP
000486700	BENTLEY, JANET R	18-26-6 SE4 157.57 AC CUSTER TWPSP TD 69"
000491500	BENTLEY, JANET R	31-26-6 NE4 159.14 AC CUSTER TWPSP TD 69"
000491700	BENTLEY, JANET R	31-26-6 SE4 159.73 AC CUSTER TWPSP TD 69"
000492200	BENTLEY, JANET R	32-26-6 SE4SW4 39.63 AC CUSTER TWPSP TD 69"
000492300	BENTLEY, JANET R	33-26-6 W2W2 162.86 AC CUSTER TWPSP TD 69"
000372700	BERTRAM SHARON	33-25-5 E2NW4 & SW4 EXC NW4SW4 138.44 AC WILLOW TWPSP TD 34"
000373000	BERTRAM SHARON	34-26-5 ALL 634.80 AC WILLOW TOWNSHIP TD 36"
000453900	BEVERLY LAND CO A RHODE ISLAND CORP	10-25-6 S2SE4 82.41 AC NEIGH TWPSP TD 62"
000454800	BEVERLY LAND CO A RHODE ISLAND CORP	12-25-6 SW4 156.98 AC NEIGH TWPSP TD 62"
000451000	BEVERLY LAND CO A RHODE ISLAND CORP	13-25-6 W2 315.77 AC NEIGH TWPSP TD 62"
000470700	BEVERLY LAND CO A RHODE ISLAND CORP	24-25-6 W2 - 3 TR NW4NW4 W2SE4 392.6 AC NEIGH TWPSP TD 62
000470900	BEVERLY LAND CO A RHODE ISLAND CORP	25-25-6 NW4 160.26 AC NEIGH TWPSP TD 62"
000449000	BOCHE, MARK K & LUANN K	2-25-6 SW4 157.65 AC NEIGH TWPSP TD 62"
000450600	BOOTH HAY COMPANY LLC	5-25-6 72.88 AC IRR TRACT E2NE4 NEIGH TWPSP TD62"
000354400	BRANDT RANCH INC	29-25-5 SW4 159.38 AC ELM TWPSP TD 33"
000354500	BRANDT RANCH INC	30-25-5 NE4E4 & E2NE4 116.81 AC ELM TWPSP TD 33"
000354600	BRANDT RANCH INC	30-25-5 NW4NE4 N2NW4 121.12 AC ELM TWPSP TD 24"
000355500	BRANDT RANCH INC	32-25-5 NW1/4 160 AC ELM TOWNSHIP TD 32
000586100	BRIDGE, MERLE D & JOANN L	22-26-7 SE4SE4 37.31 AC BLAINE TWPSP TD 105"
000587000	BRIDGE, MERLE D & JOANN L	23-26-7 W2SW4-TR NE4SW4NW4SE4 93.79 AC BLAINE TWPSP TD 105**
000588200	BRIDGE, MERLE D & JOANN L	26-26-7 NW4SW4 W2NW4 117.63 AC BLAINE TWPSP TD 105"
000341100	CENTRAL GRAIN INC OF PALMER NE	5-25-5 NW4 EXC TR 252.87 AC ELM TWPSP TD 29
000342600	DINSDALE BROS INC	3-25-5 W2 317.06 AC ELM TWPSP TD 29"
000342700	DINSDALE BROS INC	4-25-5 NE4 80.88 AC ELM TWPSP TD 29"
000490000	DOUBLE B TURKEY FARM INC	28-26-6 NE4-6E4NE4NW4-HWY & TR NW4NW4- NW4SW4-HWY; 305.37 AC CUSTER TWPSP TD 72"
000490100	DOUBLE B TURKEY FARM INC	28-26-6 SE4NE4 38.86 AC CUSTER TWPSP TD 69"
000492400	DOUBLE B TURKEY FARM INC	33-26-6 NE4 & NW4SE4 198.94 AC CUSTER TWPSP TD 69"
000492000	DOUBLE B TURKEY FARM INC	33-26-6 NE4SE4 11.53 AC CUSTER TWPSP TD 69"
000493100	DOUBLE B TURKEY FARM INC	34-26-6 NW4 158.7 AC CUSTER TWPSP TD 69"
000491400	DREDGE, LYLE D & NADINE F hg tr	30-26-6 S2 316.04 AC CUSTER TWPSP TD 72"
000587200	DWIGHT MORRISON PROPERTIES, LLC	24-26-7 TR NE4 158.81 AC BLAINE TWPSP TD 105"
000587300	DWIGHT MORRISON PROPERTIES, LLC	24-26-7 TR SE4 158.06 AC BLAINE TOWNSHIP TD 105"
000347700	ELENS, RICHARD D & MARETHA J	16-25-5 SW1/4 160 AC ELM TOWNSHIP TD 29
000343200	ESCRITT, DOROTHY G & VELLA M	5-25-5 SE4 158.13 AC ELM TWPSP TD 29"
000343200	ESCRITT, DOROTHY G & VELLA M	20-25-5 NW1/4 & N1/2SW1/4 240 AC ELM TOWNSHIP TD 29
000355000	EVANS INC	31-25-5 NE1/4 EXC 5 AC & SE1/4 314.7774 AC ELM TOWNSHIP TD 24"
000355200	EVANS INC	31-25-5 NW4 159.21 AC ELM TWPSP TD 24"
000471000	EVANS INC	25-25-6 SE4 156.60 AC NEIGH TWPSP TD 62"
000473800	EVANS, JOSEPH T & NANCY M	25-25-6 NE4 154.58 AC NEIGH TWPSP TD 62"
000348101	EYMAN, GORDON K & HELEN A	17-25-5 700' NW4SW4 S2SW4 101 AC ELM TOWNSHIP TD 29
000489500	FORSSELL, THOMAS	25-26-6 S2SE4 81.18 AC CUSTER TWPSP TD 75"
000450400	GERALD BAKER INC	4-25-6 SW4 EXC STATE HWY 153.30 AC NEIGH TWPSP TD 62"
000491000	GOOD, HARLAN D & SHIRLEY A	29-26-6 SW4 161.83 AC CUSTER TWPSP TD 69"
000583000	GOOD, HARLAN D & SHIRLEY A	15-26-7 SE4NE4-SE4 NW4SE4 159.29 AC BLAINE TWPSP TD 110**
000583100	GOOD, HARLAN D & SHIRLEY A	15-26-7 SW4NE4-SW4NW4SE4 206.33 AC BLAINE TWPSP TD 110**
000354300	GROSSERODE, JOSEPH H & MARCELLA A	29-25-5 SE4 160.15 AC ELM TWPSP TD 33"
000355400	GROSSERODE, JOSEPH H & MARCELLA A	32-25-5 NE4 158.23 AC ELM TWPSP TD 32"
000356000	GROSSERODE, JOSEPH H & MARCELLA A	33-25-5 NW4 & W 2 AC IN SW4 162.38 AC ELM TWPSP TD 32"
000584400	HAUF, LAWRENCE R & ESTHER M	18-26-7 SW4-TR SW4SW4 152.77 AC BLAINE TWPSP TD 107"
000489600	HAUPTMAN, LEVERN & JOANN	25-26-6 SW4 161.45 AC CUSTER TWPSP TD 72"
000493800	HAUPTMAN, LEVERN & JOANN et al	34-26-6 NE4 156.75 AC CUSTER TWPSP TD 69"
000493800	HAUPTMAN, LEVERN & JOANN et al	35-26-6 NW4 SE4 & 20' SO TR SW4NE4 321.71 AC CUSTER TWPSP TD 69"
000356300	HEITHOFF, STANLEY G & DOROTHY A	33-25-5 SW1/4 LESS W 2 AC FOR ROAD 158 AC ELM TOWNSHIP TD 32
000368300	HERBERT, DENISE A et al	20-26-5 SW4 159.63 AC WILLOW TOWNSHIP TD 34
000449300	HOPFMAN, DANIEL J & JOAN L	3-25-6 NE4 EXC TR 161.99 AC NEIGH TWPSP TD 68
000580700	HOPKINS, ESTHER M	9-26-7 NE4 159.85 AC BLAINE TWPSP TD 107"
000581000	HOPKINS, ESTHER M	9-26-7 N2SE4 80.27 AC BLAINE TWPSP TD 107"
000581100	HOPKINS, ESTHER M	9-26-7 S2SE4 80.44 AC BLAINE TWPSP TD 107"
000581200	JAEKE, CAROLINE	9-26-7 SW4-SW4SW4 151.87 AC BLAINE TWPSP TD 107"
000584000	JAEKE, CAROLINE	17-26-7 SW4 158.68 AC BLAINE TWPSP TD 107"
000585600	JAEKE, CAROLINE	20-26-7 E2W2 W2SE4 298.24 AC BLAINE TWPSP TD 107"

APN	OWNER	LEGAL
000589100	JAEKE,CAROLINE	28-26-7 W2W2 163.99 AC BLAINE TWPSP TD 107"
000589200	JAEKE,CAROLINE	23-25-7 NE4 SW4NE4 NE4SE4 150.22 AC BLAINE TWPSP TD 107"
000344501	JDHI LLC C/O RANDALL J HUPP	9-25-5 NE4 159.83 AC ELM TWPSP
000344500	JDHI LLC ETAL C/O RANDALL J HUPP	9-25-5 NW4 159.63 AC ELM TWPSP
000356200	JOHNSON,JERRY C & YVONNE D	33-25-5 SE4SE4 39.79 AC ELM TWPSP TD 32"
000488700	JONES,GARY D & DONNA D	23-26-6 SW4 162.09 AC CLUSTER TWPSP TD 69"
000483900	KALHOFF,DARELD A rev tr	7-26-6 SE4 157.62 AC CLUSTER TWPSP TD 69"
000489300	KALHOFF,DARELD A rev tr	25-26-6 SW4 160.35 AC CLUSTER TWPSP TD 69"
000489200	KALHOFF,KENNETH L	24-26-6 NE4 S2 490.09 AC CLUSTER TWPSP TD 75"
000488900	KALHOFF,KENNETH L & SUE V	24-26-6 NW4 158.30 AC CLUSTER TWPSP TD 75"
000489000	KALHOFF,TIMOTHY J & JANELLE M	22-26-6 SW4 157.95 AC CLUSTER TWPSP TD 6"
000489300	KALHOFF,TIMOTHY J & JANELLE M	27-26-6 ALL 633.14 AC CLUSTER TWPSP TD 69"
000352200	KEE,ROBERT D etal	25-25-5 SW4NW4 40.52 AC ELM TWPSP TD 32"
000352600	KEE,ROBERT D etal	25-25-5 SW4 158.04 AC ELM TWPSP TD 32"
000357000	KEE,ROGER ALLEN & GERALYN MARIE	36-25-5 E2NW4 73.54 AC ELM TWPSP TD 32"
000445500	KERKMAN,JOHN & LESLIE A	36-25-5 N 53.89 AC OF SW1/4 S3.39 AC ELM TOWNSHIP TD 32"
000344900	KLOEPPER,ELMER W & LEONA M relet tr	1-25-6 SE4 157.99 AC NELIGH TWPSP TD 68"
000353200	KLOEPPER,ELMER W & LEONA M relet tr	10-25-5 NW1/4 160 AC ELM TOWNSHIP TD 29
000586500	KNAPP,KETH R & SUE B	27-25-5 NW1/4 40 AC ELM TOWNSHIP TD 25
000586300	KNAPP,ROBERT E & ELIZABETH A	22-26-7 TR NW COR NW4SW4 7.55 AC BLAINE TWPSP TD 11"0"
000586200	KNAPP,ROBERT E & ELIZABETH A etal	22-26-7 N2SW4-TR NW4SW4-W2SE4 155.64 AC BLAINE TWPSP TD 110"0"
000586400	KNAPP,ROBERT E & ELIZABETH A etal	22-26-7 SE4SW4 17.64 AC BLAINE TWPSP TD 110"
000585700	KOENIG,JAMES T & KATHRYN E	9-26-7 SE4 159.33 AC BLAINE TWPSP TD 107"
000585600	KOENIG,JAMES T & KATHRYN E	21-26-7 ALL 643.59 AC BLAINE TWPSP TD 111"
000586800	KOENIG,JAMES T & KATHRYN E	23-26-7 NE4-SW4NE4NE4SE4 155.02 AC BLAINE TWPSP TD 105"
000586800	KOENIG,JAMES T & KATHRYN E	26-26-7 NE4-E2NW4-N4E4SW4-NW4SE4 319.31 AC BLAINE TWPSP TD 107"
000371800	KORTH,ALLEN D & LUOILLE I	31-26-5 NE4 E2NW4 241.01 AC WILLOW TWPSP TD 34"
000343900	MARSH,MELVIN D & RUTH D	7-25-5 NW4 153.15 AC ELM TWPSP TD 24"
000343900	MARTENSEN,DEANNA LEE	30-25-5 15E AC IN SW1/4 156.82 AC ELM TOWNSHIP TD 24
000343100	MARTENSEN,LEONARD P & DEANNA LEE	25-25-5 NE4 159.15 AC ELM TWPSP TD 24"
000343700	MAUGHAN,FRANKIE & SANDRA LEE	7-25-5 N2NE4 79.20 AC ELM TWPSP TD 29"
000344200	MAUGHAN,FRANKIE & SANDRA LEE	8-25-5 N1/2 320 AC ELM TOWNSHIP TD 29
000372900	MAUGHAN,FRANKIE & SANDRA LEE	33-26-5 NE4SE4 39.77 AC WILLOW TOWNSHIP TD 34"
000448700	MERIT PROPERTIES	1-25-6 W2 315.49 AC NELIGH TWPSP TD 68"
000454000	MERIT PROPERTIES PARTNERSHIP	10-26-6 SW4 EXC TRACT 409 XS3Z IN SW CORNER 157.58 AC NELIGH TWPSP TD 62"
000586900	MILLER,JOYCE M & KEVIN C	28-26-7 TR SE4SE4 1.23 AC BLAINE TWPSP TD 107"
000486500	MILLER,LEONARD	18-26-6 NE4 157.22 AC CLUSTER TWPSP TD 69"
000491100	MILLER,LEONARD & ANITA L	30-26-6 NE4 EXC TR IN NE4NE4 151.93 AC CLUSTER TWPSP TD 69"0"
000450900	MILLER,LEONARD L	5-25-6 SE4 EXC 2.67 AC FOR HWY & EXC TRACTS SE4SE4 150.15 AC NELIGH TWPSP TD 62"
000486900	MILLER,LYLE K & LENA	19-26-6 E2 316.55 AC CLUSTER TWPSP TD 69"0"
000346900	MITCHELL,LAVERN & STACEY	19-25-5 S1/2SE1/4 & 1 AC IN N1/2SE1/4 81 AC ELM TOWNSHIP TD 24
000349300	MITCHELL,LAVERN & STACEY	20-25-5 S2SW4 82.63 AC ELM TWPSP TD 24"
000354200	MITCHELL,LAVERN & STACEY	29-25-5 NW1/4 EXC TR 325 X504 IN SE 4NW1/4 156.24 AC ELM TWPSP TD 24"
000582400	MORRISON,BRETT M	13-26-7 SE4 159.22 AC BLAINE TWPSP TD 105"
000592000	MORRISON,DWIGHT	11-26-7 SW4 158.37 AC BLAINE TWPSP TD 105"
000581200	MORRISON,DWIGHT & DARLENE etal	10-26-7 SE4 157.31 AC BLAINE TWPSP TD 111A"
000487000	MORRISON,FRANK C	19-26-6 NW4 158 AC CLUSTER TWPSP TD 72"
000580300	MORRISON,FRANK C	8-26-7 W2NE4E2NW4 157.16 AC BLAINE TWPSP TD 107"
000580900	MORRISON,FRANK C	9-26-7 NW4-S.92 AC TR NW COR 154.10 AC BLAINE TWPSP TD 107"
000581800	MORRISON,FRANK C	11-26-7 NW4 159.27 AC BLAINE TWPSP TD 105"
000587700	MORRISON,FRANK C	25-26-7 S2 316.94 AC BLAINE TWPSP TD 105"
000487100	MORRISON,FRANK C & LYNN H	19-26-6 SW4 158.73 AC CLUSTER TWPSP TD 72"
000571400	MULLINS,GREG	29-26-6 SW4 EXC TR 158.83 AC WILLOW TOWNSHIP TD 34
000586400	OLSON,ALVIN & JANIE	27-26-7 NE4 NE4NW4 NW4SE4 237.66 AC BLAINE TWPSP TD 110"
000593200	OLSON,ALVIN & JANIE	35-26-7 E2 317.17 AC BLAINE TWPSP TD 106"
000586500	OLSON,DAN	27-26-7 SE4NW4 SW4-NW4SW4 157.62 AC BLAINE TWPSP TD 105"
000593400	OLSON,DAN	35-26-7 NW4NW4 38.46 AC BLAINE TWPSP TD 106"
000586600	OLSON,DAN & MARISSA	27-26-7 W2NW4 NW4SW4 124.50 AC BLAINE TWPSP TD 110"
000589001	OLSON,DAN & MARISSA	28-26-7 NE4SE4 39.63 AC BLAINE TWPSP TD 107"
000593000	OLSON,STEVE K & JOANN M	28-26-7 SE4SW4 S2SE4 1.23 AC TR SE4E4 117.49 AC BLAINE TWPSP
000352500	PETERSEN,STANLEY R etal	25-25-5 S1/2N1/2SE1/4 40 AC ELM TOWNSHIP TD 32
000367700	PETERSON,KAREN K etal	19-26-5 N2NW4 78.89 AC WILLOW TOWNSHIP TD 34
000372400	PETERSON,KAREN K etal	32-26-5 SE4 159.49 AC WILLOW TOWNSHIP TD 34
000450000	PETERSON,KEITH L rev tr etal	4-25-6 N2NW4 EXC ST HWY 76.66 AC NELIGH TWPSP TD 62"
000450100	PETERSON,KEITH L rev tr etal	4-25-6 S2NW4 EXC HWY 14 70.57 AC NELIGH TWPSP TD 62"
000342800	PINNACLE BAN CORP IN OSCEOLA INSURANCE INC	4-25-5 S2NE4 & S2 394.12 AC ELM TWPSP TD 29"
000348000	PINNACLE BAN CORP IN OSCEOLA INSURANCE INC	5-25-5 NE4 EXC TR 152.71 AC ELM TWPSP TD 29
000448000	RAINBOW FARMS INC	7-25-6 N2 316.39 AC NELIGH TWPSP TD 68"
000487200	REINKE,DALE F	20-26-6 NE4 EXC 3.86 AC HWY E2NW4 234.64 AC CLUSTER TWPSP TD 6"9"
000454600	RICE FAMILY LTD PARTNERSHIP	12-25-6 NW4 157.66 AC NELIGH TWPSP TD 62"
000346400	RICE FAMILY LTD PARTNERSHIP, A & M	18-25-5 SE4 160.70 AC ELM TWPSP TD 29"
000493500	RICE,DEBORAH ANN	34-26-6 SW4 159.05 AC CLUSTER TWPSP TD 69"
000492900	RICE,RONALD R	33-26-6 SE4SE4 39.76 AC CLUSTER TWPSP TD 69"
000479400	RICE,RONALD ROY & DEBORAH ANN	24-25-6 NE4 156.23 AC NELIGH TWPSP TD 62"
000581700	RODGERS,ROY L etal	11-26-7 NE4 158.41 AC BLAINE TWPSP TD 105"
000582100	RODGERS,ROY L & BETTY J	12-26-7 N2NE4 NW4 241.21 AC BLAINE TWPSP TD 105"
000583900	RUDLOFF,PAUL & PAMELA	17-26-7 SE4 159.10 AC BLAINE TWPSP TD 107"
000489800	SANDS,MARVIN E & MARILYN E	26-26-6 E2SW4 81.25 AC CLUSTER TWPSP TD 75"
000351900	SANNE FARMS LLC	25-25-5 NE4 EXC 1.28 AC TRACT N2N2SE4 EXC. 95 AC TRACT SE4 157.77 AC ELM TOWNSHIP TD 32
000352000	SANNE REPAIR LLC	25-25-5 TRACT IN NW4SE4NE4 1.28 AC ELM TOWNSHIP TD 32 RR SHOP
000454501	SALSER,EDWARD F & KATHERINE A rev liv tr	12-25-6 NE4 157.47 AC NELIGH TWPSP TD 62"
000344700	SALSER,JOHN W & SHARON K	9-25-5 SW1/4 160 AC ELM TOWNSHIP TD 29
000486800	SCHACHT,GENE A & CAROL	19-26-6 SW4 157.59 AC CLUSTER TWPSP TD 69"
000582900	SCHACHT,GENE A & CAROL	13-26-7 SW4 159.64 AC BLAINE TWPSP TD 105"
000582800	SCHACHT,GENE A & CAROL	14-26-7 SE4 157.80 AC BLAINE TWPSP TD 105"
000583700	SCHACHT,GENE A & CAROL	17-26-7 NE4 159.02 AC BLAINE TWPSP TD 107"
000490300	SCHRADER,DAVID C	28-26-6 S2SE4 79.96 AC CLUSTER TWPSP TD 69"
000367800	SCHRADER,DAVID C & LORI L	19-26-5 S2NW4 & N2SW4 156.92 AC WILLOW TOWNSHIP TD 34
000489900	SCHRADER,DAVID C & LORI L	2-26-6 SE4 157.2 AC NELIGH TWPSP TD 62"
000489100	SCHRADER,DAVID C & LORI L	25-26-6 NE4 156.64 AC CLUSTER TWPSP TD 72"
000489301	SCHRADER,DAVID C & LORI L	25-26-6 NW4 -RRREG TR NW4NW4 151.42 AC CLUSTER TWPSP TD 75"
000489700	SCHRADER,DAVID C & LORI L	26-26-6 E2 317.20 AC CLUSTER TWPSP TD 75"
000490600	SCHRADER,DAVID C & LORI L	29-26-6 S2NE4 & N2SE4 -HWY 155.91 AC CLUSTER TWPSP TD 69"0"
000490900	SCHRADER,DAVID C & LORI L	29-26-6 SW4SE4 39.89 AC CLUSTER TWPSP TD 69"

APN	OWNER	LEGAL
000493800	SCHRADER,DAVID C & LORI L	32-26-6 NE4 - 3.12 AC TR NE4E4 189.93 AC CUSTER TWP SD 112"
000343500	SCHRADER,RICHARD C	6-25-5 NW4 155.39 AC ELM TWP SD 29"
000372000	SCHRADER,RICHARD C	31-26-5 S2 312.43 AC WILLOW TOWNSHIP SD 34
000448501	SCHRADER,RICHARD C	1-25-6 NE4 EXC STRIP NE4E4 156.92 AC NELIGH TWP SD 68"
000490400	SCHRADER,THOMAS E & ALICE ELAINE	28-26-6 SW4SW4 E2SW4 & N2SE4 EXC 1.51 AC HWY 197.76 AC CUSTER TWP SD
000490800	SCHRADER,THOMAS E & ALICE ELAINE	23-26-6 SE4SE4 36.95 AC CUSTER TWP SD 69
000492500	SCHRADER,THOMAS E & ALICE ELAINE	33-26-6 N2NW4 75.72 AC CUSTER TWP SD 69
000491300	SCHULTZ,FREDERICK T & KATHLEEN J	30-26-6 NW4 158.61 AC CUSTER TWP SD 69"
000586200	SCHULTZ,FREDERICK T & KATHLEEN J	6-26-7 SW4 159.08 AC BLAINE TWP SD 107"
000583800	SCHULTZ,FREDERICK T & KATHLEEN J	17-26-7 NW4 158.97 AC BLAINE TWP SD 107"
000585800	SCHULTZ,FREDERICK T & KATHLEEN J	22-26-7 E2NE4 NE4SE4 116.42 AC BLAINE TWP SD 110"
000586000	SCHULTZ,FREDERICK T & KATHLEEN J	22-26-7 W2NW4 84.05 AC BLAINE TWP SD 110"
000586800	SCHULTZ,FREDERICK T & KATHLEEN J	23-26-7 NW4 - SE4NW4 117.52 AC BLAINE TWP SD 110"
000588300	SCHULTZ,FREDERICK T & KATHLEEN J	26-26-7 SW4SW4 39.06 AC BLAINE TWP SD 110A"
000588700	SCHULTZ,FREDERICK T & KATHLEEN J	27-26-7 SE4-NW4SE4 120.28 AC BLAINE TWP SD 110A"
000585300	SCHULTZ,FREDERICK T & THOMAS J	22-26-7 W2NE4 & E2NW4 154.97 AC BLAINE TWP SD 110"
000584100	SCOTT,JAMES T Jr	18-26-7 NE4NE4 39.61 AC BLAINE TWP SD 107"
000580400	SEIER,SHAWN M	6-26-7 W2NW4 79.58 AC BLAINE TWP SD 107"
000347800	SHABRAM,TROY & BOBIE	17-25-5 NE1/4 160 AC ELM TOWNSHIP SD 29
000345400	SHERMERACE E & THERESA	11-25-5 SW4 163.68 AC ELM TWP SD 32"
000346900	SHERMERACE E & THERESA	15-25-5 NE4 159.18 AC ELM TWP SD 28"
000583200	SNOODGRASS,RONALD	15-26-7 NW4-TR NW4NW4 149.60 AC BLAINE TWP SD 105"
000344100	SPONHOF,MEGRAMSNA G	7-25-5 SW4 152.61 AC ELM TWP SD 24"
000355100	SPULAK,ROGER & JANET	33-25-5 SE4 EXC SE4SE4 120 AC ELM TOWNSHIP SD 32
000354000	SPULAK,RUDY E & IRENE K	28-25-5 S1/2SE1/4 80 AC ELM TOWNSHIP SD 32
000366500	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-5 W2NW4 78.71 AC WILLOW TWP SD 34"
000366501	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-5 SW4SE4 39.82 AC WILLOW TWP SD 34"
000373200	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-5 ALL 640.93 AC WILLOW TWP SD 36"
000494000	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-6 N2NE4 79.82 AC CUSTER TWP SD 75"
000494001	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-6 NW4 S2NE4 239.68 AC CUSTER TWP SD 75"
000494002	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-6 SW4 159.90 AC CUSTER TWP SD 75"
000494003	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-6 SE4 159.57 AC CUSTER TWP SD 75"
000583400	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-7 N2NE4 80.77 AC BLAINE TWP SD 105"
000583401	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-7 SE4 163.92 AC BLAINE TWP SD 105"
000583402	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-7 S2NE4 80.35 AC BLAINE TWP SD 106"
000583403	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-7 NW4 159.48 AC BLAINE TWP SD 106"
000593700	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-7 NE4 & NE4SE4 197.50 AC BLAINE TWP SD 105"
000593701	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-7 NW4 157.61 AC BLAINE TWP SD 105"
000355300	STINEMAN,JOHN D AND KANDACE G	33-25-5 NE1/4 160 AC ELM TOWNSHIP SD 32
000371600	SUNSET FARMS INC	30-26-5 NW4 W2SW4 232.18 AC WILLOW TWP SD 34"
000371900	SUNSET FARMS INC	31-26-5 W2NW4 77.67 AC WILLOW TOWNSHIP SD 34
000346300	TAAKE,GARY R & KATHLEEN E	13-25-5 S1/2NW1/4 & SW1/4 240 AC ELM TOWNSHIP SD 25
000346700	TAAKE,GARY R & KATHLEEN E	14-25-5 SE1/4 160 AC ELM TOWNSHIP SD 25
000350500	TAAKE,GARY R & KATHLEEN E	23-25-5 N1/2NE1/4 EXC 1 AC FOR CEMETERY 79 AC ELM TOWNSHIP SD 25
000367200	TABER FAMILY INC	18-26-5 NE4 158.15 AC WILLOW TWP SD 34"
000393000	THIELE ROY CARLE TRUST	29-26-7 SW4NW4 40.17 AC BLAINE TWP SD 107"
000584301	THIELE,FREDERIC J & DEBRA J	18-26-7 W2NE4 & E2NW4 158.71 AC BLAINE TWP SD 107"
000353300	TIMPERLEY,LOYD W & LEONA F rev tr	27-25-5 SE1/4NW1/4 40 AC ELM TOWNSHIP SD 32
000353600	TIMPERLEY,LOYD W & LEONA F rev tr	27-25-5 N2SW4 SE4SW4 120 AC ELM TOWNSHIP SD 32
000353900	TIMPERLEY,LOYD W & LEONA F rev tr	28-25-5 S1/2 EXC S1/2SE1/4 240 AC ELM TOWNSHIP SD 32
000356600	TIMPERLEY,LOYD W & LEONA F rev tr	34-25-5 NW1/4 160 AC ELM TOWNSHIP SD 32
000369100	TODDS LANDMARK FARMS INC	22-26-5 S2 317.11 AC WILLOW TWP SD 36"
000370700	TODDS LANDMARK FARMS INC	27-26-5 N2NE4 NW4 EXC 20.77 AC SE4NW4 W2SW4 232.40 AC WILLOW TWP SD 36
000343400	TREE CORNERS FARM LLC	6-25-5 NE4 157.38 AC ELM TOWNSHIP SD 29
000343600	TREE CORNERS FARM LLC	6-25-5 S2 315.87 AC ELM TOWNSHIP SD 29
000371500	TREE CORNERS FARM LLC	30-26-5 E2SW4 E2 LESS TR 392.24 AC WILLOW TOWNSHIP SD 34
000489400	TREE CORNERS FARM LLC	25-26-6 N2SE4 77.86 AC CUSTER TWP SD 75"
000451400	VOBORNÝ,BERNARD C & ROZELLA	5-25-6 S2SW4 79.96 AC NELIGH TWP SD 62"
000451401	VOBORNÝ,BERNARD C & ROZELLA	5-25-6 S2SW4 79.96 AC NELIGH TWP SD 62"
000488400	WAGNER,LUDY M	23-26-6 NW4 160.29 AC CUSTER TWP SD 69"
000366700	YOUNG FAMILY LLC	17-26-5 NE4 N2SE4 239.85 AC WILLOW TWP SD 34"

Adjacent Properties

APN	OWNER	LEGAL
000318000	RUTINSKI, DONALD J & LAURA	1-24-5 N2 EX 4.91 AC TR SE4NE4 230.63 AC BURNETT TWP SD 23"
000319200	UNSELD, CHRIS A & KELLI J	2-24-5 NW4 EXC TRACT S OF ROAD & EXCL RECT TRACT S2NW4 120 AC BURNETT TOWNSHIP
000319900	JOHNSON,JERRY C & YVONNE D	4-24-5 NE4NE4 LYING NORTH OF ROAD 17.11 AC BURNETT TWP SD 23"
000321600	GROSSER,JOSEPH H & MARCELLA A	5-24-5 E2NW4 -TRACT 40X130W4NW4 78.94 AC BURNETT TWP SD 18"
000322000	EVANS, INC	6-24-5 W2NE4 80.97 AC BURNETT TWP SD 19"
000355300	MARTENSEN,RICHARD P & DEANNA LEE	31-25-5 SW1/4 160.64 AC ELM TOWNSHIP SD 24
000361700	TABER FAMILY INC	7-26-5 SE4 157 AC WILLOW TWP SD 37"
000365800	YOUNG,ROLAND E & HELEN L	15-26-5 NW4 EXC TRACT 134.28 AC WILLOW TOWNSHIP SD 35
000367500	ZULKE,ELUGENE C & DEBORAH R	18-26-5 SW4 155.08 AC WILLOW TOWNSHIP SD 34
000452600	SCHRADER,DAVID C & LORI L	6-25-6 NE4 EXC STATE HWY 151.15 AC NELIGH TWP SD 62"
000452700	VOBORNÝ,BERNARD C & ROZELLA	8-25-6 N2NW4 & SW4NW4 EXC BRCTR IN W2NW4 ALONG CO RD 116.05 AC NELIGH TWP SD 62"
000453100	BEVERLY LAND CO A RHODE ISLAND CORP	9-25-6 NE4 159.18 AC NELIGH TWP SD 62"
000453200	BALTI,CAMERICAN LAND COMPANY	9-25-6 NW4 -4.92 AC ST HWY 8 & -2.25 AC TRACT SW4NW4 151.76 AC NELIGH TWP SD 62"
000455200	BEVERLY LAND CO A RHODE ISLAND CORP	14-25-6 N2 316.59 AC NELIGH TWP SD 62"
000455300	RAINBOW FARMS INC	14-25-6 SE4 158.76 AC NELIGH TWP SD 62"
000455500	BEVERLY LAND CO A RHODE ISLAND CORP	15-25-6 N2 322.09 AC NELIGH TWP SD 62"
000471300	RICE FAMILY LTD PARTNERSHIP, A & M	26-25-6 S2NE4 & 138.08 AC NW4 217.56 AC NELIGH TWP SD 62"
000471500	WRIGHT,FREDERICK	26-25-6 S2S2 158.65 AC NELIGH TWP SD 62"
000471600	RICE FAMILY LTD PARTNERSHIP, A & M	26-25-6 N2SE4 79.32 AC NELIGH TWP SD 62"
000485600	REINKE,KENNY D	15-26-6 SE4 EXC 1000'X 450' TR IN NE4SE4 146.32 AC CUSTER TWP SD 69"
000486000	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-6 NW4NE4 S2NE4 W2 SE4 EXC 8.67 AC HWY 592.69 AC CUSTER TWP SD 69"
000563601	OLSON,ALVIN & JANIE	1-25-7 W2NW4 76.79 AC ORD TWP SD
000563800	OLSON,ALVIN & JANIE	2-25-7 NE4 154.36 AC ORD TWP SD
000578200	MORRISON,FRANK	1-26-7 SE4 159.92 AC BLAINE TWP SD 105"
000578900	GRO LLC	1-26-7 SW4 - E2SW4SW4 140.34 AC BLAINE TWP SD 105"
000578400	RODGERS,BOBBY tre et al	1-26-7 E2SW4SW4 20 AC BLAINE TWP SD 105"
000573400	TINSLEY FARMS INC, A C	5-26-7 N2 SE4 478.82 AC BLAINE TWP SD 107"
000573500	SCOTT,JAMES T Jr	5-26-7 SW4 150.56 AC BLAINE TWP SD 107"
000573900	SCOTT,CLARABELL	7-26-7 E2 317 AC BLAINE TWP SD 107"

APN	OWNER	LEGAL
000590000	THIELE REVOCABLE TRUST	30-26-7 S2NE&N2SE4 159.26 AC BLAINE TWP SD TD 107"
000592100	OLSON, ALVIN & JANE	33-26-7 NE4 158.01 AC BLAINE TWP SD TD 107"
000592300	OLSON, STEVE K & JOANN M	33-26-7 NE4NW4 89.88 AC BLAINE TWP SD TD 107"
000592600	OLSON, DAN	34-26-7 NE4-SE4NE4 120.60 AC BLAINE TWP SD TD 106"
000592800	SIEMS, ROBERT FARMS INC	34-26-7 NW4-TR SW4NW4 157.75 AC BLAINE TWP SD TD 106"
000684100	THIELE, FREDERIC J & DEBRA J	13-26-8 SE4-TR 155.79 AC FRENCHTOWN TWP SD
000684101	THIELE, CURT et al	13-26-8 NE4 160.82 AC FRENCHTOWN TWP SD
700038544	STELLINGSMA TRUST	
700038894	OLSON, ROBERT L SR & PHYLLIS J OLSON & FAMILY PARTN	
700034181	KEE, ROBERT D & SHERLENE A	
700034545	PETERSEN SUE L	

# EXHIBIT B: LANDOWNER TEAM – AGREEMENTS IN PLACE BETWEEN INVENERGY AND THE FOLLOWING ANTELOPE COUNTY PARCELS 04/12/2016

*\*Update per Planning Commission Condition*

Updated 4/12/2016

## Exhibit B Project Landowner Team

APN	OWNER	LEGAL
000349000	ADAMS,AUDREY B	19-25-5 S 130 AC OF SW1/4 129.44 AC ELM TOWNSHIP TD 24
000454900	ADAMS,AUDREY B	13-25-6 NE4 158.20 AC NELIGH TWSF TD 62"
000348000	ADAMS, TEDD	17-25-5 SE4 EXC NW4SE4 118.76 AC ELM TWSF TD 29"
000348100	ADAMS, TEDD	17-25-5 W1/2NW1/4 & N 620' NW1/4SW1/4 99 AC ELM TOWNSHIP TD 29
000347900	ADAMS, TEDD R	17-25-5 E1/2NW1/4, NE1/4SW1/4, & NW1/4SE1/4 160 AC ELM TOWNSHIP TD 29
000348200	ADAMS, TEDD R	18-25-5 NE1/4 160 AC ELM TOWNSHIP TD 29
000348500	ADAMS, TEDD R	18-25-5 SW4 155.50 AC ELM TWSF TD 24"
000449700	ADAMS, TEDD R	3-25-6 TRACT A IN NW4 & N25W4 126.98 AC NELIGH TWSF TD 68"
000449800	ADAMS, TEDD R	3-25-6 TRACT B IN SW4 106.98 AC NELIGH TWSF TD 68"
000449900	ADAMS, TEDD R	4-25-6 NE4 157.63 AC NELIGH TWSF TD 62"
000450200	ADAMS, TEDD R	4-25-6 SE4 EXC IR TR SE COR & EXC IR TR SW COR 145.53 AC NELIGH-TWSF TD 62"
000492601	ADAMS, TEDD R	33-26-6 SW4SE4 38.8 AC CUSTER TWSF TD 72"
000348600	ANCHUSTEGUI,JANE ELIZABETH HATFIELD	19-25-5 NE4 159.08 AC ELM TWSF TD 24"
000470500	ANCHUSTEGUI,JANE ELIZABETH HATFIELD	24-25-6 E2SE4 78.66 AC NELIGH TWSF TD 62"
000448600	ANTELOPE COUNTY	1-25-6 TR NE4NE4 1.08 AC NELIGH TWSF TD 68"
000449500	BALTIC AMERICAN LAND COMPANY	3-25-6 SE4 159.86 AC NELIGH TWSF TD 62"
000449600	BALTIC AMERICAN LAND COMPANY	3-25-6 TRACT E2SW4 38.06 AC NELIGH TWSF TD 68"
000453600	BALTIC AMERICAN LAND COMPANY	10-25-6 N2NE4 80 AC NELIGH TWSF TD 62"
000354701	BARTOS,LUANN & KENNETH J	30-25-5 TR 10 X 48 RODS NE4SW4 3 AC ELM TWSF TD 24
000354800	BARTOS,LUANN & KENNETH J	30-25-5 SE1/4 160 AC ELM TWSF"
000355100	BARTOS,LUANN & KENNETH J	31-25-5 TRACT N2NE4 5 AC ELM TOWNSHIP TD 33
000487500	BENNETT TURKEY FARMS INC	21-26-6 ALL HWY ON WY SIDE- 5 AC TR 218'X1000'SW4SE4-SE4SW4 -6.28AC-SW CORNERSW4; 616.94 AC CUSTER TWSF TD69"-616.94"
000490500	BENNETT TURKEY FARMS INC	29-26-6 N2NE4 EXC 1.53 AC HWY 78.58 AC CUSTER TWSF TD 69"
000581400	BENNETT, FREDA	10-26-7 NE4 157.75 AC BLAINE TWSF
000451501	BENTLEY, ALLAN	6-25-6 N2SE4SE4NE4 & 5 0' NE4SE4NE4 5.94 AC NELIGH TWSF
000487300	BENTLEY, JANET	20-26-6 W2NW4 80 AC CUSTER TWSF
000451500	BENTLEY,ALAN & LYNDA KESTER	6-25-6 NE4 EXC N2SE4SE4NE4 & EXC 5 0' NE4SE4NE4 149.24 AC NELIGH TWSF TD 62"
000450500	BENTLEY,ALLAN	5-25-6 NE1/4 EXC 73.3 AC IRREG TR IN EAST 77.76 AC NELIGH TWSF TD-62"
000450700	BENTLEY,ALLAN	5-25-6 NW4 154.63 AC NELIGH TWSF TD 62"
000451200	BENTLEY,ALLAN	5-25-6 N2SW4 EXC TR TRACT SW CORNER 73.55 AC NELIGH TWSF TD 62"
000491600	BENTLEY,JANET	31-26-6 W2 315.61 AC CUSTER TWSF TD 69"
000451700	BENTLEY,JANET R	6-25-6 NE4SW4;SE4 202.87 AC NELIGH TWSF TD 62"
000483202	BENTLEY,JANET R	7-26-6 SW4-TR 157.07 AC CUSTER TWSF
000486700	BENTLEY,JANET R	18-26-6 SE4 157.57 AC CUSTER TWSF TD 69"
000491500	BENTLEY,JANET R	31-26-6 NE4 159.14 AC CUSTER TWSF TD 69"
000491700	BENTLEY,JANET R	31-26-6 SE4 159.73 AC CUSTER TWSF TD 69"
000492200	BENTLEY,JANET R	32-26-6 SE4SW4 39.83 AC CUSTER TWSF TD 69"
000492300	BENTLEY,JANET R	32-26-6 W2W2 162.06 AC CUSTER TWSF TD 69"
000377200	BERTRAM SHARON	33-26-5 E2NW4 & SW4 EXC NW4SW4 198.44 AC WILLOW TWSF TD 34"
000373000	BERTRAM SHARON	34-26-5 ALL 634.80 AC WILLOW TOWNSHIP TD 36"
000453900	BEVERLY LAND CO A RHODE ISLAND CORP	10-25-6 S2SE4 82.41 AC NELIGH TWSF TD 62"
000454800	BEVERLY LAND CO A RHODE ISLAND CORP	12-25-6 SW4 156.98 AC NELIGH TWSF TD 62"
000455100	BEVERLY LAND CO A RHODE ISLAND CORP	13-25-6 W2 315.77 AC NELIGH TWSF TD 62"
000470700	BEVERLY LAND CO A RHODE ISLAND CORP	24-25-6 W2 - 2 TR NW4NW4 W2SE4 392.6 AC NELIGH TWSF TD 62
000470900	BEVERLY LAND CO A RHODE ISLAND CORP	25-26-6 NW4 160.28 AC NELIGH TWSF TD 62"
000449000	BOCHE,MARK K & LUANN K	2-25-6 SW4 157.65 AC NELIGH TWSF TD 62"
000450600	BOOTH HAY COMPANY LLC	5-25-6 72.88 AC IRR TRACT E2NE4 NELIGH TWSF TD62"
000354400	BRANDT RANCH INC	29-25-5 SW4 159.38 AC ELM TWSF TD 33"
000354500	BRANDT RANCH INC	30-25-5 NE4NE4 & S2NE4 116.81 AC ELM TWSF TD 33"
000354600	BRANDT RANCH INC	30-25-5 NW4NE4 N2NW4 121.12 AC ELM TWSF TD 24"
000355500	BRANDT RANCH INC	32-25-5 NW1/4 160 AC ELM TOWNSHIP TD 32
000586100	BRIDGE, MERLE D & JOANN L	22-26-7 SE4SE4 37.31 AC BLAINE TWSF TD 105"
000587000	BRIDGE, MERLE D & JOANN L	23-26-7 W2SW4;TR NE4SW4-NW4SE4 93.79 AC BLAINE TWSF TD 105"
000588200	BRIDGE, MERLE D & JOANN L	25-26-7 NW4SW4 W2NW4 117.63 AC BLAINE TWSF TD 105"
000343100	CENTRAL GRAIN INC OF PALMER NE	5-25-5 NW4 EXC TR 152.62 AC ELM TWSF TD 29
000488300	COLTER, DOUGLAS & PAMELA	23-26-6 E2 322.39 AC CUSTER TWSF
000342600	DINSDALE BROS INC	3-25-5 W2 317.06 AC ELM TWSF TD 29"
000342700	DINSDALE BROS INC	4-25-5 N2NE4 80.88 AC ELM TWSF TD 29"
000490000	DOUBLE B TURKEY FARM INC	28-26-6 NE4-SE4NE4;NW4-HWY & TR NW4NW4- NW4SW4-HWY; 305.37 AC-CUSTER TWSF TD 72"
000490100	DOUBLE B TURKEY FARM INC	28-26-6 SE4NE4 39.86 AC CUSTER TWSF TD 69"
000492400	DOUBLE B TURKEY FARM INC	33-26-6 NE4, & NW4SE4 198.94 AC CUSTER TWSF TD 69"
000492800	DOUBLE B TURKEY FARM INC	33-26-6 NE4SE4 41.59 AC CUSTER TWSF TD 69"
000493100	DOUBLE B TURKEY FARM INC	34-26-6 NW4 158.7 AC CUSTER TWSF TD 69"
000491400	DREGE,LYLE D & NADINE F lng tr	30-26-6 S2 316.04 AC CUSTER TWSF TD 72"
000587200	DWIGHT MORRISON PROPERTIES,LLC	24-26-7 TR NE4 158.81 AC BLAINE TWSF TD 105"
000587300	DWIGHT MORRISON PROPERTIES,LLC	24-26-7 TR SE4 158.06 AC BLAINE TOWNSHIP TD 105"
000347700	EILERS,RICHARD D & MARTHA J	16-25-5 SW1/4 160 AC ELM TOWNSHIP TD 29
000342400	ELLSWORTH, GUY & CARLA	3-25-5 NE4 157.26 AC ELM TWSF
000343200	ESCRIIT,DOROTHY G & VELLA M	5-25-5 SE4 158.13 AC ELM TWSF TD 29"
000349200	ESCRIIT,DOROTHY G & VELLA M	20-25-5 NW1/4 & N1/2SW1/4 240 AC ELM TOWNSHIP TD 29
000355000	EVANS INC	31-25-5 NE1/4 EXC 5 AC & SE1/4 314.7774 AC ELM TOWNSHIP TD 24"
000355200	EVANS INC	31-25-5 NW4 159.21 AC ELM TWSF TD 24"
000471000	EVANS INC	25-25-6 SE4 156.60 AC NELIGH TWSF TD 62"
000470800	EVANS,JOSEPH T & NANCY M	25-25-6 NE4 154.58 AC NELIGH TWSF TD 62"
000348101	EYMANN,GORDON K & HELEN A	17-25-5 S 700' NW4SW4 S2SW4 101 AC ELM TOWNSHIP TD 29
000489500	FORSELL,THOMAS	25-26-6 S2SE4 81.18 AC CUSTER TWSF TD 75"
000450400	GERALD BAKER INC	4-25-6 SW4 EXC STATE HWY 153.20 AC NELIGH TWSF TD 62"
000491000	GOOD,HARLAN D & SHIRLEY A	29-26-6 SW4 161.83 AC CUSTER TWSF TD 69"
000583000	GOOD,HARLAN D & SHIRLEY A	15-26-7 SE4NE4;SE4-NW4SE4 159.29 AC BLAINE TWSF TD 110"
000583100	GOOD,HARLAN D & SHIRLEY A	15-26-7 SW4NE4;SW4-NW4SE4 236.53 AC BLAINE TWSF TD 110"
000354300	GROSSERODE,JOSEPH H & MARCELLA A	29-25-5 SE4 160.15 AC ELM TWSF TD 33"
000354400	GROSSERODE,JOSEPH H & MARCELLA A	32-25-5 NE4 158.23 AC ELM TWSF TD 32"
000356000	GROSSERODE,JOSEPH H & MARCELLA A	33-25-5 NW4, & W 2 AC IN SW4 162.38 AC ELM TWSF TD 32"
000584400	HAUF,LAWRENCE R & ESTHER M	18-26-7 SW4-TR SW4SW4 152.77 AC BLAINE TWSF TD 107"
000489600	HAUPTMANN,LEVERN & JOANN	25-26-6 SW4 161.45 AC CUSTER TWSF TD 72"
000493000	HAUPTMANN,LEVERN & JOANN etal	34-26-6 NE4 158.75 AC CUSTER TWSF TD 69"
000493800	HAUPTMANN,LEVERN & JOANN etal	35-26-6 NW4 SE4 & 20'SQ TR SW4NE4 321.71 AC CUSTER TWSF TD 69"
000356300	HEITHOFF,STANLEY G & DOROTHY A	33-25-5 SW1/4 LESS W 2 AC FOR ROAD 158 AC ELM TOWNSHIP TD 32
000368300	HERBERT, DENISE A etal	20-26-5 SW4 159.63 AC WILLOW TOWNSHIP TD 34
000449100	HOFFMAN,DANIEL J & JOAN L	3-25-6 NE4 EXC TR 161.99 AC NELIGH TWSF TD 68
000580700	HOPKINS,ESTHER M	9-26-7 NE4 159.85 AC BLAINE TWSF TD 107"

APN	OWNER	LEGAL
000581000	HOPKINS, ESTHER M	9-26-7 N2SE4 80.27 AC BLAINE TWP SD 107~
000581100	HOPKINS, ESTHER M	9-26-7 S2SE4 80.44 AC BLAINE TWP SD 107~
000581200	JAEKE, CAROLINE	9-26-7 SW4-SW4SW4 151.87 AC BLAINE TWP SD 107~
000584000	JAEKE, CAROLINE	17-26-7 SW4 158.88 AC BLAINE TWP SD 107~
000585600	JAEKE, CAROLINE	20-26-7 E2W2 W2SE4 238.24 AC BLAINE TWP SD 107~
000589100	JAEKE, CAROLINE	28-26-7 W2W2 163.99 AC BLAINE TWP SD 107~
000589200	JAEKE, CAROLINE	29-26-7 NE4-SW4NE4 NE4SE4 160.22 AC BLAINE TWP SD 107~
000344501	JDH LLC C/O RANDALL J HUPP	9-25-5 NE4 159.83 AC ELM TWP SD
000344500	JDH LLC C/O RANDALL J HUPP	9-25-5 NW4 159.63 AC ELM TWP SD
000356200	JOHNSON, JERRY C & YVONNE D	33-25-5 SE4SE4 39.79 AC ELM TWP SD 32~
000488700	JONES, GARY D & DONNA D	23-26-6 SW4 162.09 AC CUSTER TWP SD 69~
000488300	KALLHOFF, DARELD A rev tr	7-26-6 SE4 157.62 AC CUSTER TWP SD 69~
000493900	KALLHOFF, DARELD A rev tr	35-26-6 SW4 160.35 AC CUSTER TWP SD 69~
000489000	KALLHOFF, KENNETH L	24-26-6 NE4 S2 480.08 AC CUSTER TWP SD 75~
000489900	KALLHOFF, KENNETH L & SUE V	24-26-6 NW4 158.30 AC CUSTER TWP SD 75~
000489000	KALLHOFF, TIMOTHY J & JANELLE M	22-26-6 SW4 157.35 AC CUSTER TWP SD 6~
000489900	KALLHOFF, TIMOTHY J & JANELLE M	27-26-6 ALL 633.14 AC CUSTER TWP SD 69~
000352200	KEE, ROBERT D et al	25-25-5 SW4NW4 40.52 AC ELM TWP SD 32~
000352600	KEE, ROBERT D et al	25-25-5 SW4 158.04 AC ELM TWP SD 32~
000357600	KEE, ROGER ALLEN & GERALYN MARIE	36-25-5 E2NW4 79.54 AC ELM TWP SD 32~
000357900	KEE, ROGER ALLEN & GERALYN MARIE	36-25-5 N 53.33 AC OF SW1/4 S3.39 AC ELM TOWNSHIP SD 32~
000448500	KERMAN, JOHN & LESLIE A	1-25-6 SE4 157.99 AC NELIGH TWP SD 68~
000344900	KLOPPER, ELMER W & LEONA M relest tr	10-25-5 NW1/4 160 AC ELM TOWNSHIP SD 29
000353200	KLOPPER, ELMER W & LEONA M relest tr	27-25-5 NW1/4 NW1/4 40 AC ELM TOWNSHIP SD 25
000586500	KNAPP, KEITH R & SUE B	22-26-7 SW4SW4 41.19 AC BLAINE TWP SD 110~
000586300	KNAPP, ROBERT E & ELIZABETH A	22-26-7 TR NW COR NW4SW4 7.55 AC BLAINE TWP SD 11~0~
000586200	KNAPP, ROBERT E & ELIZABETH A et al	22-26-7 N2SW4-TR NW4SW4/W2SE4 155.64 AC BLAINE TWP SD 110~
000586400	KNAPP, ROBERT E & ELIZABETH A et al	22-26-7 SE4SW4 37.64 AC BLAINE TWP SD 110~
000580500	KOENIG, JAMES T & KATHRYN E	8-26-7 SE4 159.19 AC BLAINE TWP SD 68~
000585700	KOENIG, JAMES T & KATHRYN E	21-26-7 ALL 643.59 AC BLAINE TWP SD 111~
000586600	KOENIG, JAMES T & KATHRYN E	23-26-7 NE4-SW4NE4/NE4SE4 155.02 AC BLAINE TWP SD 105~
000588900	KOENIG, JAMES T & KATHRYN E	28-26-7 NE4/E2NW4/NE4SW4/NW4SE4 319.31 AC BLAINE TWP SD 107~
000371800	KORTH, ALLEN D & LUCILLE I	31-26-5 NE4 E2NW4 241.01 AC WILLOW TWP SD 34~
000582900	KREBS, SHANE & REGINA	15-26-7 N2NE4 EX TR 77.36 AC BLAINE TWP SD
000582700	KREBS, SHANE & REGINA	14-26-7 N2NW4 79.49 AC BLAINE TWP SD
000343900	MARSH, MELVIN D & RUTH D	7-25-5 NW4 153.15 AC ELM TWP SD 24~
000354900	MARTENSEN, DEANNA LEE	7-25-5 NW4 153.15 AC ELM TWP SD 24~
000354100	MARTENSEN, RICHARD P & DEANNA LEE	30-25-5 155 AC IN SW1/4 155.82 AC ELM TOWNSHIP SD 24
000347000	MAUGHAN, FRANKIE & SANDRA LEE	29-25-5 NE4 159.15 AC ELM TWP SD 24~
000342000	MAUGHAN, FRANKIE & SANDRA LEE	7-25-5 N2NE4 79.20 AC ELM TWP SD 29~
000372900	MAUGHAN, FRANKIE & SANDRA LEE	8-25-5 N1/2 320 AC ELM TOWNSHIP SD 29
000448700	MERIT PROPERTIES	33-26-5 NE4SE4 39.77 AC WILLOW TOWNSHIP SD 34~
000454000	MERIT PROPERTIES PARTNERSHIP	1-25-6 W2 315.49 AC NELIGH TWP SD 68~
000589900	MILLER, JOYCE M & KEVIN C	10-25-5 SW4 EXC TRACT 409'X532' IN SW CORNER 157.58 AC NELIGH TWP SD 62~
000486500	MILLER, LEONARD	28-26-7 TR SE4SE4 1.23 AC BLAINE TWP SD 107~
000491100	MILLER, LEONARD & ANITA L	18-26-6 NE4 157.29 AC CUSTER TWP SD 69~
000450900	MILLER, LEONARD L	30-26-6 NE4 EXC TRI TR IN NE4NE4 151.93 AC CUSTER TWP SD 69~
000486900	MILLER, LYLE K & LENA	5-25-6 SE4 EXC 2.67 AC FOR HWY & EXC TRACTS SE4SE4 150.15 AC NELIGH TWP SD 62~
000343800	MITCHELL, LAVERN & STACEY	19-26-6 E2 316.55 AC CUSTER TWP SD 69~
000349300	MITCHELL, LAVERN & STACEY	19-25-5 S1/2SE1/4 & 1 AC IN N1/2SE1/4 81 AC ELM TOWNSHIP SD 24
000354200	MITCHELL, LAVERN & STACEY	20-25-5 S2SW4 82.63 AC ELM TWP SD 24~
000582400	MORRISON, BRETT M	29-25-5 NW4/4 EXC TR 325'X504' IN SE/4NW4 156.24 AC ELM TWP SD 24~
000581500	MORRISON, DWIGHT	13-26-7 SE4 159.29 AC BLAINE TWP SD 105~
000487000	MORRISON, DWIGHT & DARLENE et al	11-26-7 SW4 158.97 AC BLAINE TWP SD 105~
000580300	MORRISON, FRANK C	10-26-7 SE4 157.31 AC BLAINE TWP SD 111A~
000580900	MORRISON, FRANK C	19-26-6 NW4 158 AC CUSTER TWP SD 72~
000581800	MORRISON, FRANK C	8-26-7 W2NE4/E2NW4 157.16 AC BLAINE TWP SD 107~
000587700	MORRISON, FRANK C	9-26-7 NW4-5.92 AC TR NW COR 154.10 AC BLAINE TWP SD 107~
000487100	MORRISON, FRANK C & LYNN H	11-26-7 NW4 159.27 AC BLAINE TWP SD 105~
000371400	MULLINS, GREG	29-26-7 S2 318.94 AC BLAINE TWP SD 105~
000588400	OLSON, ALVIN & JANIE	19-26-6 SW4 158.73 AC CUSTER TWP SD 72~
000593200	OLSON, ALVIN & JANIE	29-26-5 SW4 EXC TR 159.83 AC WILLOW TOWNSHIP SD 34
000585500	OLSON, DAN	27-26-7 NE4 NE4NW4 NW4SE4 237.86 AC BLAINE TWP SD 110~
000593400	OLSON, DAN	35-26-7 E2 317.17 AC BLAINE TWP SD 106~
000586600	OLSON, DAN & MARISSA	27-26-7 SE4NW4 SW4-NW4SW4 157.62 AC BLAINE TWP SD 105~
000589001	OLSON, DAN & MARISSA	35-26-7 NW4NW4 38.46 AC BLAINE TWP SD 106~
000589000	OLSON, STEVE K & JOANN M	27-26-7 W2NW4 NW4SW4 124.50 AC BLAINE TWP SD 110~
000352500	PETERSEN, STANLEY R et al	28-26-7 NE4SE4 39.63 AC BLAINE TWP SD 107~
000367700	PETERSON, KAREN K et al	28-26-7 SE4SW4 S2SE4-1.23 AC TR SE4SE4 117.49 AC BLAINE TWP SD
000372400	PETERSON, KAREN K et al	25-25-5 S1/2N1/2SE1/4 40 AC ELM TOWNSHIP SD 32
000450000	PETERSON, KEITH L rev tr et al	19-26-5 N2NW4 78.89 AC WILLOW TOWNSHIP SD 34
000450100	PETERSON, KEITH L rev tr et al	32-26-5 SE4 159.49 AC WILLOW TOWNSHIP SD 34
000342800	Pinnacle Bancorp Inc OSCEOLA INSURANCE INC	4-25-6 N2NW4 EXC HWY 14 70.57 AC NELIGH TWP SD 62~
000343000	Pinnacle Bancorp Inc OSCEOLA INSURANCE INC	4-25-5 S2NE4 & S2 394.12 AC ELM TWP SD 29~
000448800	RAINBOW FARMS INC	5-25-5 NE4 EXC TR 152.71 AC ELM TWP SD 29
000487200	REINKE, DALE F	2-25-6 N2 316.99 AC NELIGH TWP SD 68~
000454600	RICE FAMILY LTD PARTNERSHIP	20-26-6 NE4 EXC 3.86 AC HWY E2NW4 234.64 AC CUSTER TWP SD 6~9~
000348400	RICE FAMILY LTD PARTNERSHIP	12-25-6 NW4 157.66 AC NELIGH TWP SD 62~
000493500	RICE, DEBORAH ANN	18-25-5 SE4 160.70 AC ELM TWP SD 29~
000492900	RICE, RONALD R	34-26-6 SW4 159.05 AC CUSTER TWP SD 69~
000470400	RICE, RONALD ROY & DEBORAH ANN	33-26-6 SE4SE4 39.76 AC CUSTER TWP SD 69~
000581700	RODGERS, BOBBY tre et al	24-25-6 NE4 156.23 AC NELIGH TWP SD 62~
000582100	RODGERS, ROY L & BETTY J	11-26-7 NE4 159.41 AC BLAINE TWP SD 105~
000583900	RUDLOFF, PAUL & PAMELA	12-26-7 N2NE4 NW4 241.21 AC BLAINE TWP SD 105~
000489800	SANDS, MARVIN E & MARILYN E	17-26-7 SE4 159.10 AC BLAINE TWP SD 107~
000351900	SANNE FARMS LLC	26-26-6 E2SW4 81.25 AC CUSTER TWP SD 75~
000352000	SANNE REPAIR LLC	25-25-5 NE4 EXC 1.28 AC TRACT N2N2SE4 EXC .95 AC TRACT SE4 197.77 AC ELM TOWNSHIP SD 32
000454501	SAUSER, EDWARD H & KATHERINE A rev ltr tr	25-25-5 TRACT IN NW4SE4NE4 1.28 AC ELM TOWNSHIP SD 32 RPR SHOP
000344700	SAUSER, VINCENT H & SHARON K	12-25-6 NE4 157.47 AC NELIGH TWP SD 62~
000486800	SCHACHT, GENE A & CAROL	9-25-5 SW1/4 180 AC ELM TOWNSHIP SD 29
000582500	SCHACHT, GENE A & CAROL	18-26-6 SW4 157.58 AC CUSTER TWP SD 69~
000582800	SCHACHT, GENE A & CAROL	13-26-7 SW4 159.64 AC BLAINE TWP SD 69~
000583700	SCHACHT, GENE A & CAROL	14-26-7 SE4 157.80 AC BLAINE TWP SD 105~
000490300	SCHRADER, DAVID C	17-26-7 NE4 159.02 AC BLAINE TWP SD 107~
		28-26-6 S2SE4 79.96 AC CUSTER TWP SD 69~

APN	OWNER	LEGAL
000367800	SCHRADER, DAVID C & LORI L	19-26-5 S2NW4 & N2SW4 156.92 AC WILLOW TOWNSHIP TD 34
000448900	SCHRADER, DAVID C & LORI L	2-25-6 SE4 157.2 AC NELIGH TWP TD 62"
000489100	SCHRADER, DAVID C & LORI L	25-26-6 NE4 156.64 AC CUSTER TWP TD 72"
000489301	SCHRADER, DAVID C & LORI L	25-26-6 NW4 -IRREG TR N4NW4 151.42 AC CUSTER TWP TD 75"
000489700	SCHRADER, DAVID C & LORI L	26-26-6 E2 317.20 AC CUSTER TWP TD 75"
000490600	SCHRADER, DAVID C & LORI L	29-26-6 S2NE4 & N2SE4 - HWY 155.91 AC CUSTER TWP TD 69"
000490900	SCHRADER, DAVID C & LORI L	29-26-6 SW4SE4 39.89 AC CUSTER TWP TD 69"
000491800	SCHRADER, DAVID C & LORI L	32-26-6 NE4 - 3.12 AC TR N4SW4 189.93 AC CUSTER TWP TD 112"
000343500	SCHRADER, RICHARD C	6-25-5 NW4 155.39 AC ELM TWP TD 29"
000372000	SCHRADER, RICHARD C	31-26-5 S2 312.43 AC WILLOW TOWNSHIP TD 34
000448501	SCHRADER, RICHARD C	1-25-6 NE4 EXC STRIP NEANE4 156.92 AC NELIGH TWP TD 68"
000490400	SCHRADER, THOMAS E & ALICE ELAINE	28-26-6 SW4SW4 E2SW4 & N2SE4 EXC 1.51 AC HWY 157.76 AC CUSTER TWP"
000490800	SCHRADER, THOMAS E & ALICE ELAINE	29-26-6 SE4SE4 36.95 AC CUSTER TWP TD 69
000492500	SCHRADER, THOMAS E & ALICE ELAINE	33-26-6 N2NW4 75.72 AC CUSTER TWP TD 69
000491300	SCHULTZ, FREDERICK T & KATHLEEN J	30-26-6 NW4 158.61 AC CUSTER TWP TD 69"
000580600	SCHULTZ, FREDERICK T & KATHLEEN J	8-26-7 SW4 159.08 AC BLAINE TWP TD 107"
000583800	SCHULTZ, FREDERICK T & KATHLEEN J	17-26-7 NW4 158.97 AC BLAINE TWP TD 107"
000585800	SCHULTZ, FREDERICK T & KATHLEEN J	22-26-7 E2NE4 NE4SE4 116.42 AC BLAINE TWP TD 110"
000586000	SCHULTZ, FREDERICK T & KATHLEEN J	22-26-7 W2NW4 84.05 AC BLAINE TWP TD 110"
000586800	SCHULTZ, FREDERICK T & KATHLEEN J	23-26-7 NW4 - SE4NW4 117.52 AC BLAINE TWP TD 110"
000588300	SCHULTZ, FREDERICK T & KATHLEEN J	26-26-7 SW4SW4 39.06 AC BLAINE TWP TD 110A"
000588700	SCHULTZ, FREDERICK T & KATHLEEN J	27-26-7 SE4-NW4SE4 120.28 AC BLAINE TWP TD 110A"
000585900	SCHULTZ, FREDERICK T & THOMAS J	22-26-7 W2NE4 & E2NW4 154.97 AC BLAINE TWP TD 110"
000584100	SCOTT, JAMES T Jr	18-26-7 NE4NE4 39.61 AC BLAINE TWP TD 107"
000580400	SEIER, SHAWN M	8-26-7 W2NW4 79.58 AC BLAINE TWP TD 107"
000347800	SHABRAM, TROY & BOBIE	17-26-5 NE1/4 160 AC ELM TOWNSHIP TD 29
000345400	SHERMER, ACE E & THERESA	11-25-5 SW4 163.68 AC ELM TWP TD 32"
000346900	SHERMER, ACE E & THERESA	15-25-5 NE4 159.18 AC ELM TWP TD 28"
000583200	SNODGRASS, RONALD	15-26-7 NW4-TR N4NW4 149.60 AC BLAINE TWP TD 105"
000344100	SPONHOWER, RAMONA G	7-25-5 SW4 152.61 AC ELM TWP TD 24"
000356100	SPULAK, ROGER & JANET	33-25-5 SE4 EXC SE4SE4 120 AC ELM TOWNSHIP TD 32
000354000	SPULAK, RUDY E & IRENE K	28-25-5 S1/2SE1/4 80 AC ELM TOWNSHIP TD 32
000366500	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-5 W2NW4 79.74 AC WILLOW TWP TD 34"
000366501	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-5 SW4SE4 38.82 AC WILLOW TWP TD 34"
000373200	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-5 ALL 640.93 AC WILLOW TWP TD 36"
000494000	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-6 N2NE4 79.82 AC CUSTER TWP TD 75"
000494001	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-6 NW4 S2NE4 239.68 AC CUSTER TWP TD 75"
000494002	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-6 SW4 159.90 AC CUSTER TWP TD 75"
000494003	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-6 SE4 159.57 AC CUSTER TWP TD 75"
000584400	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-7 N2NE4 80.77 AC BLAINE TWP TD 106"
000583401	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-7 SE4 163.92 AC BLAINE TWP TD 106"
000583402	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-7 S2NE4 80.35 AC BLAINE TWP TD 106"
000583403	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-7 NW4 159.48 AC BLAINE TWP TD 106"
000593700	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-7 NE4 & NE4SE4 197.50 AC BLAINE TWP TD 105"
000593701	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	36-26-7 NW4 157.61 AC BLAINE TWP TD 105"
000355900	STINEMAN, JOHN D AND KANDACE G	33-25-5 NE1/4 160 AC ELM TOWNSHIP TD 32
000371600	SUNSET FARMS INC	30-26-5 NW4 W2SW4 232.18 AC WILLOW TWP TD 34"
000371900	SUNSET FARMS INC	31-26-5 W2NW4 77.67 AC WILLOW TOWNSHIP TD 34
000346200	TAAKE, GARY R & KATHLEEN E	13-25-5 S1/2NW1/4 & SW1/4 240 AC ELM TOWNSHIP TD 25
000346700	TAAKE, GARY R & KATHLEEN E	14-25-5 SE1/4 160 AC ELM TOWNSHIP TD 25
000350500	TAAKE, GARY R & KATHLEEN E	23-25-5 N1/2NE1/4 EXC 1 AC FOR CEMETERY 79 AC ELM TOWNSHIP TD 25
000367200	TABER FAMILY INC	18-26-5 NE4 158.15 AC WILLOW TWP TD 34"
000589500	THIELE REVOCABLE TRUST	29-26-7 SW4NW4 40.17 AC BLAINE TWP TD 107"
000584301	THIELE, FREDERIC J & DEBRA J	18-26-7 W2NE4 & E2NW4 158.71 AC BLAINE TWP TD 107"
000593300	TIMPERLEY, LLOYD W & LEONA F Rev tr	27-25-5 SE1/4NW1/4 40 AC ELM TOWNSHIP TD 32
000353600	TIMPERLEY, LLOYD W & LEONA F Rev tr	27-25-5 N2SW4 SE4SW4 120 AC ELM TOWNSHIP TD 32
000353900	TIMPERLEY, LLOYD W & LEONA F Rev tr	28-25-5 S1/2 EXC S1/2SE1/4 240 AC ELM TOWNSHIP TD 32
000356600	TIMPERLEY, LLOYD W & LEONA F Rev tr	34-25-5 NW1/4 160 AC ELM TOWNSHIP TD 32
000369100	TODDS LANDMARK FARMS INC	22-26-5 S2 317.11 AC WILLOW TWP TD 36"
000370700	TODDS LANDMARK FARMS INC	27-26-5 N2NE4 NW4 EXC 20.77 AC SE4NW4 W2SW4 292.40 AC WILLOW TWP TD 36
000343400	TREE CORNERS FARM LLC	6-25-5 NE4 157.38 AC ELM TOWNSHIP TD 29
000343600	TREE CORNERS FARM LLC	6-25-5 S2 315.87 AC ELM TOWNSHIP TD 29
000371500	TREE CORNERS FARM LLC	30-26-5 E2SW4 E2 LESS TR 392.24 AC WILLOW TOWNSHIP TD 34
000489400	TREE CORNERS FARM LLC	25-26-6 N2SE4 77.86 AC CUSTER TWP TD 75"
000451400	VOBORNY, BERNARD C & ROZELLA	5-25-6 S2SW4 79.96 AC NELIGH TWP TD 62"
000451401	VOBORNY, BERNARD C & ROZELLA	5-25-6 S2SW4 79.96 AC NELIGH TWP TD 62"
000488400	WAGNER, JUDY M	23-26-6 NW4 160.29 AC CUSTER TWP TD 69"
000352700	WEBER, RONALD	26-25-5 NE4 159.30 AC ELM TWP
000352800	WEBER, RONALD	26-25-5 NW4 159.19 AC ELM TWP
000353100	WEBER, RONALD	27-25-5 NE4 NE4NW4 EX TR 191.18 AC ELM TWP
000355800	WEBER, RONALD	32-25-5 SW4; W66' SE4 160.67 AC ELM TWP
000355600	WEBER, RONALD	32-25-5 SE4 EX W 66' EX TR 157.76 AC ELM TWP
000366700	YOUNG FAMILY LLC	17-26-5 NE4 N2SE4 239.85 AC WILLOW TWP TD 34"

Adjacent Properties

APN	OWNER	LEGAL
000318000	RUTJENS, DONALD J & LAURA	1-24-5 N2 EX 4.91 AC TR SE4NE4 290.63 AC BURNETT TWP TD 23"
000319200	UNSELD, CHRIS A & KELLI J	2-24-5 NW4 EXC TRACT S OF ROAD & EXCL RECT TRACT S2NW4 120 AC BURNETT TOWNSHIP
000319900	JOHNSON, JERRY C & TVONNE D	4-24-5 NE4NE4 LYING NORTH OF ROAD 17.11 AC BURNETT TWP TD 23"
000321600	GROSSERODE, JOSEPH H & MARCELLA A	5-24-5 E2NW4 - TRACT 40'X190'NE4NW4 78.94 AC BURNETT TWP TD 16"
000322000	EVANS INC	6-24-5 W2NE4 80.97 AC BURNETT TWP TD 19"
000355300	MARTENSEN, RICHARD P & DEANNA LEE	31-25-5 SW1/4 160.64 AC ELM TOWNSHIP TD 24
000361700	TABER FAMILY INC	7-26-5 SE4 157 AC WILLOW TWP TD 37"
000365800	YOUNG, ROLAND E & HELEN L	15-26-5 NW4 EXC TRACT 134.28 AC WILLOW TOWNSHIP TD 35
000367500	ZUHLKE, EUGENE C & DEBORAH R	18-26-5 SW4 155.08 AC WILLOW TOWNSHIP TD 34
000452600	SCHRADER, DAVID C & LORI L	8-25-6 NE4 EXC STATE HWY 151.15 AC NELIGH TWP TD 62"
000452700	VOBORNY, BERNARD C & ROZELLA	8-25-6 N2NW4 & SW4NW4 EXC RR TR IN W2NW4 ALONG CO RD 116.05 AC-NELIGH TWP TD 62"
000453100	BEVERLY LAND CO A RHODE ISLAND CORP	9-25-6 NE4 159.18 AC NELIGH TWP TD 62"
000453200	BALTC AMERICAN LAND COMPANY	9-25-6 NW4 - 4.92 AC ST HWY & - 2.25 AC TRACT SW4NW4 151.76 AC NELIGH-TWP TD 62"
000455200	BEVERLY LAND CO A RHODE ISLAND CORP	14-25-6 N2 316.59 AC NELIGH TWP TD 62"
000455300	RAINBOW FARMS INC	14-25-6 SE4 158.76 AC NELIGH TWP TD 62"
000455500	BEVERLY LAND CO A RHODE ISLAND CORP	15-25-6 N2 322.09 AC NELIGH TWP TD 62"
000471300	RICE FAMILY LTD PARTNRSHP, A & M	26-25-6 S2NE4 & 138.08 AC NW4 217.56 AC NELIGH TWP TD 62"

APN	OWNER	LEGAL
000471500	WRIGHT, FREDERICK	26-25-6 S2S2 158.05 AC NELIGH TWSP TD 62~
000471600	RICE FAMILY LTD PRTRNSHP, A & M	26-25-6 N2SE4 79.32 AC NELIGH TWSP TD 62~
000485600	REINKE, KENNY D	15-26-6 SE4 EXC 1000'X 450'TR IN NE4SE4 146.32 AC CLUSTER TWSP TD 69~
000486000	STATE OF NEBRASKA BOARD OF ED LANDS & FUNDS	16-26-6 NW4NE4 S2NE4 W2 SE4 EXC 8.67 AC HWY 592.69 AC CLUSTER TWSP~TD 69~
000563601	OLSON, ALVIN & JANIE	1-25-7 W2NW4 76.79 AC ORD TWSP
000563800	OLSON, ALVIN & JANIE	2-25-7 NE4 154.36 AC ORD TWSP
000578200	MORRISON, FRANK	1-26-7 SE4 159.92 AC BLAINE TWSP TD 105~
000578300	GRO LLC	1-26-7 SW4 E2SW4SW4 140.34 AC BLAINE TWSP TD 105~
000578400	RODGERS, BOBBY tre etal	1-26-7 E2SW4SW4 20 AC BLAINE TWSP TD 105~
000579400	TINSLEY FARMS INC, A C	5-26-7 N2 SE4 478.82 AC BLAINE TWSP TD 107~
000579500	SCOTT, JAMES T tr	5-26-7 SW4 160.56 AC BLAINE TWSP TD 107~
000579900	SCOTT, CLARABEL tr	7-26-7 E2 317 AC BLAINE TWSP TD 107~
000590000	THIELE REVOCABLE TRUST	30-26-7 S2NE4, N2SE4 159.96 AC BLAINE TWSP TD 107~
000592100	OLSON, ALVIN & JANIE	33-26-7 NE4 158.01 AC BLAINE TWSP TD 107~
000592300	OLSON, STEVE K & JOANN M	33-26-7 NE4NW4 39.88 AC BLAINE TWSP TD 107~
000592600	OLSON, DAN	34-26-7 NE4-SE4NC4 120.90 AC BLAINE TWSP TD 106~
000592800	SIEMS, ROBERT FARMS INC	34-26-7 NW4-TR SW4NW4 157.75 AC BLAINE TWSP TD 106~
000684100	THIELE, FREDERIC J & DEBRA J	13-26-8 SE4-TR 155.79 AC FRENCHTOWN TWNSP
000684101	THIELE, CURT etal	13-26-8 NE4 160.82 AC FRENCHTOWN TWNSP
700033544	STELLING LIVING TRUST	
700033894	OLSON ROBERT L SR & PHYLLIS J OLSON & FAMILY PARTN	
700034181	KEE ROBERT D & SHERLENE A	
700034545	PETERSEN SUE L	

## EXHIBIT C: SUBMITTED FAA DETERMINATIONS

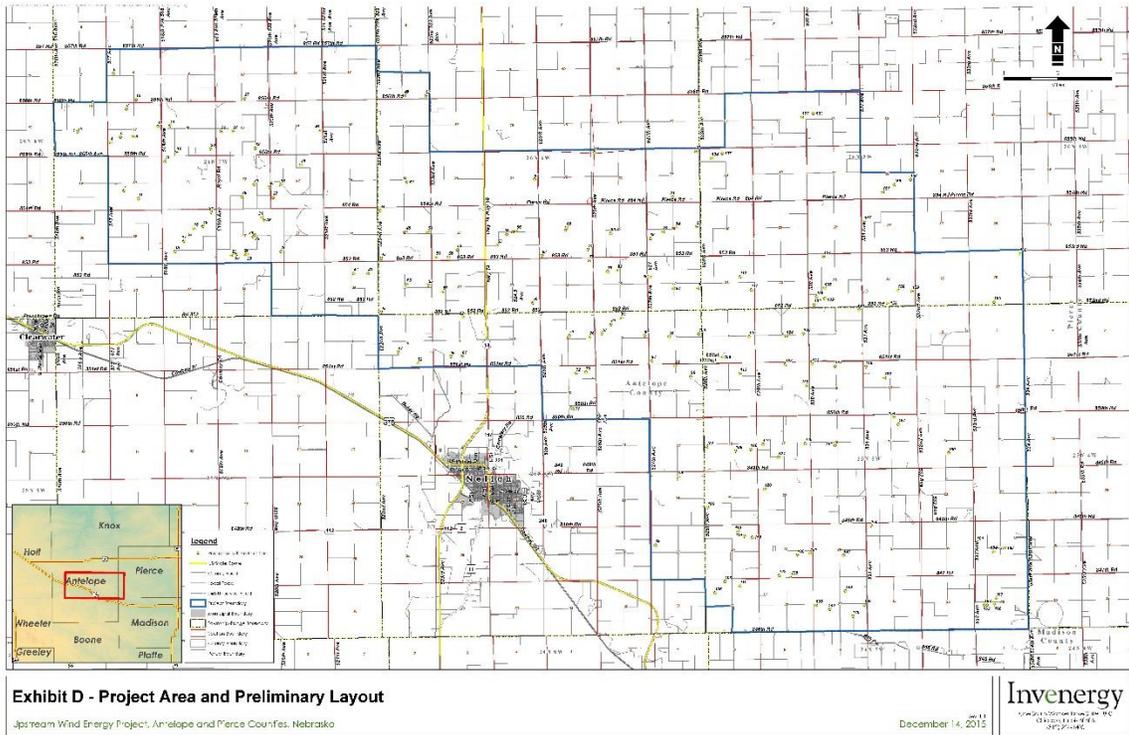
<b>Exhibit C</b>				
<b>Submitted FAA Determinations and Turbine Coordinates</b>				
Turbine ID	Geographic NAD83			FAA
	Latitude	Longitude	Elevation (ft)	Study Number
1	42° 13' 33.6936" N	98° 10' 32.5060" W	1958	2015-WTE-8514-OE
3	42° 13' 58.4328" N	98° 10' 14.6456" W	2034	2015-WTE-8516-OE
4	42° 13' 22.9102" N	98° 09' 49.5485" W	2002	2015-WTE-8517-OE
5	42° 14' 29.5393" N	98° 09' 45.2654" W	2001	2015-WTE-8518-OE
6	42° 13' 28.3609" N	98° 09' 36.7389" W	1965	2015-WTE-8519-OE
7	42° 12' 36.3262" N	98° 09' 32.7618" W	1969	2015-WTE-8520-OE
8	42° 13' 55.1451" N	98° 09' 28.3564" W	2028	2015-WTE-8521-OE
9	42° 13' 28.5319" N	98° 09' 20.2910" W	1969	2015-WTE-8522-OE
10	42° 14' 4.3262" N	98° 09' 15.8873" W	1993	2015-WTE-8523-OE
11	42° 12' 28.4397" N	98° 09' 14.0702" W	1919	2015-WTE-8524-OE
12	42° 13' 37.8590" N	98° 08' 48.1903" W	1994	2015-WTE-8525-OE
13	42° 13' 4.0401" N	98° 08' 39.1807" W	1979	2015-WTE-8526-OE
14	42° 13' 38.7432" N	98° 08' 31.9938" W	1938	2015-WTE-8527-OE
15	42° 11' 36.8657" N	98° 08' 27.4512" W	1891	2015-WTE-8528-OE
16	42° 13' 12.8730" N	98° 08' 23.7074" W	1936	2015-WTE-8529-OE
17	42° 11' 47.0212" N	98° 08' 15.4537" W	1962	2015-WTE-8530-OE
18	42° 11' 59.1794" N	98° 08' 2.5120" W	1968	2015-WTE-8531-OE
19	42° 12' 1.0974" N	98° 07' 50.3199" W	1979	2015-WTE-8532-OE
20	42° 13' 15.8160" N	98° 07' 39.7859" W	1944	2015-WTE-8533-OE
21	42° 12' 14.5049" N	98° 07' 39.7573" W	1964	2015-WTE-8534-OE
22	42° 13' 32.6008" N	98° 07' 25.7264" W	1953	2015-WTE-8535-OE
23	42° 11' 32.6403" N	98° 07' 13.3446" W	1950	2015-WTE-8536-OE
24	42° 13' 32.4188" N	98° 07' 10.4172" W	1975	2015-WTE-8537-OE
25	42° 11' 33.9193" N	98° 07' 6.7868" W	1927	2015-WTE-8538-OE
26	42° 12' 29.2397" N	98° 06' 59.3454" W	1964	2015-WTE-8539-OE
27	42° 14' 4.2018" N	98° 06' 54.7489" W	2016	2015-WTE-8540-OE
28	42° 11' 33.4484" N	98° 06' 56.1549" W	1944	2015-WTE-8541-OE
29	42° 11' 33.3316" N	98° 06' 53.6277" W	1953	2015-WTE-8542-OE
30	42° 11' 50.4815" N	98° 06' 45.0166" W	1985	2015-WTE-8543-OE
31	42° 12' 40.9490" N	98° 06' 43.1762" W	1953	2015-WTE-8544-OE
32	42° 11' 52.1504" N	98° 06' 42.8130" W	1993	2015-WTE-8545-OE
33	42° 13' 16.0809" N	98° 06' 41.3753" W	2019	2015-WTE-8546-OE
34	42° 12' 9.1017" N	98° 06' 33.7234" W	1981	2015-WTE-8547-OE
35	42° 12' 6.5186" N	98° 06' 30.9252" W	1973	2015-WTE-8548-OE
36	42° 12' 38.2693" N	98° 06' 23.7625" W	1988	2015-WTE-8549-OE
37	42° 12' 28.3107" N	98° 06' 18.9748" W	1960	2015-WTE-8550-OE
38	42° 12' 40.3249" N	98° 06' 8.8179" W	2024	2015-WTE-8551-OE
39	42° 11' 35.7735" N	98° 06' 9.0338" W	1914	2015-WTE-8552-OE
40	42° 12' 59.4078" N	98° 05' 42.2904" W	1979	2015-WTE-8553-OE
41	42° 13' 32.7036" N	98° 05' 17.4733" W	1961	2015-WTE-8554-OE
42	42° 11' 14.0528" N	98° 04' 35.3906" W	1952	2015-WTE-8555-OE
43	42° 11' 13.9019" N	98° 04' 16.6899" W	1930	2015-WTE-8556-OE
44	42° 12' 14.2982" N	98° 03' 59.8886" W	1987	2015-WTE-8557-OE
45	42° 11' 28.2856" N	98° 03' 59.2577" W	1932	2015-WTE-8558-OE
46	42° 10' 36.3827" N	98° 03' 59.9340" W	1911	2015-WTE-8559-OE
47	42° 09' 57.5935" N	98° 03' 38.6262" W	1889	2015-WTE-8560-OE
48	42° 14' 5.2359" N	98° 03' 26.7540" W	1941	2015-WTE-8561-OE
49	42° 11' 53.5028" N	98° 03' 26.6196" W	1977	2015-WTE-8562-OE
50	42° 11' 3.2790" N	98° 03' 26.4503" W	1932	2015-WTE-8563-OE

Turbine ID	Geographic NAD83			FAA
	Latitude	Longitude	Elevation (ft)	Study Number
51	42° 12' 41.7948" N	98° 03' 24.5059" W	1949	2015-WTE-8564-OE
52	42° 09' 46.7193" N	98° 03' 13.4236" W	1925	2015-WTE-8565-OE
53	42° 14' 4.7800" N	98° 02' 59.0127" W	1922	2015-WTE-8566-OE
54	42° 11' 53.1717" N	98° 02' 58.2819" W	2009	2015-WTE-8567-OE
55	42° 11' 1.8821" N	98° 02' 58.6144" W	1933	2015-WTE-8568-OE
56	42° 11' 28.8989" N	98° 02' 47.9638" W	2014	2015-WTE-8569-OE
57	42° 10' 55.2722" N	98° 02' 39.6197" W	1935	2015-WTE-8570-OE
58	42° 11' 28.6979" N	98° 02' 31.6171" W	2019	2015-WTE-8571-OE
59	42° 09' 52.6194" N	98° 02' 30.3649" W	1863	2015-WTE-8572-OE
60	42° 11' 35.9628" N	98° 02' 20.2585" W	2016	2015-WTE-8573-OE
61	42° 09' 52.7861" N	98° 02' 15.4141" W	1869	2015-WTE-8574-OE
62	42° 10' 30.6097" N	98° 02' 13.7946" W	1903	2015-WTE-8575-OE
63	42° 11' 39.8648" N	98° 01' 27.8341" W	1971	2015-WTE-8576-OE
64	42° 11' 50.4611" N	98° 01' 15.7238" W	1950	2015-WTE-8577-OE
65	42° 11' 53.2363" N	98° 01' 2.8178" W	1940	2015-WTE-8578-OE
66	42° 10' 43.9705" N	98° 00' 42.6181" W	1961	2015-WTE-8579-OE
67	42° 12' 42.8001" N	98° 00' 39.0218" W	1922	2015-WTE-8580-OE
68	42° 11' 29.0598" N	98° 00' 30.1441" W	1948	2015-WTE-8581-OE
69	42° 11' 55.9478" N	97° 59' 57.6744" W	1976	2015-WTE-8582-OE
70	42° 10' 11.5024" N	97° 59' 56.2267" W	1933	2015-WTE-8583-OE
71	42° 09' 0.7242" N	97° 59' 52.5494" W	1872	2015-WTE-8584-OE
72	42° 09' 34.9540" N	97° 59' 47.8695" W	1889	2015-WTE-8585-OE
73	42° 09' 35.8815" N	97° 59' 35.3045" W	1884	2015-WTE-8586-OE
74	42° 11' 34.3756" N	97° 59' 30.4594" W	2046	2015-WTE-8587-OE
75	42° 11' 23.8576" N	97° 59' 28.9698" W	2005	2015-WTE-8588-OE
76	42° 10' 10.1010" N	97° 59' 29.4881" W	1921	2015-WTE-8589-OE
77	42° 13' 8.0561" N	97° 59' 20.8128" W	1883	2015-WTE-8590-OE
78	42° 10' 12.9113" N	97° 59' 13.5786" W	1950	2015-WTE-8591-OE
79	42° 11' 12.9174" N	97° 59' 5.3402" W	2011	2015-WTE-8592-OE
80	42° 11' 49.7718" N	97° 59' 0.5645" W	1991	2015-WTE-8593-OE
81	42° 10' 22.0132" N	97° 59' 1.5779" W	2001	2015-WTE-8594-OE
82	42° 11' 14.2278" N	97° 58' 52.2404" W	2002	2015-WTE-8595-OE
83	42° 10' 28.1866" N	97° 58' 48.4464" W	2023	2015-WTE-8596-OE
84	42° 10' 10.8297" N	97° 58' 18.1726" W	2005	2015-WTE-8597-OE
85	42° 11' 44.4172" N	97° 58' 9.1562" W	1921	2015-WTE-8598-OE
86	42° 11' 6.9736" N	97° 58' 9.6337" W	1981	2015-WTE-8599-OE
87	42° 09' 46.2081" N	97° 58' 9.5068" W	1966	2015-WTE-8600-OE
88	42° 06' 48.2517" N	97° 58' 7.2098" W	1871	2015-WTE-8601-OE
89	42° 11' 50.6211" N	97° 57' 52.3989" W	1904	2015-WTE-8602-OE
90	42° 10' 9.1798" N	97° 57' 46.1652" W	1981	2015-WTE-8603-OE
91	42° 12' 24.3870" N	97° 57' 39.6367" W	1867	2015-WTE-8604-OE
92	42° 10' 56.0053" N	97° 57' 39.8200" W	1959	2015-WTE-8605-OE
93	42° 09' 41.2624" N	97° 57' 38.8206" W	1993	2015-WTE-8606-OE
94	42° 11' 54.8171" N	97° 57' 35.9788" W	1906	2015-WTE-8607-OE
95	42° 07' 54.1476" N	97° 57' 36.3035" W	1888	2015-WTE-8608-OE
96	42° 09' 30.9328" N	97° 57' 18.8572" W	1963	2015-WTE-8609-OE
97	42° 13' 8.1630" N	97° 57' 8.2119" W	1835	2015-WTE-8610-OE
98	42° 11' 55.1523" N	97° 57' 8.6771" W	1880	2015-WTE-8611-OE
99	42° 10' 55.9084" N	97° 57' 7.7808" W	1954	2015-WTE-8612-OE
100	42° 10' 11.6817" N	97° 57' 7.5085" W	1996	2015-WTE-8613-OE
101	42° 08' 22.2116" N	97° 56' 59.1638" W	1930	2015-WTE-8614-OE
102	42° 07' 24.0745" N	97° 56' 58.8176" W	1881	2015-WTE-8615-OE
103	42° 09' 46.3115" N	97° 56' 55.1584" W	1966	2015-WTE-8616-OE

Turbine ID	Geographic NAD83			FAA
	Latitude	Longitude	Elevation (ft)	Study Number
104	42° 13' 1.4306" N	97° 56' 48.2159" W	1828	2015-WTE-8617-OE
105	42° 06' 1.3887" N	97° 56' 50.9093" W	1854	2015-WTE-8618-OE
106	42° 09' 49.1715" N	97° 56' 38.2455" W	1924	2015-WTE-8619-OE
107	42° 13' 6.0047" N	97° 56' 34.4003" W	1864	2015-WTE-8620-OE
108	42° 06' 12.2912" N	97° 56' 37.7109" W	1892	2015-WTE-8621-OE
109	42° 08' 18.1385" N	97° 56' 21.7236" W	1948	2015-WTE-8622-OE
110	42° 07' 0.2754" N	97° 56' 19.9740" W	1923	2015-WTE-8623-OE
111	42° 06' 7.7680" N	97° 56' 18.3680" W	1848	2015-WTE-8624-OE
112	42° 11' 6.3338" N	97° 56' 13.3331" W	1908	2015-WTE-8625-OE
113	42° 09' 32.9371" N	97° 56' 14.6789" W	1895	2015-WTE-8626-OE
114	42° 06' 55.8532" N	97° 56' 11.5996" W	1907	2015-WTE-8627-OE
115	42° 10' 8.5208" N	97° 56' 2.4465" W	1964	2015-WTE-8628-OE
116	42° 08' 19.7094" N	97° 56' 2.3118" W	1930	2015-WTE-8629-OE
117	42° 10' 53.7500" N	97° 55' 58.9404" W	1913	2015-WTE-8630-OE
118	42° 06' 54.7562" N	97° 56' 1.6893" W	1855	2015-WTE-8631-OE
119	42° 08' 24.1631" N	97° 55' 46.1620" W	1975	2015-WTE-8632-OE
120	42° 07' 41.1567" N	97° 55' 44.6649" W	1913	2015-WTE-8633-OE
121	42° 08' 11.3960" N	97° 55' 26.1646" W	1947	2015-WTE-8634-OE
122	42° 06' 17.4412" N	97° 55' 27.3522" W	1866	2015-WTE-8635-OE
123	42° 09' 41.1412" N	97° 55' 15.7541" W	1962	2015-WTE-8636-OE
124	42° 10' 8.4571" N	97° 55' 14.0260" W	1941	2015-WTE-8637-OE
125	42° 06' 16.2915" N	97° 55' 11.9586" W	1888	2015-WTE-8638-OE
126	42° 06' 36.8624" N	97° 55' 3.2055" W	1878	2015-WTE-8639-OE
127	42° 13' 39.8175" N	97° 54' 49.9234" W	1818	2015-WTE-8640-OE
128	42° 10' 10.6134" N	97° 54' 51.7178" W	1991	2015-WTE-8641-OE
129	42° 08' 24.6203" N	97° 54' 51.3073" W	1904	2015-WTE-8642-OE
130	42° 09' 20.5873" N	97° 54' 48.4770" W	1882	2015-WTE-8643-OE
131	42° 06' 38.3281" N	97° 54' 46.7646" W	1846	2015-WTE-8644-OE
132	42° 09' 41.2354" N	97° 54' 41.1076" W	1896	2015-WTE-8645-OE
133	42° 13' 43.3744" N	97° 54' 35.2481" W	1821	2015-WTE-8646-OE
134	42° 10' 38.8786" N	97° 54' 37.2857" W	1853	2015-WTE-8647-OE
135	42° 05' 48.2688" N	97° 54' 40.0883" W	1867	2015-WTE-8648-OE
136	42° 10' 46.0816" N	97° 54' 34.4158" W	1840	2015-WTE-8649-OE
137	42° 11' 24.9876" N	97° 54' 24.1118" W	1820	2015-WTE-8650-OE
138	42° 10' 54.2783" N	97° 54' 23.5512" W	1836	2015-WTE-8651-OE
139	42° 10' 44.5831" N	97° 54' 23.4567" W	1849	2015-WTE-8652-OE
140	42° 05' 44.3677" N	97° 54' 21.9580" W	1808	2015-WTE-8653-OE
141	42° 08' 22.9233" N	97° 54' 12.6518" W	1883	2015-WTE-8654-OE
142	42° 09' 39.0385" N	97° 54' 11.2942" W	1905	2015-WTE-8655-OE
143	42° 06' 35.8066" N	97° 54' 3.3080" W	1871	2015-WTE-8656-OE
144	42° 06' 1.5812" N	97° 54' 1.2869" W	1840	2015-WTE-8657-OE
145	42° 05' 37.2751" N	97° 53' 52.3040" W	1786	2015-WTE-8658-OE
146	42° 10' 32.9697" N	97° 53' 38.8479" W	1838	2015-WTE-8659-OE
147	42° 11' 58.1617" N	97° 53' 30.6911" W	1805	2015-WTE-8660-OE
148	42° 05' 47.9585" N	97° 53' 37.1432" W	1865	2015-WTE-8661-OE
149	42° 09' 37.9085" N	97° 53' 31.3092" W	1953	2015-WTE-8662-OE
150	42° 07' 4.3132" N	97° 53' 26.9748" W	1893	2015-WTE-8663-OE
151	42° 12' 26.5192" N	97° 53' 6.0355" W	1783	2015-WTE-8664-OE
152	42° 09' 27.2326" N	97° 53' 6.9623" W	1925	2015-WTE-8665-OE
153	42° 10' 39.3208" N	97° 53' 1.6425" W	1847	2015-WTE-8666-OE
154	42° 08' 48.9322" N	97° 52' 56.0015" W	1883	2015-WTE-8667-OE
155	42° 12' 33.3444" N	97° 52' 51.0876" W	1774	2015-WTE-8668-OE
156	42° 10' 51.4461" N	97° 52' 48.2644" W	1771	2015-WTE-8669-OE

Turbine ID	Geographic NAD83			FAA
	Latitude	Longitude	Elevation (ft)	Study Number
157	42° 08' 41.9330" N	97° 52' 49.7639" W	1910	2015-WTE-8670-OE
158	42° 12' 38.4564" N	97° 52' 30.1070" W	1788	2015-WTE-8671-OE
159	42° 10' 50.4864" N	97° 52' 29.7113" W	1822	2015-WTE-8672-OE
160	42° 08' 13.5764" N	97° 51' 45.1821" W	1850	2015-WTE-8673-OE
161	42° 06' 47.2410" N	97° 51' 9.9741" W	1839	2015-WTE-8674-OE
162	42° 05' 46.5567" N	97° 51' 1.3601" W	1799	2015-WTE-8675-OE
163	42° 05' 46.5257" N	97° 50' 58.2697" W	1807	2015-WTE-8676-OE
164	42° 06' 38.0420" N	97° 50' 48.2375" W	1824	2015-WTE-8677-OE
165	42° 10' 39.0892" N	97° 50' 43.5985" W	1795	2015-WTE-8678-OE
166	42° 05' 46.5891" N	97° 50' 48.4299" W	1802	2015-WTE-8679-OE
167	42° 05' 52.7264" N	97° 50' 46.1420" W	1769	2015-WTE-8680-OE
168	42° 06' 41.1767" N	97° 50' 34.3337" W	1817	2015-WTE-8681-OE
169	42° 11' 25.1089" N	97° 50' 9.5392" W	1789	2015-WTE-8682-OE

## EXHIBIT D: PROJECT AREA AND PRELIMINARY LAYOUT





## EXHIBIT E: ECI ENGINEERING CERTIFICATION



**ELECTRICAL CONSULTANTS, INC.**

BILLINGS OFFICE: 3521 GABEL ROAD, BILLINGS, MONTANA 59102 • PHONE: 406-259-9933 • FAX: 406-259-3441

November 3, 2015

Mr. James Williams  
 Invenergy, LLC  
 2580 W Main St. Suite 200  
 Littleton, CO 80120

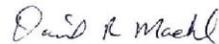
Re: Upstream Wind Energy Electrical Design in Antelope County

Dear James:

This letter is to certify that Electrical Consultants, Inc. (ECI) is qualified to design the Upstream Wind Energy Project substation and underground collector system. ECI has prepared design for similar type facilities on dozens of past projects. ECI will prepare the design for the Upstream Wind Energy Project in compliance with applicable codes and standards needed to achieve a reliable, efficient and adequately rated power delivery system, including the project substation and 34.5 kV collection system.

The attached sheets outline specific experience for the Electrical and Civil Project Managers assigned to the project. Please advise me if there are any questions or need for clarification pertaining to the electrical design of the Upstream Wind Energy Project.

Sincerely,



David R. Maehl, P.E.

DM:bs

P:\Invenergy\Correspondence\Upstream\_11-3-15.docx

BILLINGS OFFICE  
 3521 GABEL ROAD  
 BILLINGS MT 59102  
 PHONE 406-259-9933  
 FAX 406-259-3441  
 EMAIL [contact\\_us@ecibillings.com](mailto:contact_us@ecibillings.com)

SALT LAKE CITY OFFICE  
 660 WEST 700 SOUTH  
 WOODS CROSS UT 84087  
 PHONE 801-292-9964  
 FAX 801-292-9177  
 EMAIL [contact\\_us@ecislc.com](mailto:contact_us@ecislc.com)

TUCSON OFFICE  
 6740 NORTH ORACLE RD, #100  
 TUCSON, AZ 85704  
 PHONE 520-219-9933  
 FAX 520-219-9949  
 EMAIL [contact\\_us@ecituc.com](mailto:contact_us@ecituc.com)

MADISON OFFICE  
 2800 ROYAL AVENUE  
 MADISON, WI 53713  
 PHONE 608-240-9933  
 FAX 608-240-1579  
 EMAIL [contact\\_us@ecimadison.com](mailto:contact_us@ecimadison.com)



**ELECTRICAL CONSULTANTS, INC.**

BILLINGS OFFICE: 3521 GABEL ROAD, BILLINGS, MONTANA 59102 • PHONE: 406-259-9933 • FAX: 406-259-3441

**David R. Maehl, Project Manager Electrical**

**Selected Wind Farm, Project Experience (Past 5 Years):**

Project Manager:

- Vantage Wind Project – 230 kV Switchyard, 34.5-230 kV Substation, 201 MW (WA)
- White Oak Wind Project – 138 kV Switchyard, 34.5-138 kV Substation, 150 MW (IL)
- Crane Creek Wind Project – 34.5-161 kV Substation, 99 MW (IA)
- Comber Wind Project – 34.5-230 kV Substation, 165.6 MW (Canada)
- Gratiot Wind Project – 34.5-138 kV Substation, 200 MW (MI)
- Bishop Hill Wind Project – 34.5-138 kV Substation, 212.8 MW (IL)

Electrical Lead:

- Glacier Wind – 115 kV Switchyard (Wind Generation Transmission Tie) MT
- Glacier Wind – 34.5-115 kV Substation and Collector System, 120 MVA (MT)

Quality Assurance Reviews:

- California Ridge - 34.5-138 kV, 200 MVA, Collector & Substation (IL)
- Rim Rock East – 34.5-230 kV, 120 MVA, Collector and Substation (MT)
- Rim Rock West – 34.5-230 kV, 120 MVA, Collector and Substation (MT)
- Petersburg Wind Project – 34.5-115 kV Substation, 40.5 MW (NE)



**Registration Information:**

**David Robert Maehl**  
is licensed to practice  
**Electrical Engineering**  
In the State of Nebraska  
Until **December 31, 2016**  
License Number: **E-13879**



Secretary, Board of Engineers and Architects



**David R. Maehl, PE**  
General Manager

3521 Gabel Road  
Billings, MT 59102  
Phone (406) 259-9933  
Cell (406) 670-9851  
FAX (406) 259-3441  
dave.maehl@eciblg.com

**ELECTRICAL CONSULTANTS, INC.**  
Power Delivery Services to Utilities & Industry

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BILLINGS OFFICE  
3521 GABEL ROAD  
BILLINGS, MT 59102  
PHONE: 406-259-9933  
FAX: 406-259-3441  
EMAIL: contact-us@ecibillings.com

SALT LAKE CITY OFFICE  
660 WEST 700 SOUTH  
WOODS CROSS, UT 84087  
PHONE: 801-292-9664  
FAX: 801-292-9177  
EMAIL: contact-us@ecislc.com

TUCSON OFFICE  
6740 NORTH ORACLE RD, #100  
TUCSON, AZ 85704  
PHONE: 520-219-9933  
FAX: 520-219-9949  
EMAIL: contact-us@ecituc.com

MADISON OFFICE  
2800 ROYAL AVENUE  
MADISON, WI 53713  
PHONE: 608-240-9933  
FAX: 608-240-1579  
EMAIL: contact-us@ecimadison.com



**ELECTRICAL CONSULTANTS, INC.**

BILLINGS OFFICE: 3521 GABEL ROAD, BILLINGS, MONTANA 59102 • PHONE: 406-259-9933 • FAX: 406-259-3441

**Daniel E. Donovan, Project Manager Civil**

**Selected Wind Farm, Project Experience (Past 5 Years):**

Project Manager:

Capricorn Ridge - 345 kV Transmission Substation – 138 kV, 550 MVA, generation tie to LCRA 345 kV system (TX)  
 Goat Mountain Three – 34.5-138 kV, 230 MVA Collection Substation (TX)  
 Wolf Ridge (White Tail) – 34.5-138 kV, 132 MVA, Collection Substation (TX)

Civil/Structural Lead:

Omega – 345 kV Switchyard, Horse Hollow Gen Tie (TX)  
 Pony – 138 kV Switchyard, Horse Hollow Gen Tie (TX)

Quality Assurance Reviews:

Combine Hills – 34.5-69 kV Collection Substation (OR)  
 Logan North – 34.5-230 kV Collection Substation (CO)  
 Logan South – 34.5-230 kV Collection Substation (CO)  
 Dooley – 34.5-230 kV Collection Substation (WA)  
 Linden – 34.5-230 kV Collection Substation (WA)  
 Petersburg – 34.5-115 kV Substation (NE)



**Registration Information:**



STATE OF NEBRASKA BOARD OF ENGINEERS AND ARCHITECTS

STREET ADDRESS - 215 Centennial Mall South, Ste. 400  
 MAILING ADDRESS - P.O. Box 99100, Lincoln, NE 68509-0100

Professional License Results for Daniel Eugene Donovan are as follows:

License Number: E9696

Type: Engineer

License Profession: Civil Engineering

License Status: Licensed

Address 1: 3521 GABEL RD STE 1

City: BILLINGS

County: YELLOWSTONE

State: MT

Zip: 59102

Country: UNITED STATES

License Issue Date: 12/10/1999

License Expiration Date: 12/31/2015



P:\Invenergy\Correspondence\Upstream\_11-3-15\_page3.docx  
 BILLINGS OFFICE  
 3521 GABEL ROAD  
 BILLINGS, MT 59102  
 PHONE: 406-259-9933  
 FAX: 406-259-3441  
 EMAIL: contact-us@ecibillings.com

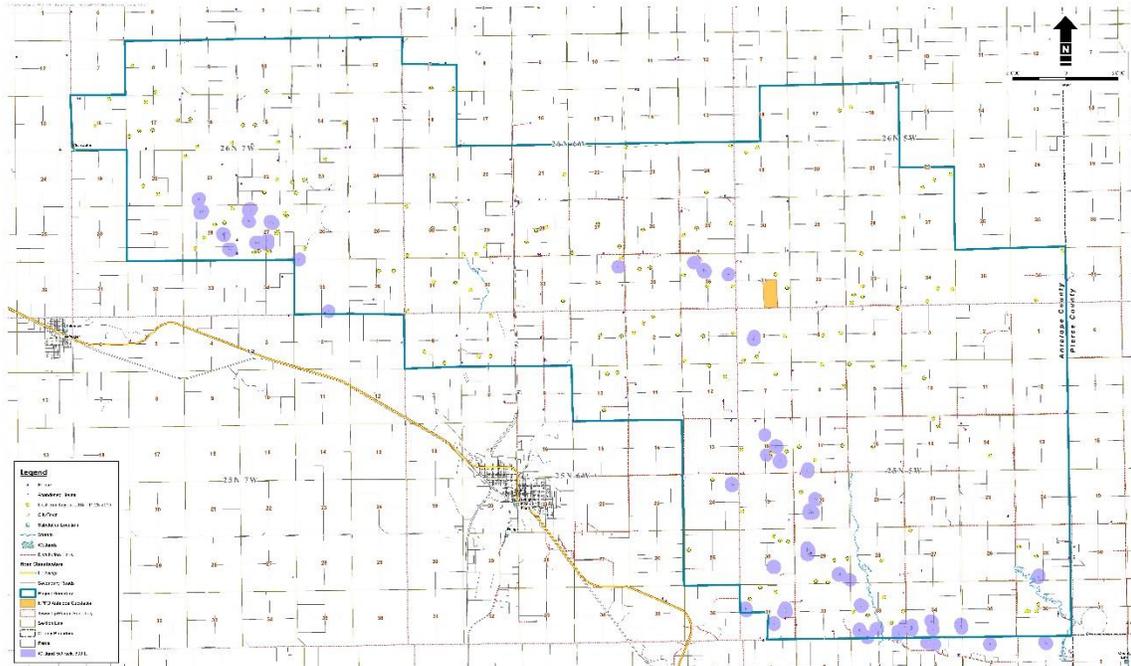
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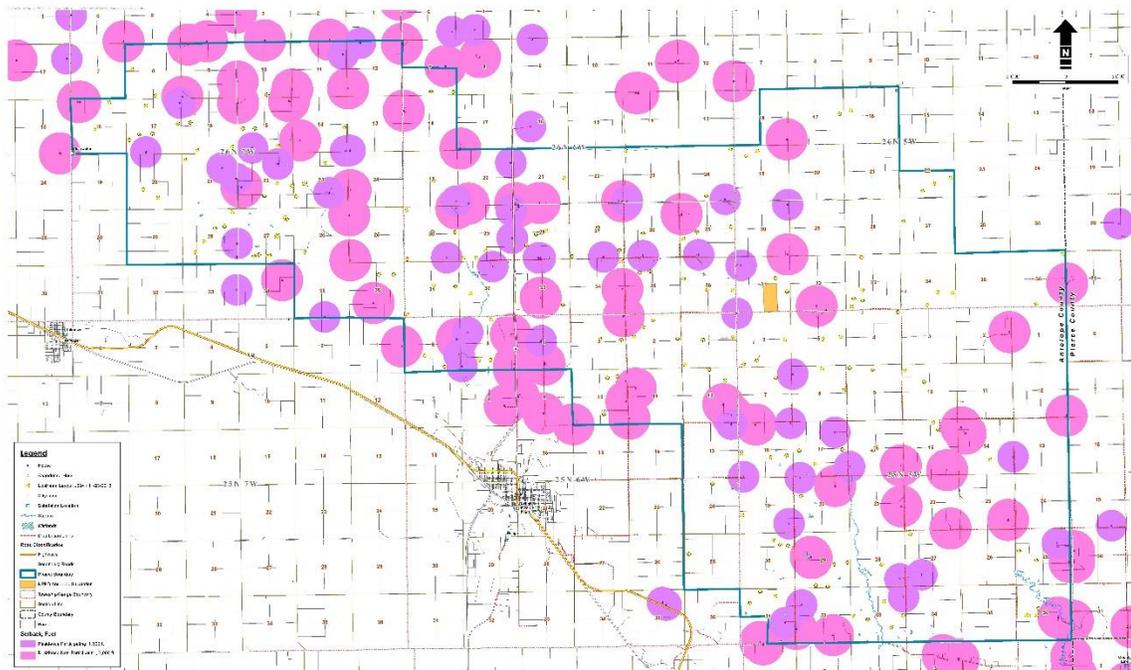
## EXHIBIT F: WETLAND LOCATION MAP AND HOME LOCATION MAP



**Exhibit F - Wetland Location Map**

Jupitream Wind Energy Project, Antelope Pierce Madison Counties, Nebraska

December 17, 2015



**Exhibit F - Home Location Map**

Jupitream Wind Energy Project, Antelope Pierce Madison Counties, Nebraska

December 17, 2015



## EXHIBIT G: NOISE ANALYSIS CERTIFICATION



November 3, 2015

Antelope County Zoning Office  
Charlayne Carpenter - Zoning Administrator  
501 M. Street, Rm. 8  
Neligh, Nebraska 68756

Re: Upstream Wind Energy Project - Noise Analysis and Assessment

Dear Ms. Carpenter,

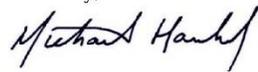
Invenergy has requested that Hankard Environmental analyze and assess the noise that would result from the proposed Upstream Wind Energy Project that is to be located in Antelope County, Nebraska. Hankard Environmental has been conducting environmental noise studies across the U.S. and internationally for industrial projects for more than 20 years. We have extensive expertise with noise from utility scale wind turbine farms, including measurements, modeling, and compliance assessments under a variety of noise regulations, as well as expert testimony.

We understand that Antelope County has specific regulations concerning noise emissions from utility scale wind turbine farms as defined by *Zoning Regulations of Antelope County Nebraska, Article 15 Antelope County Wind Tower Regulations (July 2012)*. More specifically, Section 1504.06 *Safety and Design Standards* states "No Commercial/Utility WECS shall exceed 50 dBA at the nearest existing inhabited dwelling. Exception: a Commercial/Utility may exceed 50 dBA during periods of severe weather as defined by the US Weather Service or during shut down or restart for normal maintenance".

During the upcoming permitting process for the proposed project Hankard Environmental will mathematically model noise from the turbines at each of the occupied dwellings located within the project study area. The modeling will employ noise emission levels provided by the turbine manufacturer per IEC 61400-11 and estimate propagation using ISO 9613-2. We will work collaboratively with the project team to ensure that noise levels from the proposed project, as modeled using current professional methods, do not exceed the noise limits imposed by Antelope County.

Please call if you have any questions.

Sincerely,



Michael Hankard  
Principal Acoustical Consultant



## Wind Power GeoPlanner™

### Microwave Study

#### Upstream Wind Farm



Prepared on Behalf of  
Upstream Wind Energy  
LLC

August 10, 2015





*Upstream Wind Energy LLC  
Wind Power GeoPlanner™  
Microwave Study  
Upstream Wind Farm*

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<b>1. Introduction</b>	<b>- 1 -</b>
<b>2. Project Overview</b>	<b>- 1 -</b>
<b>3. Fresnel Zone Analysis</b>	<b>- 2 -</b>
<b>4. Conclusion</b>	<b>- 5 -</b>
<b>5. Contact</b>	<b>- 5 -</b>

## 1. Introduction

Microwave bands that may be affected by the installation of wind turbine facilities operate over a wide frequency range (900 MHz – 23 GHz). Comsearch has developed and maintains comprehensive technical databases containing information on licensed microwave networks throughout the United States. These systems are the telecommunication backbone of the country, providing long-distance and local telephone service, backhaul for cellular and personal communication service, data interconnects for mainframe computers and the Internet, network controls for utilities and railroads, and various video services. This report focuses on the potential impact of wind turbines on licensed, proposed and applied non-federal government microwave systems.

## 2. Project Overview

### Project Information

**Name:** Upstream Wind Farm  
**County:** Antelope, Pierce and Madison  
**State:** Nebraska

**Number of Turbines:** TBD  
**Blade Diameter:** 116 meters  
**Hub Height:** 80 meters

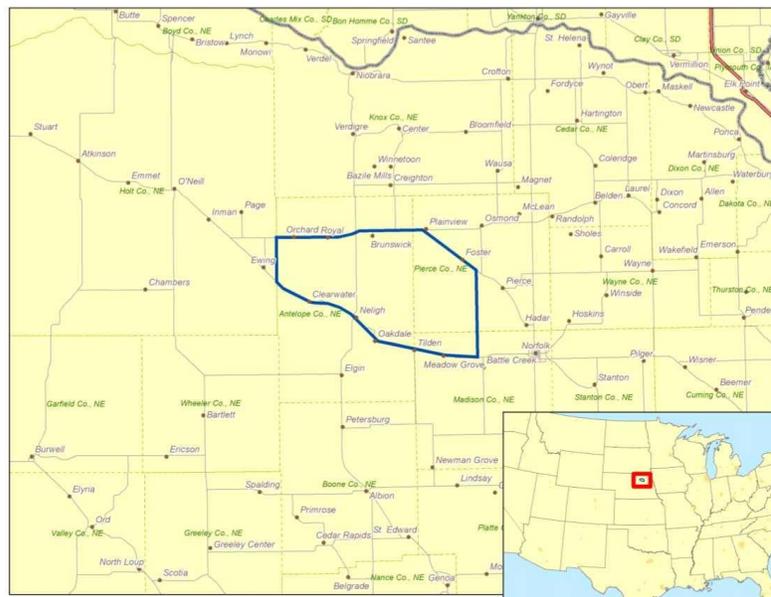


Figure 1: Area of Interest

### 3. Fresnel Zone Analysis

#### Methodology

Our obstruction analysis was performed using Comsearch's proprietary microwave database, which contains all non-government licensed, proposed and applied paths from 0.9 - 23 GHz<sup>1</sup>. First, we determined all microwave paths that intersect the area of interest<sup>2</sup> and listed them in Table 1. These paths and the area of interest that encompasses the planned turbine locations are shown in Figure 2.

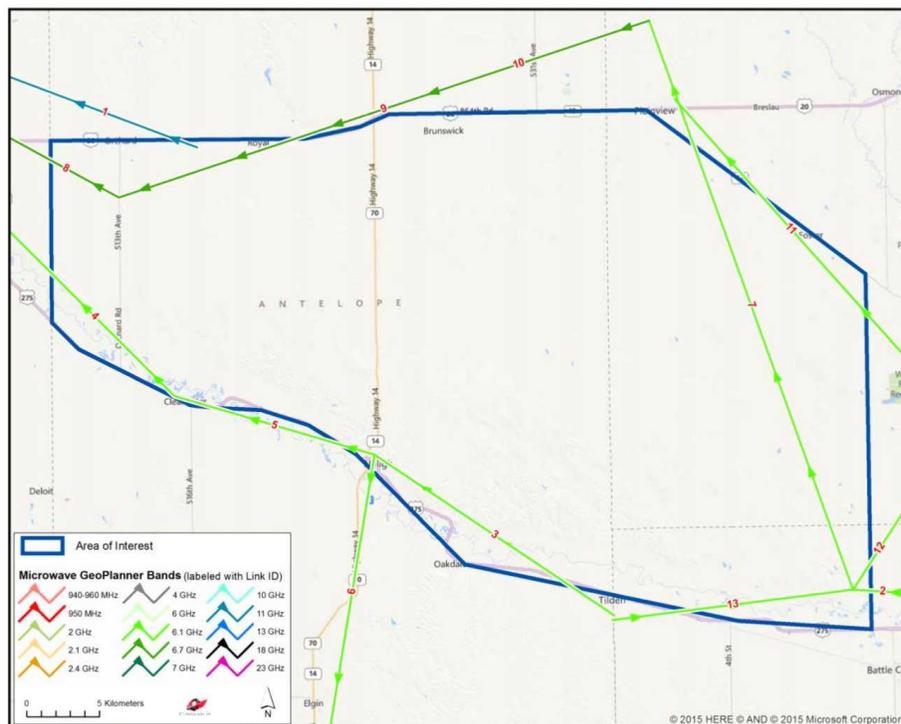


Figure 2: Microwave Paths that Intersect the Area of Interest

<sup>1</sup> Please note that this analysis does not include unlicensed microwave paths or federal government paths that are not registered with the FCC.

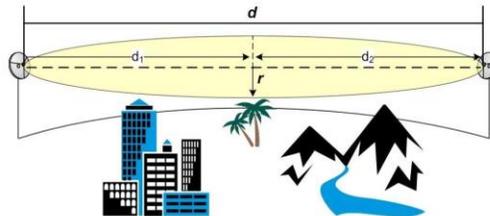
<sup>2</sup> We use FCC-licensed coordinates to determine which paths intersect the area of interest. It is possible that as-built coordinates may differ slightly from those on the FCC license.

ID	Status	Callsign 1	Callsign 2	Band	Path Length (km)	Licensee
1	Proposed	ROYALHUB	PAGE	11 GHz	21.34	United Farmers Cooperative
2	Licensed	WLS717	WQHL901	Lower 6 GHz	25.61	USCOC Nebraska/Kansas, LLC
3	Licensed	WQFW791	WQFW794	Lower 6 GHz	19.94	NE Colorado Cellular, Inc.
4	Licensed	WQFW792	WQFW793	Lower 6 GHz	22.69	NE Colorado Cellular, Inc.
5	Licensed	WQFW794	WQFW792	Lower 6 GHz	14.38	NE Colorado Cellular, Inc.
6	Licensed	WQFW794	WQUJ209	Lower 6 GHz	21.12	NE Colorado Cellular, Inc.
7	Licensed	WQHL901	WQHL905	Lower 6 GHz	41.77	USCOC Nebraska/Kansas, LLC
8	Licensed	WQHL902	WQHL903	Upper 6 GHz	35.75	USCOC Nebraska/Kansas, LLC
9	Licensed	WQHL905	WQHL902	Lower 6 GHz	38.58	USCOC Nebraska/Kansas, LLC
10	Licensed	WQHL905	WQHL902	Upper 6 GHz	38.58	USCOC Nebraska/Kansas, LLC
11	Licensed	WQJG544	WQJG545	Lower 6 GHz	28.39	NE Colorado Cellular, Inc.
12	Licensed	WQKA254	WQHL901	Lower 6 GHz	15.77	USCOC Nebraska/Kansas, LLC
13	Licensed	WQSY524	WQHL901	Lower 6 GHz	16.72	USCOC Nebraska/Kansas, LLC

Table 1: Summary of Microwave Paths that Intersect the Area of Interest  
(See enclosed mw\_geopl.xlsx for more information and  
GP\_dict\_matrix\_description.xls for detailed field descriptions)

Next, we calculated a Fresnel Zone for each path based on the following formula:

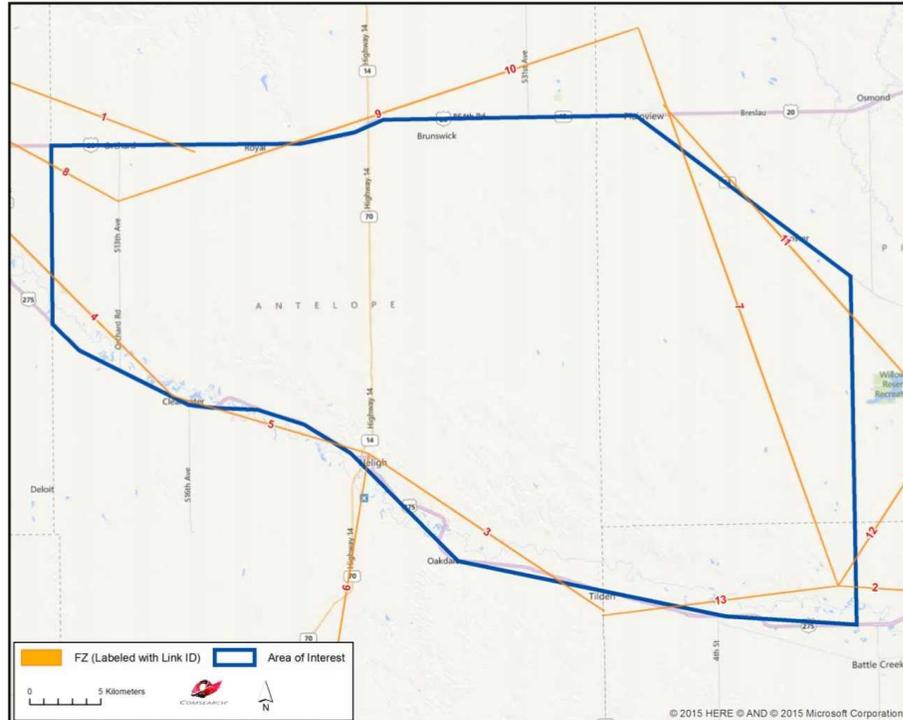
$$r \cong 17.3 \sqrt{\frac{n}{F_{\text{GHz}}} \left( \frac{d_1 d_2}{d_1 + d_2} \right)}$$



Where,

- r = Fresnel Zone radius at a specific point in the microwave path, meters
- n = Fresnel Zone number, 1
- F<sub>GHz</sub> = Frequency of microwave system, GHz
- d<sub>1</sub> = Distance from antenna 1 to a specific point in the microwave path, kilometers
- d<sub>2</sub> = Distance from antenna 2 to a specific point in the microwave path, kilometers

The calculated Fresnel Zone shows the narrow area of signal swath and is calculated for each microwave path in the project area. In general, this is the area where the planned wind turbines should be avoided, if possible. A depiction of the individual Fresnel Zones is shown in Figure 3, and is also included in the shapefiles<sup>3,4</sup>.



*Figure 3: Fresnel Zones in the Area of Interest*

<sup>3</sup> The ESRI® shapefiles enclosed are in NAD 83 UTM Zone 14 projected coordinate system.

<sup>4</sup> Comsearch makes no warranty as to the accuracy of the data included in this report beyond the date of the report. The data provided in this report is governed by Comsearch's data license notification and agreement located at [http://www.comsearch.com/files/data\\_license.pdf](http://www.comsearch.com/files/data_license.pdf).



**Discussion of Potential Obstructions**

Total Microwave Paths	Paths with Affected Fresnel Zones	Total Turbines	Turbines intersecting Fresnel Zones
13	N/A	N/A	N/A

For this project, turbine locations were not provided; thus we could not determine if any potential obstructions exist between the planned wind turbines and the incumbent microwave paths. If the latitude and longitude values for turbine locations are provided, Comsearch can identify where a potential conflict might exist.

**4. Conclusion**

Our study identified 13 microwave paths intersecting the Upstream Wind Farm project area. The Fresnel Zones for these microwave paths were calculated and mapped. We recommend that all turbines be sited in locations that will not obstruct the Fresnel Zones.

**5. Contact**

For questions or information regarding the Microwave Study, please contact:

Contact person: Denise Finney  
 Title: Account Manager  
 Company: Comsearch  
 Address: 19700 Janelia Farm Blvd., Ashburn, VA 20147  
 Telephone: 703-726-5650  
 Fax: 703-726-5595  
 Email: dfinney@comsearch.com  
 Web site: www.comsearch.com



EXHIBIT H: COMSEARCH AND NATIONAL TELECOMMUNICATIONS AND  
INFORMATION ADMINISTRATION REPORTS 04/08/2016

*\*Update at request of Zoning Administrator*

## Wind Power GeoPlanner™

### Microwave Study

Upstream Wind Farm



Prepared on Behalf of  
Upstream Wind Energy  
LLC

April 8, 2016





*Upstream Wind Energy LLC  
Wind Power GeoPlanner™  
Microwave Study  
Upstream Wind Farm*

---

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## 1. Introduction

Microwave bands that may be affected by the installation of wind turbine facilities operate over a wide frequency range (900 MHz – 23 GHz). Comsearch has developed and maintains comprehensive technical databases containing information on licensed microwave networks throughout the United States. These systems are the telecommunication backbone of the country, providing long-distance and local telephone service, backhaul for cellular and personal communication service, data interconnects for mainframe computers and the Internet, network controls for utilities and railroads, and various video services. This report focuses on the potential impact of wind turbines on licensed, proposed and applied non-federal government microwave systems

## 2. Project Overview

### Project Information

**Name:** Upstream Wind Farm  
**County:** Antelope, Pierce and Madison  
**State:** Nebraska

**Number of Turbines:** 168  
**Blade Diameter:** 116 meters  
**Hub Height:** 80 meters



Figure 1: Area of Interest

### 3. Fresnel Zone Analysis

#### Methodology

Our obstruction analysis was performed using Comsearch's proprietary microwave database, which contains all non-government licensed, proposed and applied paths from 0.9 - 23 GHz<sup>1</sup>. First, we determined all microwave paths that intersect the area of interest<sup>2</sup> and listed them in Table 1. These paths and the area of interest that encompasses the planned turbine locations are shown in Figure 2.

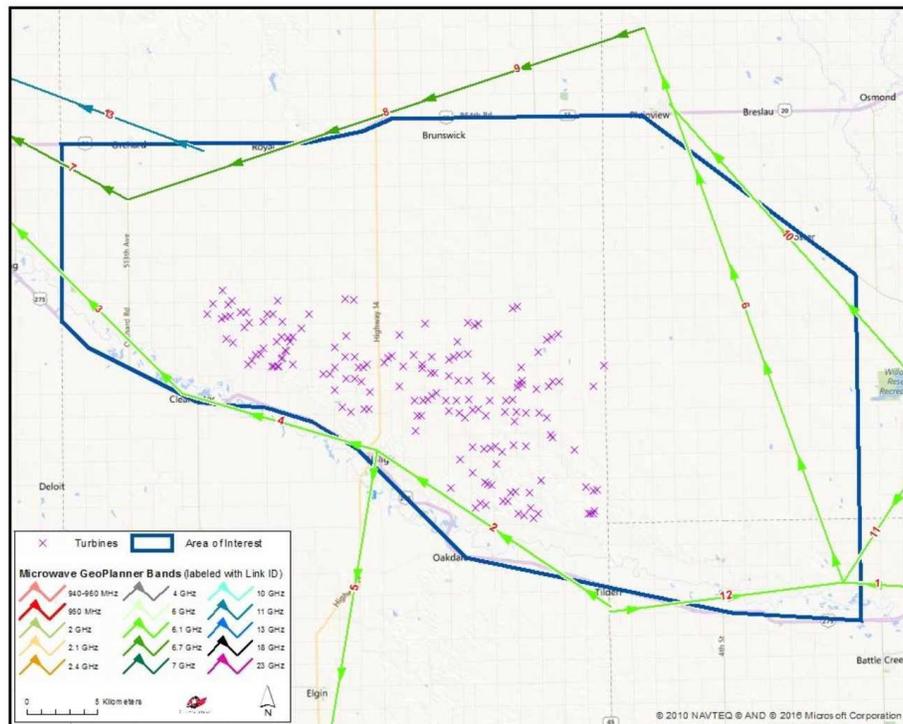


Figure 2: Microwave Paths that Intersect the Area of Interest

<sup>1</sup> Please note that this analysis does not include unlicensed microwave paths or federal government paths that are not registered with the FCC.

<sup>2</sup> We use FCC-licensed coordinates to determine which paths intersect the area of interest. It is possible that as-built coordinates may differ slightly from those on the FCC license.

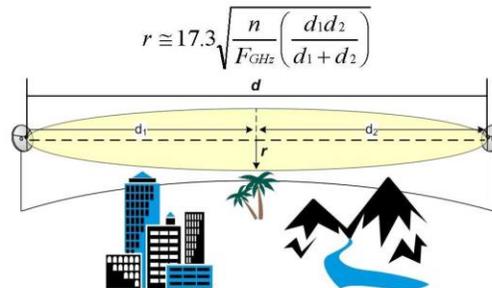
ID	Status	Callsign 1	Callsign 2	Band	Path Length (km)	Licensee
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2	Licensed	WQFW791	WQFW794	6.1 GHz	19.94	NE Colorado Cellular, Inc.
3	Licensed	WQFW792	WQFW793	6.1 GHz	22.69	NE Colorado Cellular, Inc.
4	Licensed	WQFW794	WQFW792	6.1 GHz	14.38	NE Colorado Cellular, Inc.
5	Licensed	WQFW794	WQUJ209	6.1 GHz	21.12	NE Colorado Cellular, Inc.
6	Licensed	WQHL901	WQHL905	6.1 GHz	41.77	USCOC Nebraska/Kansas, LLC
7	Licensed	WQHL902	WQHL903	6.7 GHz	35.75	USCOC Nebraska/Kansas, LLC
8, 9	Licensed	WQHL905	WQHL902	6.1 GHz	38.58	USCOC Nebraska/Kansas, LLC
10	Licensed	WQJG544	WQJG545	6.1 GHz	28.39	NE Colorado Cellular, Inc.
11	Licensed	WQKA254	WQHL901	6.1 GHz	15.77	USCOC Nebraska/Kansas, LLC
12	Licensed	WQSY524	WQHL901	6.1 GHz	16.72	USCOC Nebraska/Kansas, LLC
13	Licensed	WQWN773	WQWN774	11 GHz	21.34	Central Valley AG Cooperative

Table 1: Summary of Microwave Paths that Intersect the Area of Interest  
(See enclosed mw\_geopl.xlsx for more information and  
GP\_dict\_matrix\_description.xls for detailed field descriptions)

#### Verification of Coordinate Accuracy

It is possible that as-built coordinates may differ from those on the FCC license. For this project, one path crosses within close proximity of the proposed turbines and the tower locations for this path will have a critical impact on the result. Therefore, we verified these locations using aerial photography and they were found to be accurate..

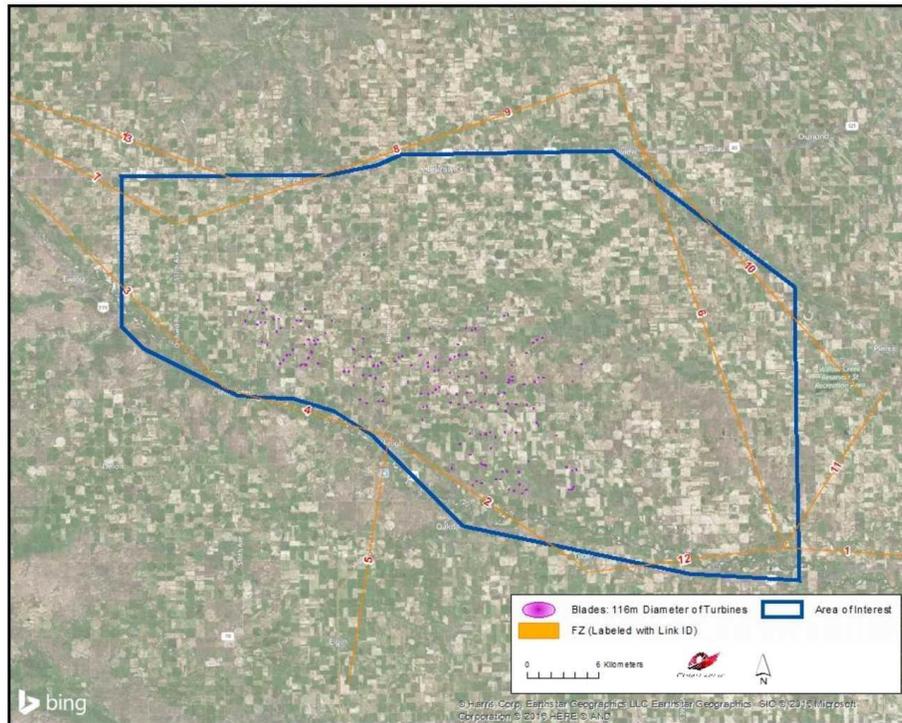
Next, we calculated a Fresnel Zone for each path based on the following formula:



Where,

- r = Fresnel Zone radius at a specific point in the microwave path, meters
- n = Fresnel Zone number, 1
- $F_{\text{GHz}}$  = Frequency of microwave system, GHz
- $d_1$  = Distance from antenna 1 to a specific point in the microwave path, kilometers
- $d_2$  = Distance from antenna 2 to a specific point in the microwave path, kilometers

In general, this is the area where the planned wind turbines should be avoided, if possible. A depiction of the Fresnel Zones for each microwave path listed can be found in Figure 3, and is also included in the enclosed shapefiles<sup>3,4</sup>.



*Figure 3: Microwave Paths with Fresnel Zones*

<sup>3</sup> The ESRI® shapefiles enclosed are in NAD 83 UTM Zone 14 projected coordinate system.

<sup>4</sup> Comsearch makes no warranty as to the accuracy of the data included in this report beyond the date of the report. The data provided in this report is governed by Comsearch's data license notification and agreement located at [http://www.comsearch.com/files/data\\_license.pdf](http://www.comsearch.com/files/data_license.pdf).



#### 4. Conclusion

Total Microwave Paths	Paths with Affected Fresnel Zones	Total Turbines	Turbines intersecting the Fresnel Zones
13	0	168	0

Table 2: Fresnel Zone Analysis Result

Our study identified 13 microwave paths intersecting the Upstream Wind Farm area of interest. The Fresnel Zones for these microwave paths were calculated and mapped in order to assess the potential impact from the turbines. A total of 168 turbines were considered in the analysis, each with a blade diameter of 116 meters and turbine hub height of 80 meters. Of those turbines, none were found to have potential obstruction with the microwave systems in the area.

#### 5. Contact

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EXHIBIT I: ECONOMIC DEVELOPMENT REPORT

Economic Impact of the  
Prairie Breeze Wind Energy Project

By

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#### About the Authors

Dr. David G. Loomis is Professor of Economics at Illinois State University and Director of the Center for Renewable Energy. He has over 10 years experience in the wind industry and has performed economic analyses at the county, region, state and national levels for both wind farms and the wind turbine supply chain. He has served as a consultant for the State of Illinois, Illinois Finance Authority, Illinois State Energy Office, Invenergy, Clean Line Energy Partners, Illinois Chamber of Commerce, Geronimo Energy and others. He has testified on the economic impacts of wind energy before the Illinois Senate Energy and Environment Committee and the LaSalle and Livingston County Boards in Illinois. Dr. Loomis is a widely recognized expert and has been quoted in the Wall Street Journal, Forbes Magazine, Associated Press, and Chicago Tribune as well as appearing on CNN.

Dr. Loomis has published over 15 peer-reviewed articles in leading energy policy and economics journals. He has raised and managed over \$5 million in grant and contracts from government, corporate and foundation sources. He received the 2011 Department of Energy's Midwestern Regional Wind Advocacy Award and the 2006 Best Wind Working Group Award. Dr. Loomis received his Ph.D. in economics from Temple University in 1995.

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## I. Executive Summary

Invenergy Wind Development LLC developed the Prairie Breeze Wind Farm in Antelope and Boone Counties, Nebraska. The purpose of this report is to aid decision makers in evaluating the economic impact of this project on Antelope County, Boone County and the State of Nebraska. The basis of this analysis is to study the direct, indirect and induced impacts on job creation, wages and total economic output.

The Prairie Breeze Wind Energy Project consists of three phases. Prairie Breeze Phase I was built in 2014 and consists of 118 wind turbines for a total capacity of 200.6 MW. Prairie Breeze Expansion (Phase II and III) contains 61 1.79 MW wind turbines for an additional capacity of 109 MW. The total Prairie Breeze Project consists of 179 wind turbines and the associated access roads, transmission and communication equipment, storage areas, and control facilities. The project represents an investment in excess of \$500 million. The total development is anticipated to result in the following:

### Jobs

- 395 new local jobs during construction for Antelope County
- 76 new local jobs during construction for Boone County
- 1,232 new local jobs during construction for the State of Nebraska
- 5 new local long term jobs for Antelope County
- 3 new local long term jobs for Boone County
- 11 new local long term jobs for the State of Nebraska

### Earnings

- Over \$14.5 million in new local earnings during construction for Antelope County
- Over \$1.7 million in new local earnings during construction for Boone County
- Over \$46.4 million in new local earnings during construction for the State of Nebraska
- Over \$ 700,000 in new local long term earnings for Antelope County annually
- Over \$175,000 in new local long term earnings for Boone County annually
- Over \$1.4 million in new local long term earnings for the State of Nebraska annually

### Output

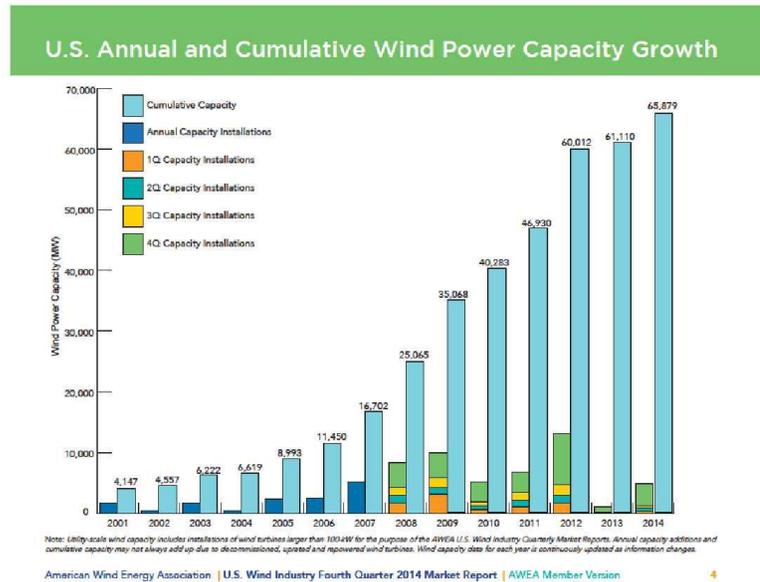
- Over \$40.3 million in new local output during construction for Antelope County
- Over \$7.2 million in new local output during construction for Boone County
- Over \$119.4 million in new local output during construction for the State of Nebraska
- Over \$2.4 million in new local long term output for Antelope County annually
- Over \$1.2 million in new local long term output for Boone County annually
- Over \$4.3 million for the State of Nebraska in new local long term output annually

**II. U.S. Wind Industry Growth and Economic Development**  
**a. U.S. Wind Industry Growth**

The U.S. wind industry grew at a rapid but uneven pace from 2006-2014. In 2012, the U.S. set a new record of 13,131 MW far surpassing the previous annual peak just over 10,000 MW of wind power installed in 2009. Due to the uncertainty surrounding wind energy policy, the industry only installed 1,087 MW in 2013. The industry rebounded in 2014 with 4,854 MW installed.

The total amount of wind capacity in the U.S. by the end of 2014 was 65,879 MW which is enough to power the equivalent of over 19 million homes. China is the global leader with 91.4 GW of installed capacity with Germany in third place with 34 GW of installed capacity (2013 figures). Figure 1 shows the growth in installed annual capacity and cumulative capacity in the U.S. and Figure 2 shows the state-by-state breakdown of installed capacity.

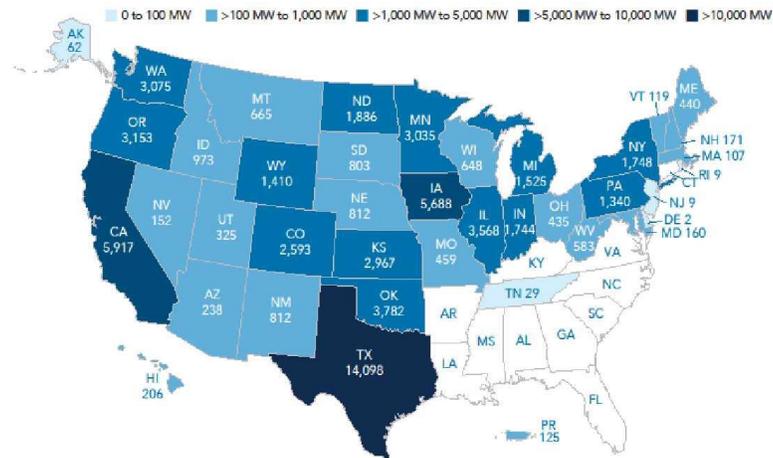
**Figure 1 - U.S. ANNUAL AND CUMULATIVE WIND POWER CAPACITY GROWTH (need to fix in final)**



**American Wind Energy Association, U.S. Wind Industry 4Q2014 Market Report**

Figure 2 – Total Wind Capacity by State (need to fix in final)

## U.S. Wind Power Capacity Installations, by State



American Wind Energy Association | U.S. Wind Industry Fourth Quarter 2014 Market Report | AWEA Member Version

5

### American Wind Energy Association, U.S. Wind Industry Annual Market Report, Year Ending 2014

#### b. Nebraska Wind Industry Growth

Nebraska’s wind power capacity has grown steadily with 75 MW of wind power installed in 2013 and 275 MW installed in 2014. As of December, 2014, Nebraska had 812 MW of total capacity online and ranked 4th in the United States in potential capacity (AWEA, 2014). Table 1 has a list of the operational wind farms in Nebraska through 2014. Nebraska has 15 wind farms covering parts of 10 different locations as shown in Figure 3. The total wind energy generation caused by these added wind farms has grown rapidly as shown in Figure 4.

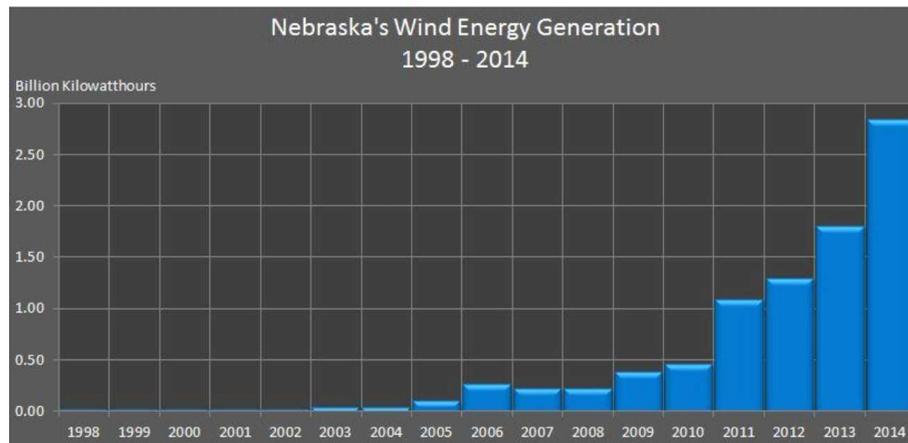
**Table 1 Nebraska Wind Farm Projects**

Wind Farm	Location	Capacity (MW)
Prairie Breeze Wind Farm	Antelope	200.0
Laredo Ridge Wind Farm	Petersburg	81.0
Elkhorn Ridge Wind Farm	Bloomfield	81.0
Broken Bow Wind Farm	Broken Bow	80.0
Broken Bow II Wind Farm	Broken Bow	75.0
Steele Flats Wind Farm	Steele City	74.8
Flat Water Wind Farm	Du Bois	60.0
Ainsworth Wind Farm	Ainsworth	59.4
Crofton Hills Wind Farm	Crofton	42.0
Petersburg Wind Farm	Petersburg	40.5
Kimball Wind Farm	Kimball	10.5
Springview II	Springview	3.0
Valentine Wind	Valentine	1.85
Salt Valley Wind Project	Lincoln	1.3
Valley Wind Turbine	Valley	0.7

[Insert Nebraska Wind Farm Map]

**Figure 3 Nebraska Wind Farm Map**

Source: Wind Development in Nebraska <http://www.neo.n e.gov/statshtml/89.htm>



**Figure 4 Nebraska's Wind Energy Generation from 1998 to 2014**

Source: Wind Energy Generation in Nebraska <http://www.neo.n e.gov/statshtml/89.htm>

**c. Economic Benefits of Wind Farms**

Wind farms have numerous economic benefits. Wind farms create job opportunities in the local area during both the short-term construction phase and the long-term operational phase. Lease payments made to landowners provide a steady source of long-term income to offset the fluctuating prices received from crops. Wind farms strengthen the local tax base helping to improve county services, schools, police and fire departments and infrastructure improvements, such as public roads.

Numerous studies have quantified the economic benefits across the United States (see [http://apps2.eere.energy.gov/wind/windexchange/economics\\_tools.asp](http://apps2.eere.energy.gov/wind/windexchange/economics_tools.asp)). The National Renewable Energy Laboratory has produced economic impact reports for the State of Arizona (NREL, 2008a), State of Idaho (NREL, 2008b), State of Indiana (NREL, 2014), State of Iowa (NREL, 2013), State of Maine (NREL, 2008c), State of Montana (NREL, 2008d), State of New Mexico (NREL, 2008e), State of Nevada (NREL, 2008f), State of Pennsylvania (NREL, 2008g), State of South Dakota (NREL, 2008h), State of Utah (NREL, 2008i), State of West Virginia (NREL, 2008j), State of Wisconsin (NREL, 2008k), and the State of North Carolina (NREL, 2009).

**III. Prairie Breeze Wind Farm Project Description and Location**

**a. Prairie Breeze Wind Farm Project Description**

The Prairie Breeze Wind Energy Center is a 309.6 MW facility in Antelope and Boone Counties, Nebraska located approximately 100 miles northwest of Lincoln. The facility consists of three (3) phases, Prairie Breeze I, II and III. The first phase is 200.6 MW and commenced commercial operation in May of 2014 providing power to the Omaha Public Power District. The expansion is under construction and both phases will be operational in the first quarter of 2016 providing power to Lincoln Electric System (73.5 MW, Phase II) and the City of Grand Island (36 MW, Phase III). The project has more than 180 landowners and is located on approximately 45,000 acres of private land.

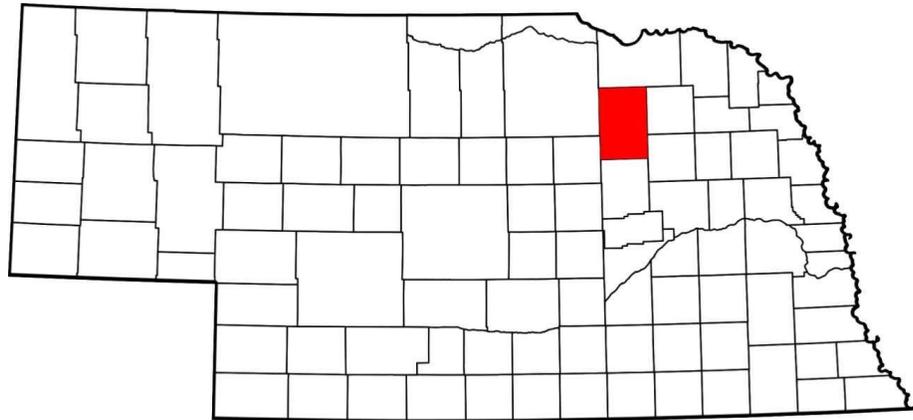
b. Antelope County, Nebraska

Antelope County is located in the northeastern part of Nebraska (see Figure 5). It has a total area of 858 square miles and the U.S. Census estimates that the 2014 population was 6,398 with 3,287 housing units and a population density of 7.8 (persons per square mile) compared to 23.8 for the State of Nebraska. Median household income in the county was \$43,518 (2009-2013). As shown in Table 2, the largest industry is retail trade followed closely by health care and social assistance.

**Table 2 Employment by Industry in Antelope County**

Industry	Number	Percent
Retail trade	289	20.7%
Health care and social assistance	273	19.5%
Wholesale trade	250	17.9%
Other services(except public administration)	118	8.4%
Construction	104	7.4%
Manufacturing	92	6.6%
Finance and insurance	88	6.3%
Transportation and warehousing	36	2.6%
Accommodations and food services	20-99	1.4-7.1%
Professional, Scientific, and Technical Services	20-99	1.4-7.1%
Agriculture, forestry, fishing and hunting	0-20	0-1.4%
Mining, quarrying, and oil and gas extraction	0-20	0-1.4%
Utilities	0-20	0-1.4%
Information	0-20	0-1.4%
Real estate and rental and leasing	0-20	0-1.4%
Management of Companies and Enterprises	0-20	0-1.4%
Arts, entertainment, and recreation	0-20	0-1.4%

Figure 3 – Map of Antelope County, Nebraska



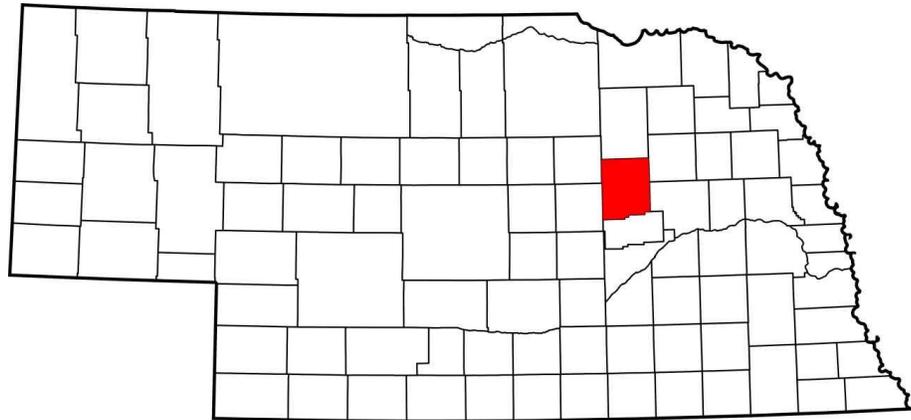
a. Boone County, Nebraska

Boone County is located in the northeastern part of Nebraska adjacent to Antelope County (see Figure 6). It has a total area of 687 square miles and the U.S. Census estimates that the 2014 population was 5,353 with 2,643 housing units and a population density of 8.0 (persons per square mile) compared to 23.8 for the State of Nebraska. Median household income in the county was \$45,246 (2009-2013). As shown in Table 3, the largest industry is health care followed closely by wholesale trade and retail trade.

**Table 3 Employment by Industry in Boone County**

Industry	Number	Percent
Health care and social assistance	288	20.4%
Wholesale trade	263	18.6%
Retail trade	248	17.5%
Manufacturing	102	7.2%
Transportation and warehousing	91	6.4%
Accommodations and food services	80	5.7%
Construction	55	3.9%
Other services(except public administration)	44	3.1%
Professional, Scientific, and Technical Services	28	2.0%
Finance and insurance	20-99	1.4-7.0%
Educational Services	20-99	1.4-7.0%
Real estate and rental and leasing	20-99	1.4-7.0%
Agriculture, forestry, fishing and hunting	5	0.4%
Information	0-20	0-1.4%
Utilities	0-20	0-1.4%
Administrative and Support and Waste Management and Remediation Services	0-20	0-1.4%
Arts, entertainment, and recreation	0-20	0-1.4%

Figure 3 – Map of Boone County, Nebraska



#### IV. Methodology

The economic analysis of wind power development presented here utilizes the National Renewable Energy Laboratory's (NREL's) latest Jobs and Economic Development Impacts (JEDI) Wind Energy Model (W4.28.14). NREL is the U.S. Department of Energy's primary national laboratory for renewable energy and energy efficiency research and development. The JEDI Wind Energy Model is an input-output model that measures the spending patterns and location-specific economic structures that reflect expenditures supporting varying levels of employment, income, and output. Essentially, JEDI is an input-output model, which takes into account the fact that the output of one industry can be used as an input for another. For example, when a wind farm developer purchases turbines to build a wind farm, those wind turbines are made of components such as fiberglass, aluminum, steel, copper, etcetera. Therefore, purchases of wind turbines impact the demand for these components. In addition, when a wind farm developer purchases a wind turbine from a manufacturing facility, the manufacturer uses some of that money to pay employees, and then the employees spend that money to purchase goods and services within their community. In essence, JEDI reveals how purchases of wind project materials not only benefit local turbine manufacturers but also the local industries that supply the concrete, rebar, and other materials (Reategui et al., 2009). The JEDI model uses construction cost data, operating cost data, and data relating to the percentage of goods and services acquired in the state to calculate jobs, earnings, and economic activities that are associated with this information. The results are broken down into the construction period and the operation period of the wind project. Within each period, impacts are further divided into direct, turbine and supply chain (indirect), and induced impacts.

The Jobs and Economic Development Impacts (JEDI) Model was developed in 2002 to demonstrate the economic benefits associated with developing wind farms in the United States. The model was

developed by Marshall Goldberg of MRG & Associates, under contract with the National Renewable Energy Laboratory. The JEDI model utilizes state specific industry multipliers obtained from IMPLAN (IMpact Analysis for PLANning). IMPLAN software and data are managed and updated by the Minnesota IMPLAN Group, Inc., using data collected at federal, state, and local levels. The JEDI model considers 14 aggregated industries that are impacted by the construction and operation of a wind farm: agriculture, construction, electrical equipment, fabricated metals, finance/insurance/real estate, government, machinery, mining, other manufacturing, other services, professional service, retail trade, transportation/communication/public utilities, and wholesale trade (Reategui et al., 2009). This study does not analyze net jobs. It analyzes the gross jobs that the new wind farm development supports.

**Direct impacts** during the construction period refer to the changes that occur in the onsite construction industries in which the direct final demand (i.e., spending on construction labor and services) change is made. Final demands are goods and services purchased for their ultimate use by the end user. Onsite construction-related services include engineering, design, and other professional services. Direct impacts during operating years refer to the final demand changes that occur in the onsite spending for wind farm workers. Direct jobs consist primarily of onsite construction and project development labor.

The initial spending on the construction and operation of the wind farm creates a second layer of impacts, referred to as “turbine and supply chain impacts” or “indirect impacts.” Indirect impacts during the construction period consist of the changes in inter-industry purchases resulting from the direct final demand changes, and include construction spending on materials and wind farm equipment and other purchases of goods and offsite services. Essentially, these impacts result from “spending related to project development and on-site labor such as equipment costs (turbines, blades, towers, transportation), manufacturing of components and supply chain inputs, materials (transformer, electrical, HV line extension, HV subinterconnection materials), and the supply chain of inputs required to produce these materials” (JEDI Support Team, 2009, 2). Concrete that is used in turbine foundations increases the demand for gravel, sand, and cement. As a result of the expenditure for concrete there is increased economic activity at quarries and cement factories and these changes are indirect impacts. The accountant for the construction firm and the banker who finances the contractor are both considered indirect impacts. All supply chain component impacts/manufacturing-related activities are included under indirect impacts; therefore, the late stage turbine assembly process, which includes gearbox assembly, blade production, and steel rolling are all included under the construction period indirect impacts category.

**Indirect impacts** during operating years refer to the changes in inter-industry purchases resulting from the direct final demand changes. Essentially, these impacts result from “expenditures related to on-site labor, materials, and services needed to operate the wind farms (e.g., vehicles, site maintenance, fees, permits, licenses, utilities, insurance, fuel, tools and supplies, replacement parts/equipment); the supply chain of inputs required to produce these goods and services; and project revenues that flow to the local economy in the form of land lease revenue, property tax revenue, and revenue to equity investors” (JEDI Support Team, 2009, 3). All land lease payments and property taxes show up in the operating-years portion of the results because these payments do not support the day-to-day operations and maintenance of the wind farm but instead are more of a latent effect that results from the wind farm being present (Eric Lantz, February 25, 2009, e-mail message to Jennifer Hinman).

**Induced impacts** during construction refer to the changes that occur in household spending as household income increases or decreases due to the direct and indirect effects of final demand changes.

Local spending by employees working directly or indirectly on the wind farm project who receive their paychecks and then spend money in the community is included. Additional local jobs and economic activity are supported by these purchases of goods and services. Thus, for example, the increased economic activity at quarries and cement factories results in increased revenues for the affected firms and raises individual incomes. Individuals employed by these companies then spend more money in the local economy, e.g., as workers receive income, they may decide to purchase more expensive clothes, or higher quality food along with other goods and services from local businesses. This increased economic activity may result from “construction workers who spend a portion of their income on lodging, groceries, clothing, medicine, a local movie” theater, restaurant, or bowling alley; or a “steel mill worker who provides the inputs for turbine production and spends his money in a similar fashion, thus supporting jobs and economic activities in different sectors of the economy” (JEDI Support Team, 2009, 2). Induced impacts during operating years refer to the changes that occur in household spending as household income increases or decreases as a result of the direct and indirect effects from final demand changes. Some examples include a “wind farm technician who spends income from working at the wind farm on buying a car, a house, groceries, gasoline,” or movie tickets; or a “worker at a hardware store who provides spare parts and materials needed at the wind farm and who spends money in a similar fashion, thus supporting jobs and economic activities in different sectors of the economy” (JEDI Support Team, 2009, 3).

This methodology was been validated by a paper in the peer-reviewed economics literature. In the article, “Ex Post Analysis of Economics Impacts from Wind Power Development in U. S. Counties,” the authors conduct an ex post econometric analysis of the county-level economic development impacts of wind power installations from 2000 through 2008. They find an aggregate increase in county-level personal income and employment of approximately \$11,000 and 0.5 jobs per megawatt of wind power capacity which is consistent with the JEDI results at the county level. (Brown, 2012)

#### V. Results

The results were derived from detailed cost estimates supplied by Invenergy. In addition, Invenergy also estimated the percentages of project materials and labor that will be coming from within Antelope and Boone Counties and the State of Nebraska.

Eight separate JEDI models were run to show the economic impact of the Prairie Breeze Wind Farms. The first JEDI model used the 2014 Antelope County multipliers from IMPLAN for the Prairie Breeze Phase I project. The second JEDI model used the same county multipliers for the Prairie Breeze Expansion Project. The third and fourth models used the 2014 Boone County multipliers for Phase I and the Expansion respectively. The fifth and sixth models treated Antelope and Boone Counties as a region allowing for spill-over effects from one county to the other. Finally, the seventh and eighth models used the built-in JEDI state multipliers for the State of Nebraska. For convenience, the results are combined for the Prairie Breeze Phase I and Expansion.

The output from these models is shown in Tables 2-4. Table 2 lists the total employment impact from the total Prairie Breeze Wind Farm for Antelope County, Boone County, the Antelope and Boone Region, and the State of Nebraska. Table 3 shows the impact on total earnings and Table 4 contains the impact on total output.

#### **Table 2 Total Employment Impact from the Prairie Breeze Wind Farm**

	Antelope County	Boone County	Antelope/Boone Region	State of Nebraska
<b>Construction</b>				
Project Development and Onsite Labor Impacts	92	25	135	156
Turbine and Supply Chain Impacts	210	38	231	745
Induced Impacts	93	13	88	331
<i>New Local Jobs during Construction</i>	395	76	455	1,232
<b>Operations</b>				
Onsite Labor Impacts	11	3	18	18
Local Revenue and Supply Chain Impacts	11	3	13	19
Induced Impacts	5	3	5	11
<i>New Local Long Term Jobs</i>	27	9	35	47

The results from the JEDI model show significant employment impacts from the Prairie Breeze Wind Farm. Employment impacts can be broken down into several different components. Direct jobs created during the construction phase typically last anywhere from 6 months to over a year depending on the size of the project; however, the direct job numbers present in Table 2 from the JEDI model are based on a full time equivalent (FTE) basis for a year. In other words, 1 job = 1 FTE = 2,080 hours worked in a year. A part time or temporary job would constitute only a fraction of a job according to the JEDI model. For example, the JEDI model results show 395 new jobs during construction in Antelope County, though the construction of the wind farms may actually involve hiring closer to 790 workers for 6 months. Thus, due to the short-term nature of construction projects, the JEDI model significantly understates the number of people actually hired to work on the project. It is important to keep this fact in mind when looking at the numbers or when reporting the numbers.

As shown in Table 2, new local jobs created or retained during construction total 395 for Antelope County, 76 for Boone County, 455 for the region and 1,232 for the State of Nebraska. New local long term jobs created from the Prairie Breeze Wind Farm total 27 for Antelope County, 9 for Boone County, 35 for the region and 47 for the State of Nebraska.

Direct jobs created during the operational phase last the life of the wind farm, typically 20-30 years. Direct construction jobs and operations and maintenance jobs both require highly-skilled workers in the fields of construction, management, and engineering. These well-paid professionals boost economic development in rural communities where new employment opportunities are welcome due to economic downturns (Reategui and Tegen, 2008). Accordingly, it is important to not just look at the number of jobs but also the earnings that they produce. The earnings impacts from the Prairie Breeze Wind Farm are shown in Table 3 and are categorized by construction impacts and operations impacts. The new local earnings during construction total over \$1.6 million for Antelope County, over \$200,000 for Boone County, over \$1.5 million for the region and over \$46 million for the State of Nebraska. The new local long term earnings total over \$700,000 for Antelope County, over \$175,000 for Boone County, over \$830,000 for the region and over \$1.4 million for the State of Nebraska.

**Table 3 Total Earnings Impact from the Prairie Breeze Wind Farm**

	Antelope County	Boone County	Antelope/Boone Region	State of Nebraska
<b>Construction</b>				
Project Development and Onsite Earnings Impacts	\$3,830,229	\$735,095	\$4,565,324	\$5,833,894
Turbine and Supply Chain Impacts	\$9,030,896	\$837,078	\$6,712,083	\$30,173,215
Induced Impacts	\$1,647,474	\$212,393	\$1,561,960	\$10,410,809
<i>New Local Earnings during Construction</i>	\$14,508,600	\$1,784,566	\$12,839,367	\$46,417,918
<b>Operations</b>				
Onsite Labor Impacts	\$444,800	\$85,366	\$530,165	\$529,910
Local Revenue and Supply Chain Impacts	\$205,402	\$43,884	\$222,220	\$621,788
Induced Impacts	\$78,468	\$46,673	\$78,528	\$328,395
<i>New Local Long Term Earnings</i>	\$728,670	\$175,922	\$830,913	\$1,480,093

Output refers to economic activity or the value of production in the state or local economy. According to Table 4, the new local output during construction totals over \$40.3 million for Antelope County, over \$7.6 million for Boone County, over \$46.3 million for the region and over \$119 million for the State of Nebraska. The new local long term output totals over \$2.4 million for Antelope County, over \$1.2 million for Boone County, over \$2.6 million for the region and over \$4.3 million for the State of Nebraska.

**Table 4 Total Output Impact from the Prairie Breeze Wind Farm**

	Antelope County	Boone County	Antelope/Boone Region	State of Nebraska
<b>Construction</b>				
Project Development and Onsite Jobs Impacts on Output	\$3,830,229	\$735,095	\$4,565,324	\$6,814,623
Turbine and Supply Chain Impacts	\$30,402,103	\$5,720,789	\$35,911,337	\$82,173,368
Induced Impacts	\$6,120,449	\$805,429	\$5,902,828	\$30,449,875
<i>New Local Output during Construction</i>	\$40,352,781	\$7,261,313	\$46,379,489	\$119,437,866
<b>Operations (Annual)</b>				
Onsite Labor Impacts	\$444,800	\$85,366	\$530,165	\$529,910
Local Revenue and Supply Chain Impacts	\$1,682,522	\$1,012,283	\$1,857,929	\$2,880,142
Induced Impacts	\$291,578	\$176,994	\$296,763	\$960,715
<i>New Local Long Term Output</i>	\$2,418,900	\$1,274,643	\$2,684,857	\$4,370,767

Wind power projects increase the property tax base of a county, creating a new revenue source for education and other local government services. According to the JEDI model, the Prairie Breeze Wind Farm will generate more than \$1.2 million in annual property taxes when it is built.

Landowners benefit when they lease their land to wind developers because of the stabilized income stream. According to the model's results, the Prairie Breeze Wind Farm will generate more than \$800,000 annually in extra income for Nebraska landowners who lease their land for the project.

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EXHIBIT J: LETTERS OF SUPPORT

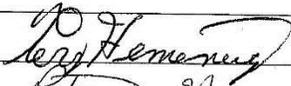
September 1, 2015

To Whom It May Concern,

As farmers in the Orchard, Nebraska area, we support Upstream Wind Project in Antelope County. Our economy will benefit in these hard times with this in our area. Farmers/landowners can use the extra income and farmers who make money, spend money on updating and improving their own businesses which in turn improves local economies. In the projects lifetime, landowner payments and nameplate capacity tax will provide over \$40 million to our residents and the county, from what we understand, and that sounds like a great boost to our economy. Then there's the bringing in/hiring construction workers which brings activity to already established businesses, another boost! And as small communities and schools struggle to grow or even stay a live, hiring full-time employees to operate and maintain the Upstream farm can be a great step in that direction. Our communities need jobs to bring in or keep our young families in our area. We see Upstream Wind project as a benefit in that direction. Plus providing a clean, renewable source of energy is something which not only helps our area but the whole nation.

Sincerely,

Terry + Patricia Hemenway  
 86198 513<sup>th</sup> Ave  
 Orchard NE 68764


cell: 402-929-0445 home 402-893-2422

Nov. 16, 2015.

To Whom it may Concern

I believe that the Invenery wind tower project will be good for our Community. It will benefit the Economy of our Community by bringing more jobs to our County and also more tax revenue.

Sincerely  
Karen Peterson

To Whom It May Concern,

My name is Kathy Schultz. My family and I live and farm in the Clearwater, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind Energy project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide more than \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream wind farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Fred & Kathy Schultz  
51964 855 RD  
Clearwater, NE 68726

Home: 402-877-4064

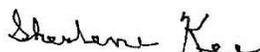
To Whom It May Concern,

We live and farm in the Neligh, Nebraska area. The purpose of our letter today is to express our support for the Upstream Wind Energy project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide more than \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream wind farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. We ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,  

Robert & Sherlene Kee  
53471 848<sup>th</sup> Rd  
Tilden, NE 68781

Home: (402) 368-5944

To Whom It May Concern,

We live and farm in the Neligh, Nebraska area. The purpose of our letter today is to express our support for the Upstream Wind Energy project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide more than \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream wind farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. We ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,

Roger and GERALYN Kee  
53639 839<sup>th</sup> Rd  
Tilden, NE 68781



Home: (402) 368-5944

To Whom It May Concern,

My Name is Levern Hauptman. My family and I live and farm in the Neligh, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind Energy project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide leveled payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide more than \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream wind farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Levern Hauptman  
52725 853<sup>rd</sup> Rd  
Neligh, NE 68756

Home: (402) 887-4271

To Whom It May Concern,

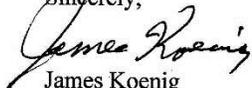
My Name is James Koenig. My family and I live and farm in the Clearwater, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind Energy project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide more than \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream wind farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



James Koenig  
85445 519 Ave  
Clearwater, NE 68726

Phone: 402-929-0135

November 12, 2015

To Whom It May Concern,

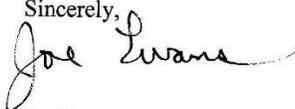
My Name is Joe Evans. My family and I live and farm in the Oakdale, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide over \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Joe Evans  
84629 529<sup>th</sup> Ave.  
Oakdale, NE 68761  
Phone: (402) 776-2610

To Whom It May Concern,

My Name is Harlan Good. My family and I live and farm in the Neligh, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind Energy project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide more than \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream wind farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Harlan Good  
51925 855 RD  
Clearwater, NE 68726

Home: 402-887-4284

To Whom It May Concern,

My Name is Lyle Dredge. My family and I live and farm in the Neligh, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind Energy project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide more than \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream wind farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Lyle Dredge  
52277 853 RD  
Neligh, NE 68756

Home: 402-887-4297

November 12, 2015

To Whom It May Concern,

My Name is Robert Bennett. My family and I live and farm in the Neligh, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide over \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Robert Bennett  
52451 854th Rd  
Neligh, NE 68756  
Phone: (402) 887-4655

October 15, 2015

To Whom It May Concern,

My Name is Dan Olson. My family and I live and farm in the Clearwater and Neligh, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind project in Antelope County.

Our rural areas need economic development. The Upstream Project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner and payments and nameplate capacity tax will provide over \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Dan Olson  
85347 519<sup>th</sup> Ave  
Clearwater, NE 68726

Cell 402-750-2133

November 12, 2015

To Whom It May Concern,

My Name is Caroline Jaeke. My family and I live and farm in the Clearwater, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide leveled payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide over \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Caroline Jaeke  
51731 855 Rd  
Clearwater, NE 68726

Home: 402-485-2575

November 16, 2015

To Whom It May Concern,

My Name is David Hoffman. My family and I live and farm in the Clearwater, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide over \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,

David Hoffman  
85325 518 Ave  
Clearwater, NE 68726

  
Cell: 402-640-8380 Home: 402-485-9237

11/16/15

November 15, 2015

To Whom It May Concern,

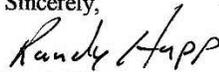
My Name is Randy Hupp. My family and I live and farm in the Neligh, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide levelized payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide over \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

Sincerely,



Randy Hupp  
P.O. Box #1  
1404 N. 8<sup>th</sup> St.  
O'Neill, NE 68763  
402-340-6254

Dave Schrader <schrader\_dc@live.com> support From: Geier Rick <rickgeier3@yahoo.com>  
Sent: Monday, November 16, 2015 11:08 AM To: schrader\_dc@live.com Subject: Letter of  
support Dave, Thanks for helping with a letter of support for the U  
To  
Geier Rick  
Today at 9:34 AM

support

---

My Name is David Schrader I have lived in Antelope Co.all my life. My family and I live and farm in the Neligh, Nebraska area. The purpose of my letter today is to express my support for the Upstream Wind project in Antelope County.

Our rural areas need economic development. The Upstream project will help diversify our rural economy by providing payments to landowners through land agreements already in place with a large amount of these dollars being put back into our local economy. Antelope County residents will benefit from the nameplate capacity tax which will provide leveled payments over the life of the project. Together the landowner payments and nameplate capacity tax will provide over \$40 million in payments to Antelope County and its residents over the life of the project.

During the construction phase of the project the local economy will benefit from the large number of workers, approximately 200, in the area. After construction is complete fourteen full time employees will be needed to operate and maintain the Upstream farm, which would again benefit and strengthen our local communities by offering jobs for residents and also bringing young families to the area with school age and younger children.

In summary, economic development is important for our local community, county, state and country along with providing clean, renewable wind energy which supports US energy independence. I ask for your support to move the Upstream project forward. Thank you for your time and consideration.

David Schrader

[Reply](#), [Reply All](#) or [Forward](#) | [More](#)

On Monday, November 16, 2015 8:40 PM, Stan Heithoff <stanheithoff@hotmail.com> wrote:

To who it may concern,

My name is Stan Heithoff. My family and I live in the Elgin area. I am writing this letter in support of the Upstream Wind Energy Project. The project will help diversify our rural economy with payments to farmer participants and added jobs to our area. It will give local stores more business to help the local economy. As a District 18 school board member I have seen the great importance of the name plate tax. The added revenue from it has allowed our district to lower our levy giving property tax relief to everyone in our district. Once again, I hope you fully support the Upstream project. Thank you, Stan Heithoff

Sent from my iPhone



## EXHIBIT K: DECOMMISSIONING PLAN



February 2016

# UPSTREAM WIND

ANTELOPE COUNTY, NEBRASKA

Invenergy

## DECOMMISSIONING REPORT

Prepared for:

Upstream Wind, LLC  
c/o Invenergy LLC  
One South Wacker Drive  
Suite 1900  
Chicago, IL 60606

Prepared by

HDR Engineering, Inc.  
701 Xenia Avenue South  
Minneapolis, MN 55416



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**FIGURES**

Attachments:

- Figure 1: Upstream Wind Project Area and Preliminary Layout
- Figure 2: Typical Wind Turbine Generator
- Figure 3: Typical Foundation Designs Section
- Figure 4: Typical Access Road Section
- Figure 5: Estimated Decommissioning Costs / Salvage Value

## UPSTREAM WIND ENERGY PROJECT

### System Description

The Upstream Wind Energy Project currently anticipated to be composed of 151 wind turbine with a nominal generating capacity of 350 MW. The project occupies properties in Antelope County, Nebraska. This decommissioning report will address the proposed units and certain auxiliary components. The proposed project is anticipated to consist of the following primary components.

- Wind Turbine Generators (WTGs)                      GE 2.0-2.3 116 - 80 M Hub Height
- Towers
- Foundations
- Crane Pads for erection
- Collection system (LF)
- Collection System Junction Boxes
- Collection system Transformers
- Access and Maintenance Roads (Miles)

Figure 1 provides the currently proposed project site area and layout.

The design of access roads, electrical transmission systems, substations, ancillary systems and underground collection service will be determined during the development of the final Upstream project system design. Quantities indicated in this report are based on the currently developed site information as provided by Upstream Wind, LLC. Developer has indicated that final designs and quantities will be provided as they are developed and as-built plans will be provided at the completion of construction.

### Decommissioning Sequence

In the event the Project requires decommissioning and removal, the following sequence for removal of the components may be anticipated:

- De-energize the Project
- Remove rotors and turbines
- Remove towers and internals
- Remove collection step-up transformers and junction boxes
- Partially remove wind turbine foundations
- Remove access roads and crane pads
- Removes and or repurpose ancillary structures and equipment

After removal of all equipment and materials the excavated and disturbed areas are anticipated to be backfilled with appropriate materials and graded to blend with the surrounding contours.

## WIND TURBINES

### Wind Turbine Technical Data

The Upstream Wind Energy Project is proposing to use 151 GE 2.0-2.3 116 Wind Turbines manufactured by General Electric for a project generating capacity of approximately 350 MW. The towers are painted monopole tubular steel, white in color, with a turbine hub height of 80 meters (262 feet). The project will use 116 meter (381 feet) diameter rotors. Each turbine and highest rotor tip will reach a total height of 196 meter (453 feet) above ground surface (Figure 2).

Properly maintained wind turbines are anticipated to have a minimum life of 20 years. At the end of the project life, depending on market conditions and project viability, the wind turbines may be “re-powered” with new or refurbished nacelles, towers, and/or blades. Alternatively, the wind turbines and towers may be decommissioned, removed and the components salvaged.

The major components of each WTG assembly are anticipated to be either salvageable or reusable. It is anticipated that following de-construction that the tower sections and turbines will be transported to a marshaling yard up to 50 miles away, for further processing. Total estimated salvage or reusable materials for the major components, each WTG assembly include:

• Tower assembly (steel)	159.9 Tons
• Nacelle (Mixed materials – Estimated 10% copper)	65.3 Tons
• Rotor nose cone (steel)	33.0 Tons
• Rotor blades (fiberglass each)	12.1 Tons
• Controller	3.2 Tons

Decommissioning will require the removal and either recycling or salvaging of all “down tower” electrical cabling and switching equipment. This material is generally removed and transported with the tower components.

It is estimated that the erection cost per turbine is approximately \$99,280 in 2016 dollars. The modular design of the WTG allows for ease of construction and de-construction. Anticipated costs for de-construction are estimated to be equivalent to the construction costs.

## WTG Foundations

### WTG Spread Foundation Design/Decommissioning

Each turbine foundation is anticipated to be an octagonal spread footing (Fig. 3) and consists of a base with a circular pedestal. Antelope County requires each foundation to be removed to a depth of 4 feet below the final ground surface. The upper 5 feet of the turbine foundation pedestal will be removed by a jack hammer mounted on a bobcat, excavator or other similar method. The concrete, reinforcing steel and anchor bolts will be removed and the remaining void will be backfilled, compacted and graded to blend with the surrounding contours.

There is essentially little salvage value to the WTG foundations. Quantities estimated for the removal of each foundation are as follows:

- Anchor bolt salvage (steel) 3.8 Tons
- Reinforcement salvage (steel) 2.0 Tons
- Concrete 47 Cubic yards (CY)
- Compacted backfill (replacement fill) 38 CY

## Wind Turbine Transformers

### Wind Turbine Transformer Design/Decommissioning

Each turbine step-up transformer sits adjacent to the turbine and is approximately 6 feet high with a 6 foot by 6 foot footprint. Each transformer will be disconnected, removed from site, and disposed of according to environmental and other regulatory conditions current at the time of the decommissioning. Salvagers have indicated that they would remove the transformers as part of salvage /recycle operation. After decommissioning activities, the transformer pad areas will be scarified along with the turbine foundation.

## Access Roads

### Access Road Construction

A typical access road detail is included as Figure 4. It is anticipated that the final access roads to each turbine will be approximately 16 feet wide with enlarged areas at the turbine sites and at intersections with connecting public roads. The existing soils will be excavated, shaped, and graded to match the typical contour of the land adjacent to the access road and compacted prior to construction of the roads. Developer has estimated that 201,000 Linear Feet(LF) of access road will be constructed for this project.

It is anticipated that the access roads will be decommissioned, if required, by removing the base and wear surface aggregate materials and stockpiling such material off-site for further recycle or reuse as general fill. The aggregate will be replaced with topsoil and graded to blend with the existing contours. Major materials anticipated for the construction of the access roads are considered as follows

- Geotextile fabric
- Base aggregate
- Wear surface aggregate

Should the access roads be decommissioned and the materials reclaimed, it is possible that the local agencies or land owners may utilize the aggregate material without processing for maintenance of their local roads. If the roads are to be decommissioned it is anticipated that the materials will be removed and hauled to a reprocessing site within 25 miles of the Project. While damage is not anticipated, any public streets damaged due to the reclamation process will be repaired. Top soil may be required to allow finish grading of the surface to blend with the existing surfaces.

Salvage value for the road materials assumes that seventy five percent (75%) of the aggregate wear surface course can be salvaged for future use, fifty percent (50%) of the aggregate base course can be salvaged for future use and that the remaining materials would be viable for general fill in non-structural fill applications. The geotextile fabric cannot be salvaged and is would be land filled.

### Crane Pads

Crane pads as required for the erection, service, and maintenance of the turbines are generally constructed and maintained, during operation. These generally will consist of 80-90 Cubic Yards of compacted native material and approximately 1 foot of aggregate. After decommissioning activities, crane pad aggregate may be removed and pad areas filled and scarified, as necessary. Restoration is expected to be performed in consultation with the landowner to near as practicable to their original condition with native seed and soils.

### Cables

#### Cable Wire and Trench Typical Installation

Construction of underground cable systems (collection, communication and like systems) will be constructed a minimum of 48 inches below the ground surface. In all cable locations outside of access roads, the trenches are backfilled with on-site earthen materials with at least 6 inches of topsoil. At roads, the cables will be in conduits which are a minimum of 48 inches below the final surface.

#### Cable Wire, Junction Box, and Trench Decommissioning

Since the cables will be located well below the ground surface and will not impose an obstacle to farm activities, physical removal of the cables is not considered to be required to restore the former use of the ground except in areas where a junction box is present. It is anticipated that the removal of the junction boxes and related cable to a depth of 48 inches may be required for full decommissioning of the site.

#### Earthwork and Topsoil Restoration

Once all of the aboveground improvements are removed, the remaining work to complete project decommissioning will consist of shaping and grading of the surface areas to as near as practicable to their original contours prior to construction of the turbine sites and access roads. These activities are anticipated to be carried out in consultation with the landowner.

## SUMMARY OF DECOMMISSION COSTS

The following is a summary of the estimated costs for project decommissioning and possible salvage values given the preliminary status of design. A further breakdown of costs is included in Figure 5. This estimate was developed using the various references listed below:

Estimated overall decommissioning costs	
• Project	\$24,657,880
• Estimated Salvage Value	
• Project	\$14,778,624

It is estimated that the decommissioning costs exceed the salvage value of the components by an estimated \$9,879,256 or approximately \$65,426 per unit. This estimate is based on 2016 estimated costs and published values and does not assume any inflation or other market fluctuations.

**Financial Assurance**

To ensure accuracy in the material quantities outlined above, HDR recommends that this report and the final engineering drawings be reviewed by our office prior to operation of the Project to verify final material quantities.

For Antelope County, financial assurance in an amount sufficient to adequately perform the required decommissioning per this plan and according to all local, state, and federal environmental regulations will be secured by Upstream Wind Energy LLC. Upstream Wind Energy LLC has stipulated that they will provide financial assurance in the amount equal to the professional engineer's certified estimate of the decommissioning costs on or by the fifteenth (15<sup>th</sup>) year of operations. To the extent that the estimate of the decommissioning costs are zero (or negative), financial assurance are not anticipated be required on the part of Upstream Wind Energy LLC, provided, however that Upstream Wind Energy, LLC shall re-evaluate the need for financial assurance at least annually after the fifteenth (15<sup>th</sup>) year of operations by a qualified engineer certified in the State of Nebraska.

**CONCLUSION**

This report is an accurate representation of the estimated decommissioning costs and salvage values, at this preliminary stage of project development and was prepared in accordance with standards of care for engineering evaluations of this type and contains no intentional false statements or misrepresentations.

Signed: Gretchen Dolson  
Gretchen Dolson, PE, Project Engineer



## References

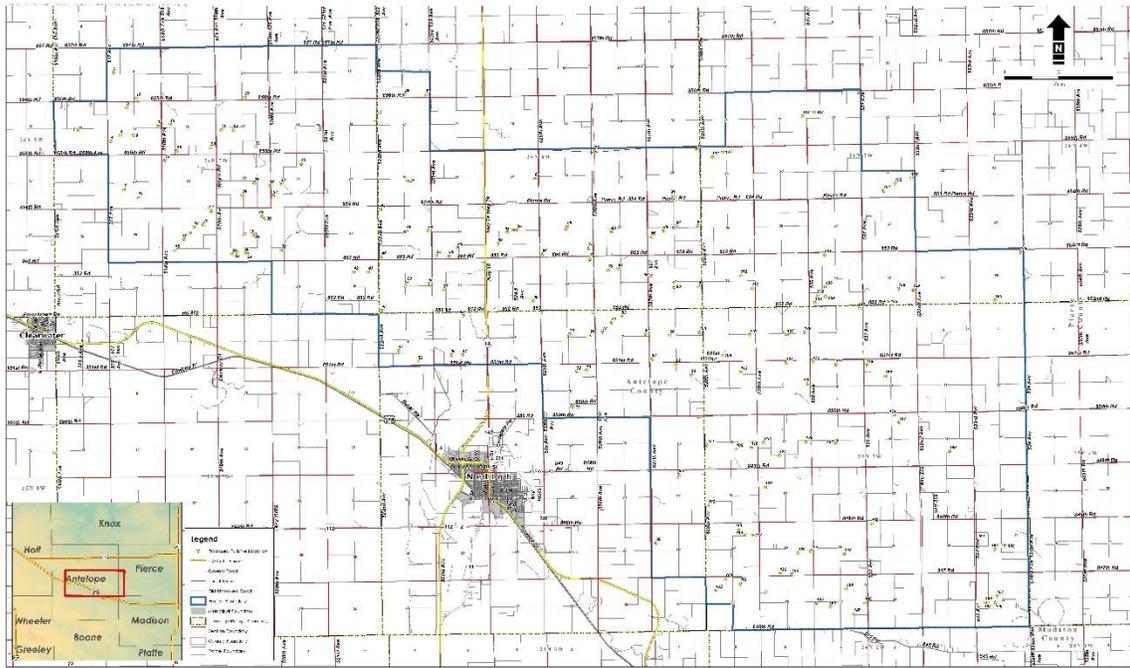
GE Energy 2012, *Technical Documentation Wind Turbine Generator System- 1&2 Platform-50 & 60 Hz; Technical Description and Data, Weights and Dimensions*

USGS Mineral Industry Surveys Iron and Steel Scrap; September 2015

USGS Mineral Industry Surveys Copper; September 2015

Scrap Metal Prices as of January 4, 2016; [scrapregister.com/scrap-prices/united-states/](http://scrapregister.com/scrap-prices/united-states/)

R.S. Means Construction Cost Estimating; 2016

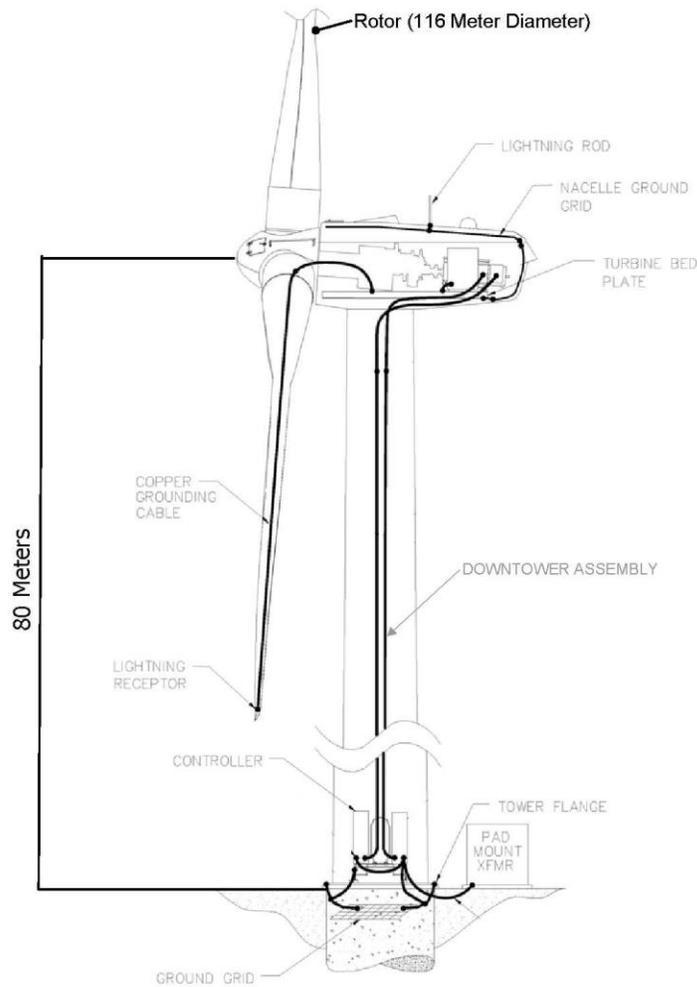


**Figure 1 - Project Area and Preliminary Layout**

Upstream Wind Energy Project, Antelope and Pierce Counties, Nebraska

December 14, 2015

**FIGURE 2  
 UPSTREAM WIND LLC  
 TYPICAL WIND TURBINE GENERATOR**

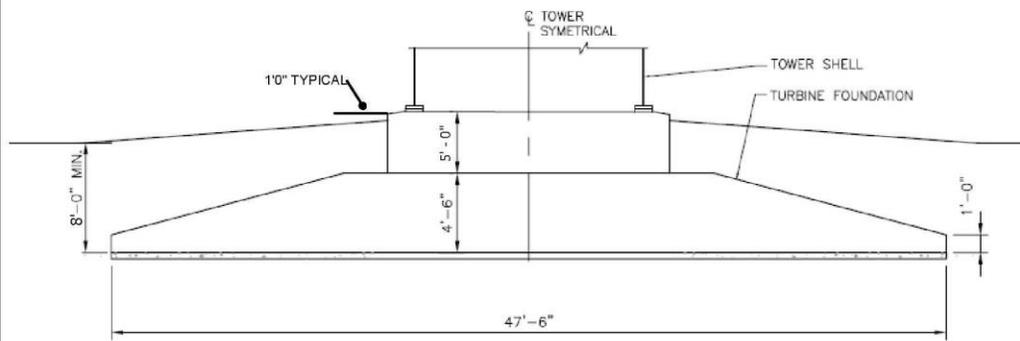


Note: Referenc Image from Technical Documentation,  
 Wind Turbine Generator Systems, GE 1.5 sle 60 Hz.

Map Document (Images.gis:file:C:\SP\Invenergy\96073\_California\Fig2\map\_doc\mxd\Decommissioning\California\Fig2\_Decommissioning\Fig1.mxd)  
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**FIGURE 3  
 UPSTREAM WIND LLC  
 TYPICAL FOUNDATION SECTION**



**TYPICAL FOUNDATION SECTION**

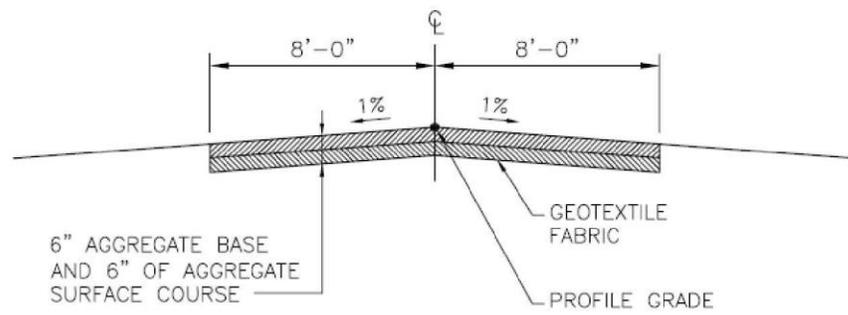
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**FIGURE 4**  
**UPSTREAM WIND LLC**  
**TYPICAL ACCESS ROAD SECTION**



**TYPICAL ACCESS ROAD— SECTION A**

SCALE: NONE



Map Document: \\msc-gis-01\GIS\Projects\Invenergy\96073\_CaliforniaRidge\Decommissioning\CaliforniaRidge\_Decommissioning\Fig3.mxd  
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Figure 5 – Estimated Decommission Cost / Salvage Value

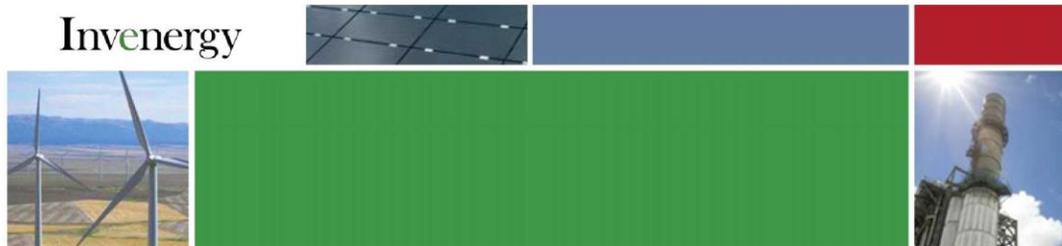
Item	Description	Unit	Estimated Decommissioning (Deconstruction) Cost			Remarks
			Est. Quantity	Est Unit Cost	Cost	
1	Mobilization/Demobilization	LS	1	\$ 450,000.00	\$ 450,000	Single mobilization; Large Crane; Contractor Admin
2	Turbine De-Construct	Each	151	\$ 99,280.00	\$ 14,991,280	Estimated on Possible Crew Size and Time required
3	Transformer - Disconnect /Remove	Each	151	\$ 800.00	\$ 120,800	Electrician Disconnect; Removed by Recycler
4	Downtower Assemblies	LS	151	\$ -	\$ -	Disconnect; Load and Haul- Included with Tower Removal
5	Turbine Pedestal- Demolish / Remove	CY	7,097	\$ 250.00	\$ 1,774,250	Demolished; loaded & hauled to repurpose off site
6	Remove - Cable; Grounding to 4 Ft below grade	LS	-	\$ -	\$ -	Included with Transformer removal
7	Backfill; Compact; Finish- excavated area	CY	5,788	\$ 7.75	\$ 44,470	Backfill w/ recovered aggregate
8	Remove; Recover- Access road & turbine area aggregate	CY	370,923	\$ 10.60	\$ 3,931,784	Excavate and remove to central location
9	Remove; Landfill Road & Turbine surface fabric	SY	357,333	\$ 0.35	\$ 125,067	Landfill- estimated 1.13 Lb/SY
10	Topsoil; Spread; grade Road & Turbine area	CY	66,267	\$ 29.67	\$ 1,966,142	Supply, Spread and Grade
11	Blade Remove; Landfill	Ton	5,481	\$ 61.00	\$ 334,359	Removal included with deconstruct- Special waste landfill cost est.
12	Transport Materials	Ton	40,552	\$ 22.68	\$ 919,729	Materials to Marshalling yard
				Subtotal	\$ 24,657,880	

Item	Description	Value Basis	Quantity Units	Estimated Material Salvage Value			Salvage Value	Remarks
				Est. Quantity	Est Unit Value <sup>1</sup>	Est. Salvage % Recovered		
1	Tower; Steel	Ton	151	159.94	\$ 235.99	100%	\$ 5,699,379	GE Document
2	Nacelle; bedplate & Misc. Steel	Ton	151	65.29	\$ 235.99	80%	\$ 1,861,250	GE Document
3	Nacelle/ Tower Copper (Est/mated)	Ton	151	6.5	\$ 1,080.00	100%	\$ 1,064,749	Estimated at 10% of the total Nacelle weight
4	Hub; Nose Cone Assembly Steel	Ton	151	33.0	\$ 235.99	100%	\$ 1,175,938	GE Document
5	Anchor Bolts; Reinforcement	Ton	151	3.8	\$ 235.99	100%	\$ 135,411	Recovered from pedestal demolition
6	Down Tower Cable and fittings	Lbs	151	670	\$ 1.65	80%	\$ 133,544	
7	Down Tower Controller/Converter	Ton	151	3.2	\$ 460.00	80%	\$ 177,818	Based on published rate Electronic Scrap
8	Base transformer (small Transformer)	Lb.	151	12,000	\$ 0.28	100%	\$ 507,360	Base of tower step up to 34.5 kV
9	Junction Box	Lb.	40	300	\$ 0.37	100%	\$ 4,440	Estimate scrap value
10	Grounding and Cable	Lb.	151	94	\$ 1.65	80%	\$ 12,756	Medium Voltage Cable & Ground.
11	Aggregate recovery	CY	1	370,923	\$ 14.40	75%	\$ 4,005,968	Processed value (Road surface, base & crane pads)
							Subtotal	\$ 14,778,624
	1. Scrap Steel value based on 2015 Annual average USCS Mineral Industry Surveys							



# Upstream LLC Correspondence with Antelope County

PowerPoint Presentation to Planning Commission January 19th, 2016



## Upstream Wind Energy CUP Application Antelope County

January 19, 2016



## Invenergy in Antelope County

- **May 2014 – January 2016 Prairie Breeze Wind Energy Center**
  - Prairie Breeze I, II, & III 310 MW
- **August – October 2015 – WEC Regulations Public Hearings**
- **October 6, 2015 – WEC Regulations Amendment**
  - Maintained 1,000-ft participating residence setback
  - Increased 2,000-ft non-participating residence setback
- **December 18, 2015 Upstream CUP Application Submittal**
- **January 7, 2016 Upstream CUP Notice Mailed**
- **January 19, 2016 Upstream CUP Public Hearing**

2

## CUP Permit Application

### Section 1504.3 Requirements: Project Overview

- ✓ **1. Name(s) of project applicant** - Invenergy Wind Development LLC
- ✓ **2. Name of the project owner** - Upstream Wind Energy LLC
- ✓ **3. Project legal description/address**

Blaine	Township 26N 7W Sections 8-18, 20-29, 35-36 ALL
Custer	Township 26N 6W Sections 7S2, 18-36 ALL
Neligh	Township 25N 6W Sections 1-6, 10-13, 24-25 ALL
Elm	Township 25N 5W Sections 1-30 ALL, 31 N2; SE4, 32-36 ALL
Willow	Township 26N 5W Sections 16-17 ALL, 18 E2, 19-21 ALL, 22 S2, 27-36 ALL

3



## CUP Permit Application

### Section 1504.3 Requirements: Project Overview

- ✓ **4. A description of the project including: number, type, name plate generating capacity, tower height, rotor diameter, and total height of all wind turbines and means of interconnecting with the feeder lines.**
  - 168 buildable turbine locations
  - Up to 350 MW capacity
  - General Electric 1.7 – 2.3 MW Turbines
    - 262 ft. hub height
    - 380 ft. rotor diameter
    - 438 ft. tip height
  - Ancillaries:
    - Electric collection system (34.5 kV)
    - Project collector substation 115kV voltage adjacent to interconnect
    - Operations and Maintenance Building



4



## CUP Permit Application

### Section 1504.3 Requirements: Project Map

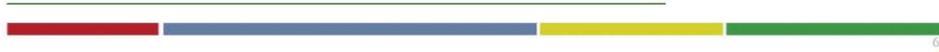
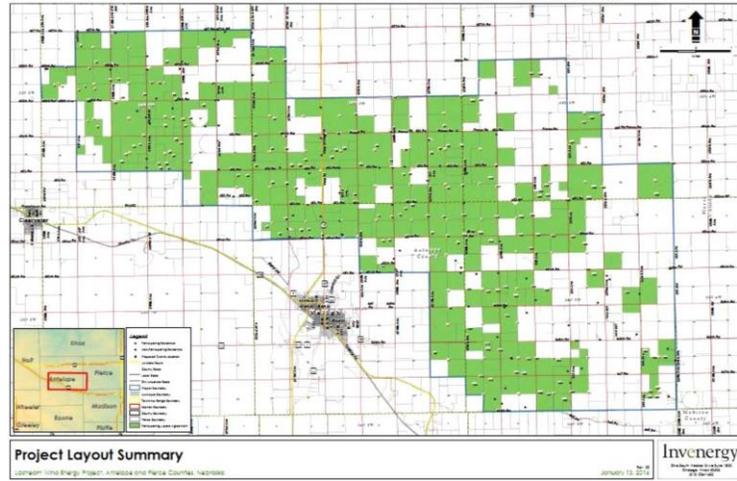
- ✓ **5. Site layout - location of property lines, wind turbines, electrical grid, and related accessory structures; including distances and drawn to scale**  
Exhibit D
- ✓ **7. Land ownership/legal control documentation**  
Exhibit B
- ✓ **8. Latitude/longitude of wind turbines – must meet setbacks**  
Exhibit D  
Exhibit C
- ✓ **9. USGS topographical map(s) of project and surrounding area, including any other Wind Energy Conversion Systems within 10 RD**  
Exhibit D
- ✓ **10. Wetlands, scenic, and natural areas within 1,320 ft. of Project area**  
Exhibit F



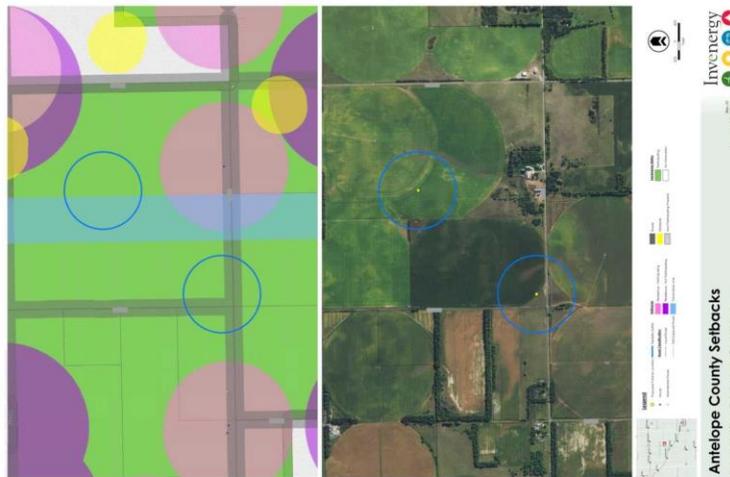
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Section 1504.3 Requirements: Project Map



Section 1504.3 Requirements: Setback and Siting Example





## CUP Permit Application

### Section 1504.3 Requirements: Additional Documents

- ✓ **6. Engineer Certification**  
Exhibit H
- ✓ **11. Acoustical Certification re Noise Requirements**  
Exhibit G
- ✓ **12. FAA and FCC permits**  
Exhibit C
- ✓ **13. No interference w/ communication towers w/in 2 miles**  
Exhibit H
- ✓ **14. Decommissioning Plan**  
Exhibit K



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## Application Overview

- 168 Buildable Turbine Locations
- Up to 350 MW of Capacity
- Antelope County Substation Interconnect
- Approximately 42,000 acres of participating leases
- Setbacks
  - Turbines sited according to October 2015 amended zoning regulations:
    - 2,000-ft from non-participating residences
- Siting
  - Turbines desktop and field verified for compliance with setbacks.
  - All landowners consulted



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## Community Benefits

- Construction:
  - Approximately 400 full time equivalents during construction in Antelope County\*
  - Approximately **\$45 million** in new local output\*
- Operations:
  - Approximately 12 new, local, full-time jobs during operations
- Property/Nameplate Tax:
  - Approximately 1.3 million in annual tax payments
- Local Economic Impact
  - During operations over \$3 million annually in taxes, landowner payments, employee salaries, and local spending.
  - More than \$75 million over the life of the project

\*Source: December 2015 Economic Report prepared by Strategic Economic Resources LLC



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## Questions?

Contact: Emily Kobylarczyk  
 EKobylarczyk@invenergyllc.com | 303-800-9342 |



11

## February 6th, 2016 Letter to Planning Commission

February 6, 2016

### VIA EMAIL AND HAND DELIVERY

Antelope County Planning Commission  
c/o Ms. Char Carpenter  
Antelope County Zoning Administrator  
[charzoning@gpcom.net](mailto:charzoning@gpcom.net)

### **Re: CUP Application of Upstream Wind Energy, LLC**

Dear Planning Commission Members:

At the January 19, 2016 meeting on Upstream Wind Energy, LLC's Conditional Use Permit application, the Planning Commission covered a number of important issues. We appreciate the opportunity to continue the dialogue with you and in an effort to be helpful, we are using this letter to consolidate and clarify from our perspective a number of the key discussion points from that meeting.

**Written Notices** – As you know, the January 19 meeting was continued because Ms. Carpenter, as the county's zoning administrator, raised a legitimate question whether some landowners had received written notice of the hearing. A third party title company was hired to assist in finding landowner addresses, and while unknown to us at the time of the January 19 meeting, apparently some of the letters came back undelivered.

Section 1004 of the county's zoning regulations require that the county zoning administrator give public notice of a public hearing in three principal ways: (1) publication in the county's official newspaper; (2) providing a copy of the notice to any planning commission chair with jurisdiction; and (3) providing copy of the notice to all property owners of record who own property adjacent to the project boundary.

Since the 19<sup>th</sup>, we have made ourselves and that of Stewart Title Company available to the county to find correct addresses, etc., and make sure that all adjacent property owners received written notice. We are pleased to report that Ms. Carpenter indicated to us that she was able to provide written notice of the February 9 meeting to the handful of persons that did not receive written notice of the first meeting.

We certainly appreciate the zoning administrator's efforts in this regard as we understand providing notice on a large scale can be a large and involved task. But it is also important to keep this issue in perspective – while a handful of landowners inadvertently may not have received written notice of the January 19 meeting, nearly all of the landowners in the notice area did receive notice. And of course notice was published in the official county newspaper. In short, while we appreciate the effort to take all reasonable steps to ensure all adjacent landowners were provided written notice, we believe that there was no legal deficiency in the meeting on the 19<sup>th</sup> and that all due process requirements were upheld.

As a result, having resolved the issue, we are hopeful that there are no more questions concerning notice at the February 9 meeting.

**Conflicts of Interest/Recusal** – At the meeting on the 19<sup>th</sup>, there was much initial discussion among commission members regarding the rules that govern conflicts of interest and recusal. As these issues involve Planning Commission procedure, these are issues the resolution of which is of course best left to you to decide in consultation with the county attorney or others. But given the significance of this project to the applicant and participating property owners, we believe it is everyone’s best interest that the Planning Commission correctly interpret these important governing rules.

Our reading of the applicable rules, confirmed in correspondence with the county attorney, is that where a planning commission member has a financial interest in the “matter” before the commission, the commission’s bylaws require that member to recuse him/herself. Where, on the other hand, the member has no financial interest in the matter before the commission – i.e., the Upstream project – that member is not required to recuse himself/herself. Specifically, where a member may have a financial interest in another wind project – i.e., a different “matter” – that member has no obligation to recuse himself/herself from this project. This means that the only persons required to recuse themselves from discussing and voting on the Upstream project are those that have a direct financial interest through a project lease for Upstream. A commission member that may have an interest in the Prairie Breeze I, II or III projects is not required to recuse themselves. Of course, any planning commission member that may recuse him/herself because of a financial interest in the Upstream project may participate in the meeting like any other member of the public.

Last, because Antelope County’s population is under 100,000, the planning commission members are exempt from Nebraska’s conflict of interest laws and those laws do not require member recusal. But we also agree that the Planning Commission’s bylaws apply.

**Turbine Noise** – At the January 19 meeting, two members of the public alleged that one or more turbines within the existing Prairie Breeze project were exceeding the county’s noise regulations. Section 1201 of the county’s zoning regulations requires that any person alleging a zoning regulation violation must file a written complaint with the county zoning administrator, and must state the cause and basis of the complaint. To our knowledge, no written complaint has been made.

We also respectfully note for the record, as we did on the 19<sup>th</sup>, that consideration by the planning commission of allegations of zoning regulation violations that concern a matter different from the Upstream project would be improper as outside the commission’s jurisdiction. As an advisory commission, investigation and enforcement of zoning regulations lies with the county board of supervisors in conjunction with the county attorney and zoning administrator.

Of course, the project takes comments like these seriously, and while it is not relevant for purposes of the present matter, please know that the project informed the owners of the Prairie Breeze project and that Prairie Breeze Wind Energy LLC has already voluntarily contacted the two people who raised noise concerns at the January 19 meeting and it intends to work with these persons and the county as appropriate.

**10-mile Instrument Approach Zone** – On January 25, 2016 Invenergy received a letter dated the same date from Mr. Keith Marvin of Marvin Planning Consultants. The intent of the letter is unclear. In the letter (Ex. 1), Mr. Marvin asked that the project provide the county with certain data that he considered “as part of the application” relating to the 3-mile turning zone and the 10-mile instrument approach zone. The letter goes on to state that that the “County must have the information in order to proceed with this application.” Finally, Mr. Marvin states that “although I am not acting as legal counsel nor am I an attorney, I will advise the county from a planning perspective not to approve any portion of the application without the necessary data on the record.”

We respectfully submit that the letter is unusual and arguably inappropriate. First, Article 15 does not require applicants for a wind energy conversion system conditional use permit to provide the information being requested by Mr. Marvin. Second, it is troubling that Mr. Marvin – who acknowledges he is not acting as the commission’s legal counsel – to conclude that he intends to advise the county, from a “planning perspective,” not to approve the Upstream application if he did not receive information that the county’s own regulations do not call for.

The project is certainly aware of the requirements of the Nebraska Airport Zoning Act, including its 10-mile instrument approach zone. Neb. Rev. Stat. §§ 3-301(5)(a)(i) and (ii). As the commission may be aware, the Airport Zoning Act provides minimum standards all Nebraska municipalities with airports may choose to adopt and incorporate into their own zoning regulations. Specifically, Antelope’s County’s zoning regulations are limited to a 3-mile airport hazard overlay district: “This district is established as an overlay district for application over any primary zoning district within three (3) statute miles in all directions from the adjacent boundaries of the Antelope County Airport which are within the planning and zoning jurisdiction of the Antelope County, Nebraska . . .” § 506.1, Antelope County Zoning Regulations (Intent). The approach zones in the regulations are likewise limited to the three-mile jurisdictional limit. § 506.2(2)(A)(1) [instrument runways], § 506.2(2)(B)(1) [visual runways], and § 506.2(2)(D)[turning zones].

Section 3-307 and 3-308 of the Nebraska Airport Zoning Act requires that any municipality that wishes to adopt the state’s standards must take affirmative action as spelled out in the statute. Section 506 of the county’s zoning regulations are limited to three miles, and do not incorporate the 10-mile instrument approach zone.

In any event, just eight of the 168 proposed project turbines are currently within the 10-mile instrument approach zone. (We will have an additional map at the meeting on February 9). As stated at the January 19 meeting, the project continues to work diligently with the FAA, as it will with the county, with respect to whether these eight turbines provide any sort of flight safety hazard. We do not expect the FAA to make such a determination, but if it does, then the project will be unable to construct any turbine for which it does not obtain an FAA Determination Of No Hazard, a federal requirement for all commercial wind turbines, regardless of any action on the part of the county.

And of course we look forward to working with Mr. Marvin on this issue.

**Decommissioning** – In the project application, we included language from each of the project’s standard land lease between the project and landowners in Antelope County. That agreement requires the company, after the 15<sup>th</sup> year of operation, to put in place financial assurances, such as a bond or letter of credit, which assures to the landowner that the wind turbines and related facilities will be properly decommissioned. Pursuant to section 1504.06(10) of the zoning regulations, Upstream had previously submitted a letter from the engineering firm HDR Engineering, Inc., a firm that regularly works with utilities and wind companies on decommissioning matters. As a result of questions at the January 19 meeting, we will provide a decommissioning plan prepared by HDR consistent with decommissioning plans previously accepted by the county.

**Taxes** – Project taxes also came up at the January 19 meeting and require clarification. Under Nebraska Revised Statute § 77-6203 and Title 316, Chapter 13 of the Regulations of the Nebraska Department of Revenue, all commercial wind energy generation facilities are required to pay a “nameplate capacity tax” in lieu of property taxes that would otherwise be imposed on wind turbine infrastructure.

Under Regulation 13-002, the owner of the wind energy generation facility must pay a tax equal to the total nameplate capacity of the commissioned wind generation facility multiplied by a tax rate of **\$3,518 per megawatt**. For a 350 MW project, this amounts to an annual tax of \$1,231,300. The nameplate capacity tax is imposed annually beginning the first calendar year the facility is commissioned. A facility commissioned prior to July 15, 2010, is subject to the tax on January 1, 2010 and each year thereafter. The regulations require detailed reporting requirements from wind generation facility owners. Reg. 13-003.

As a specific replacement for property taxes, the nameplate capacity tax *will not* decrease over time due to depreciation. We wanted to clarify this as it was raised as a concern by the public at the January 19 meeting. In fact, the regulations specifically guard against this by stating that “[w]hen the capacity of a facility to produce electricity is reduced but is not decommissioned, the nameplate capacity of the facility is deemed to be unchanged.” Regulation 13-002.02D.

Last, the project will also be assessed a tax on any real property associated with the project, such as roads, etc. That tax is in addition to the nameplate capacity tax and is also not subject to depreciation (as real property does not depreciate.)

**Turbine “Clustering”** – The issue of turbine “clustering” also requires clarification. Turbine clustering is not a recognized concept in the wind industry, nor is it recognized in the county’s wind regulations. As we stated at the January 19 meeting, the project’s proposed turbine layout will be designed according to accepted engineering principals, prudent wind industry practice, county regulations, and in conjunction with the concerns of all host landowners. Last, all turbines will be required to meet all county setbacks as set forth in Article 15 of the county’s zoning regulations, regulations which the county recently amended to include *increased* setbacks for non-participating landowners.

**Reciprocal setbacks** – § 1504.05 requires that turbines be setback at least 2000 feet from the residences of non-participating landowners, or “neighboring dwelling units.” In an asterisk, the regulation also states that the “setback for dwelling units shall be reciprocal in that no dwelling

unit shall be constructed within the same distance required for a commercial/utility Wind Energy Conversion System.” To the extent landowners wish to build new residences within the 2000 foot reciprocal setback, as stated by the commission and the company at the January 19 meeting, that landowner would be required to seek and obtain a waiver from the county and also permission from the company as turbine owner before the person could construct within that setback. Upstream is certainly willing to work with any landowner who may be interested in building within the setback in the future.

**Landowner and Community Members Letters of Support** – We are aware many landowners and members of the public took the time to write letters in support of the project. Public comment is of course important to the commission and the county board in its consideration of the Upstream application. It is our understanding that this may not have occurred during the public portion of the hearing but instead would occur at a later time during the process. We know participating landowners would appreciate their letters being accepted into the record.

**Conclusion** – Antelope County is important to Invenergy and its commitment to a clean energy future and we appreciate very much the county’s willingness to host some of the finest wind turbines and infrastructure in the world. We have worked hard to make the application presently before the planning commission consistent with the county’s Article 15 regulations for wind energy conversion systems, and with similar applications of which this commission has recommended approval to the county board of supervisors. We appreciate the time and effort by the county’s zoning administrator in meeting with us on at least two occasions to review our application, provide feedback, and confirm that it complied with all of Antelope County’s relevant regulations for wind projects. We also appreciated working with the county in its recent ordinance review and amendment process which resulted in increased setbacks. As such, to the extent there is any fact or issue which would give the Planning Commission members pause with respect to our application, we want to know what those concerns might be so that we can promptly and appropriately address them.

The project team has also worked very hard to make this a project of which Antelope County and its residents can be proud. We look forward to the project making an important contribution to the county’s economic and civic well-being for many years. This project – even more so than the projects already approved by the Planning Commission and the County Board of Supervisors – will provide even greater protection and consideration to non-participating landowners. And like the other projects, it will make significant financial contributions to those Antelope County residents that seek to use and enjoy their property consistent with the county’s zoning regulations.

Thank you for your consideration and we look forward to answering any questions you may have.

Very truly yours,

Upstream Wind Energy, LLC

c: Joseph Abler, Antelope County Attorney (via email at [ancoattv@frontier.net](mailto:ancoattv@frontier.net))

January 25, 2016

Emily Kobylarczyk  
Business Development Associate  
Invenergy LLC  
2580 West Main Street  
Littleton, CO 80127

RE: Antelope County, NE  
Upstream Wind Project

Dear Ms. Kobylarczyk;

I am writing in regard to the above referenced project in northern Antelope County, Nebraska. I am planning consultant contracted by Antelope County to assist with zoning issues. Unfortunately, I was unable to attend the Public Hearing on January 19, 2016.

One item that is critical to this process is the filing of specific data regarding the proposed locations within any areas of the airport operation zones, specifically the 3-mile turning zone and the 10-mile instrument approach zones. Regarding these data, what is needed from your office, as part of the application, is as follows:

- A map showing the proposed turbine locations, specifically within the airport operation area (I can supply you with an AutoCAD map provided by the Nebraska Department of Aeronautics if you would like);
- On the map we need the base elevations in terms comparable to those used by the Nebraska Department of Aeronautics; and,
- We will need the overall elevation of the turbines (to tip of blade in a vertical position);

At the Public Hearing, representatives of Invenergy informed Char Carpenter and the members of the planning commission that these data were to be given to the FAA upon erection of the turbines and that the county had no jurisdiction regarding this matter. If this was understood correctly, please be advised that the Nebraska Unicameral through LB 140 (2013) gave municipalities and counties of Nebraska the jurisdiction to regulate height requirements for public airports. The sections of LB 140 were interspersed throughout Chapter 3 of the Nebraska Revised Statutes.

The County must help protect the ability of the airports extending into the jurisdiction. This includes protecting them from encroachments that could impact past and future funding through the FAA.

With this said, the County must have the information requested in order to proceed with this application. The necessary information would be for the Neligh Airport and the Creighton Airport since their approaches extend into Antelope County. Please be advised, although I am not acting as legal counsel nor am I an attorney, I will advise the County from a planning perspective not to approve any portion of the application without the necessary data on the record.

If you have questions or comments, please contact me at 402.367.5031 or 402.606.6405.

For the Team,



Keith A. Marvin, AICP  
President

C: Char Carpenter, Antelope County  
Joe McNally, Neligh Airport Authority



## February 22th, 2016 Letter to Planning Commission

February 22, 2016

**VIA EMAIL ONLY**

Antelope County Planning Commission  
c/o Ms. Char Carpenter  
Antelope County Zoning Administrator  
[charzoning@gpcom.net](mailto:charzoning@gpcom.net)

**Re: CUP Application of Upstream Wind Energy, LLC**

Dear Planning Commission Members:

Thank you again for the productive meeting on February 9, 2016. We appreciate the Planning Commission's interest in working to make the Upstream Project the best it can be for the citizens of Antelope County. It was helpful to have the County's land use consultant Keith Marvin of Marvin Planning Consultants at the meeting.

Our understanding is that the public hearing portion of the public hearing on our Conditional Use Permit application is now closed and the Commission will meet again on February 24, 2016 for deliberation. At the February 9 meeting, however, the Planning Commission voted to allow the Upstream Project an opportunity to respond to the comments and proposed changes Mr. Marvin had noted in his handout provided to the Commission members, a copy of which we obtained at the time of the meeting.

The Upstream Project has communicated with Mr. Marvin to prepare comments to the proposed Conditional Use Permit application conditions. In addition to Mr. Marvin's feedback, representatives of Upstream attended a meeting with Mr. Joe McNally of the Neligh Airport Authority on February 15 regarding the eight turbines sited within the instrument approach zone discussed at the February 9 meeting. Attached to this letter is the Project's revised proposed conditions to the application which includes incorporating comments from the Planning Commission, the public, Mr. Marvin and Mr. McNally. To facilitate your review, we made our comments as a "redline" to our original proposed Conditions we included in section 2.0 of our application, which conditions Mr. Marvin used as the template for his comments. Thus, the changes highlighted are intended to replace the original conditions we made in the application.

We believe our proposed changes are consistent with Mr. Marvin's comments, the Neligh Airport Authority's comments and also consistent with the Commission's discussion on February 9<sup>th</sup>.

We look forward to answering any questions the Commission may have with respect to these proposed amended conditions at the meeting on the 24<sup>th</sup>.

Very truly yours,

Upstream Project, LLC

c: Keith Marvin, Marvin Planning Consultants (w/encl.; via email only at [info@marvinplanning.com](mailto:info@marvinplanning.com))



## Upstream LLC Supplemental Documents

**\*\* Provided at Request of Zoning Administrator**

AIRPORT APPROACH ZONES



## LAYOUT WITH PROPOSED MET TOWERS



## Setbacks



## FAA Letter

**Invenergy**  
Upstream Wind Energy LLC  
2580 W. Main St. Suite 200  
Littleton, CO 80120

April 12<sup>th</sup>, 2016

Ms. Liz Doerr, Zoning Administrator  
Antelope County  
501 Main Street  
PO Box 26  
Neligh, NE 68756

**Re: CUP Application of Upstream Wind Energy, LLC**

Dear Ms. Doerr:

This is to confirm that with respect to its application for a conditional use permit under Article 15 of the county's zoning regulations, Upstream Wind Energy, LLC agrees that prior to construction of any individual Tower/Wind Turbine (as defined in Article 15), Upstream will provide the Antelope County Zoning Administrator a Determination of No Hazard issued by the Federal Aviation Administration (FAA) for each individual Tower/Wind Turbine at its final turbine location. In addition, Upstream will work with the County to ensure the Project complies with any standard or requirements for height structures as they may apply to any Project Tower/Wind Turbines proposed to be located within the flight instrument approach zone as contemplated by Section 3-301(5)(a)(i) of the Nebraska Airport Zoning Act. To the extent any of the Towers/Wind Turbines do not comply with requirements set forth by the FAA or Section 3-301(5)(a)(i) of the Nebraska Airport Zoning Act, such Tower/Wind Turbine will not be constructed and will not be considered part of this proposed Wind Energy Conversion System.

We understand this will also be a condition to the conditional use permit for the Project, as was recommended by the Planning Commission on February 24, 2016.

Please let us know if you have any questions. Thank you.

Very truly yours,

Upstream Wind Energy, LLC



## Surveying Letter



### UPSTREAM WIND ENERGY

April 13, 2016

Emily Kobylarczyk  
Business Development Associate  
Invenergy LLC  
2580 West Main Street Littleton, CO 80127

Dear Emily

Olsson Associates has completed surveying services for Occupied Structures within the Upstream project boundary in Antelope and Pierce Counties in Nebraska prior to the conditional use permit application submittal. The coordinates were acquired using Trimble R8 GPS and Trimble Robot Total Station equipment. Occupied structure data was compiled in Civil 3D AutoCad drawing and exported to ArcGIS shapefiles for Invenergy use.



Jai J. Andrist RLS #630  
Group Leader



## Signage Example



### Turbine Signage Example



INVENERGY LLC 2580 W. Main St. STE 200 Denver, CO 80210 T 312.224.1400 F 312.224.1444 [invenergyllc.com](http://invenergyllc.com)



## GE Turbine Specs