

Deuel Harvest North Wind Farm

Deuel County, South Dakota

January 24, 2019



Invenergy Overview

We're North America's largest privately held renewable energy provider, and a global clean energy leader.



135
Projects

21,700
Megawatts

\$30B+
in Completed
Transactions

900+
Employees

\$135M+
Annual Local
Economic
Investment

Deep Experience **Across Technologies**



Wind

93 Projects
13,328 Megawatts



Solar

26 Projects
2,750 Megawatts



Storage

5 Projects
32 Megawatt hours
69 Megawatts



Natural Gas

11 Projects
5,641 Megawatts

Project Overview

Project Summary

Capacity

- Up to 310.1 Megawatts

Proposed Project Footprint To Include

- Voluntary wind energy and associated facilities easements across 41,980 acres;
- Up to 112 turbines in Deuel County;
- Access roads, underground 34.5 kV collector lines, underground fiber optic cable for turbine communications;
- An operations and maintenance (O&M) building;
- Up to 4 permanent meteorological (MET) towers; and
- A 34.5-kV to 345-kV Project Substation.

Proposed Project Transmission Facility

- A 345-kV Interconnection Substation; and
- An approximately 150-foot long 345-kV transmission line connecting the Project Substation and Interconnection Substation.

Expected Schedule

- Start of Construction: Q4 2019
- Commercial Operation Date (COD): Q4 2020

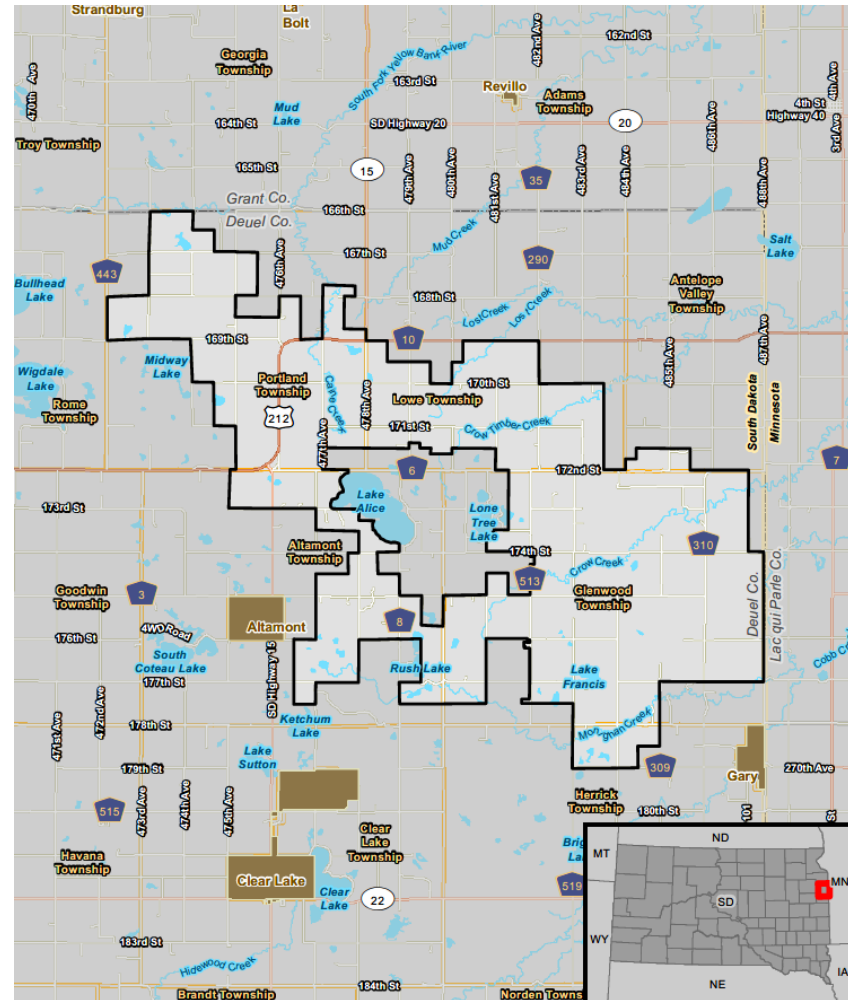
Project Area

The Project is located approximately four miles north of Clear Lake.

In the townships of Portland, Lowe, Altamont, Glenwood, and Herrick.

The Project Area encompasses approximately 48,730 acres.

86% of Project Area under lease.



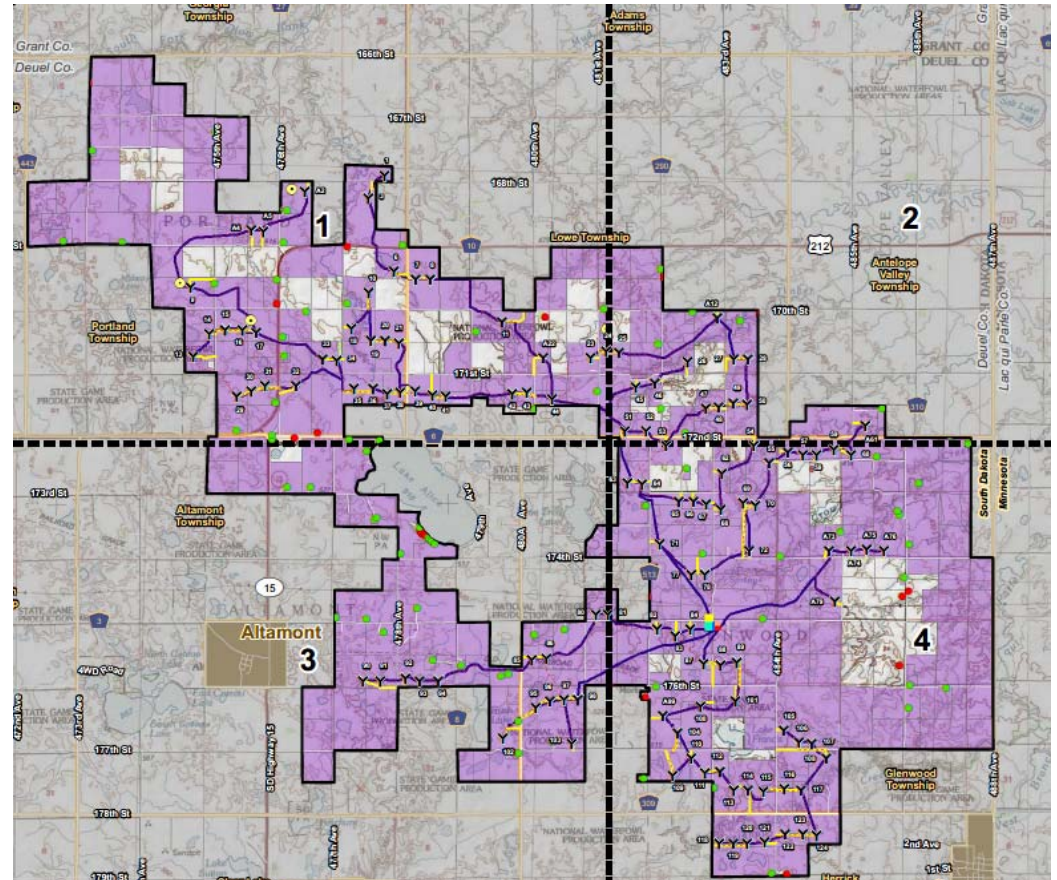
Project Site Plan

Approximately 250 wind energy leases in place.

124 turbine locations being permitted, no more than 112 would be built.

Anticipate primarily the GE 2.82 megawatt turbine in combination with the GE 2.3 megawatt turbine.

Aboveground facilities will be located on ~68 acres, less than 0.2% of the Project Area.



Project Due Diligence and Commitments

Project Outreach

Deuel County – Public hearing on January 22, 2018, and Special Exception Permits issued March 2, 2018;

Local Landowners – Meetings and conversations from mid-2015 to present;

Agencies – Staff from the PUC, U.S. Fish and Wildlife Service, Federal Aviation Administration, National Telecommunication Information Administration, South Dakota State Historical Society, State Historic Preservation Office, and South Dakota Game, Fish, and Parks;

Local Governmental Units – Presentations to Deuel County Board of Commissioners and Board of Adjustment, and communications with County Administration, Township representatives, and the County Highway Superintendent; and

Local Stakeholders – Meetings and communications with the Watertown Rotary Club, Lake Cochrane Improvement Association, Lake Alice representatives, Deuel Area Development, Inc., Deuel County Agricultural Development, Deuel County Community Foundation, and Interstate Telecommunications Cooperative, Inc.

Project Due Diligence

Study	Dates	Status
Site Characterization Study	Fall 2017 and Spring 2018	Complete
Wetland Delineations	Fall 2018	Complete
Wetlands and Waterbodies Survey	Fall 2016 and Fall 2017	Complete
Raptor Nest Survey	Spring 2016 and Spring 2017	Complete
Breeding Bird Survey	June 2016	Complete
Small Bird Use Surveys	Spring 2016 and Spring 2017	Complete
Large Bird Use Surveys	2016 and 2017	Complete
Bat Mist Netting Survey	Summer 2016	Complete
Bat Acoustic Survey	Summer 2016 and Summer 2017	Complete
Protected Butterfly Species Survey	Fall 2018	Complete
Cultural Resources Surveys (Level I and Level III)	Summer 2018	Complete
Historic / Architectural Survey	Summer 2018	Complete
AM and FM Radio Report	November 2018	Complete
Communication Tower Study	November 2018	Complete
Microwave Study	November 2018	Complete

Project Setbacks

- Setbacks, conditions, and siting standards required by State and local governing bodies will be met or exceeded;
- All turbine locations are currently planned to be 1,500 feet from participating residences, and 2,000 feet from non-participating residences;
- Distance from the Lake Park Districts located at Lake Cochrane is at least 3 miles, and from Lake Alice at least 2 miles; and
- Distance from the municipality of Altamont of 1 mile, and 1.5 miles from the city limits of Gary.

Project Commitments

- Wind turbines will be illuminated as required by FAA regulations and will also employ an Aircraft Detection Lighting System (ADLS), subject to availability and FAA approval;
- The Project will not exceed 45 dBA average A-weighted sound pressure level at the perimeter of existing non-participating residences;
- The Project will not exceed 50 dBA average A-weighted sound pressure level at the perimeter of existing participating residences; and
- The Project will not exceed 30 hours of shadow flicker per year at any residence.

Project Commitments

- Impacts to potentially undisturbed grasslands will be avoided or minimized;
- Will be required to decommission the Project at the end of its useful life. Financial assurances will be put in place as required by state and county authorities;
- Direct impacts to land held for conservation purposes via USFWS Wetland, Grassland, and Conservation Easements will be avoided;
- All turbines will be sited more than 1,000 ft from the edge of connected patches of forested habitat to avoid potential impacts to bats, in addition to fall curtailment; and
- Post construction avian and bat monitoring conducted in coordination with USFWS and SDGFP.

Deuel County Community Benefits

Community Benefits

Recipient	Annual Revenue	Total Revenue
Deuel County Landowners	\$2,900,000	\$87,000,000
Deuel County	\$365,000	\$10,900,000
Local Townships	\$155,000	\$4,700,000
State of South Dakota	\$860,000	\$25,800,000
School District	\$360,000*	\$3,600,000

*After the fifth year of receiving the annual tax revenue as well as SD state-aid funds for the school districts, the amount of wind energy tax revenue that is considered local effort funding would increase by 20% each year until year 10, after which all wind energy tax revenue would be considered local effort funding in the South Dakota School Funding Formula.

Community Benefits

A \$30,000 annual scholarship provided for students of Deuel school, funded by Invenergy (in addition to annual generation tax payments made to the school);

Approximately 400 direct jobs during construction;

Approximately 15 direct local jobs during operations; and

Will have continued local involvement, sponsorships, and support of the community.



Project Components

Wind Turbines



The General Electric 2.82-127 turbine is the primary turbine being considered for the Project.

Turbine Foundations and Assembly



Access Roads and Underground Collection



O&M Building and Transmission Facility



Invenergy

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sustainable world.**

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