





Agenda

- Geronimo Company Background
- Operational Projects
- Wind Energy Today
- Development Process
- Permitting Authority
 - State & County Authority
- Required Permits
 - Federal, State and County
- Siting Requirements
- Project Opposition
- Summary



Company Background

Geronimo is a Minnesota based wind energy developer headquartered in Minneapolis and focusing on projects in the upper Midwest

- Geronimo has a rural orientation and roots in the Southwest Minnesota agricultural community
- A pioneer, entering the wind energy business in 2004
- Geronimo has successfully fully developed and built two projects in Minnesota totaling 39 Megawatts (MW)
- Project development pipeline of roughly 4,000 MW
- Strategic partnership with Enel Green Power (EGP)

Operational Projects

Marshall Wind Farm

- Lyon County, MN
- Stage : Operating
- Project Size : 18.7 MW (18,700 kW)
- Turbines : 9 Suzlon S88 (2.1 MW) turbines
- Financial Partner : John Deere Wind Energy
- Utility Partner : Missouri River Energy Services



Odin Wind Farm

- Cottonwood & Watonwan County, MN
- Stage : Operating
- Project Size : 20 MW (20,000 kW)
- Turbines : 10 Suzlon S88 (2.1 MW) turbines
- Financial Partner : Edison Mission Group
- Utility Partner : Missouri River Energy Services





Wind Energy Today

- Driving Factors
 - Domestic, Zero Emission form of Energy
 - Renewable Energy Standard (RES)
 - Continually Competitive Cost of Energy
- Constraints
 - Transmission System Congestion
 - Stop & Go Politics on Energy Policy
 - Availability of Financing



Development Process

Order of Operation (3-7 years)

- Site Selection
- Community Engagement
- Interconnection Study (to access the transmission grid)
- Land Leases and Options
- Wind Data Collection
- Turbine Siting
- Permitting (State and Local)
- Power Purchase Agreement (PPA) with Utility
- Ordering Turbines
- Project Financial Arrangement
- Construction
- Commercial Operation



Permitting Authority

- 216F.08 – Permit Authority; Assumption by Counties
 - Projects 25 MW and below fall under local permitting authority
 - Projects 25 MW and above fall under state permitting authority
 - Counties must elect to permit projects up to 25 MW
- 216F.081 – Application of County Standards
 - A county may adopt by ordinance standards for LWECS that are more stringent than standards in commission rules or in the commission's permit standards. The commission, in considering a permit application for LWECS in a county that has adopted more stringent standards, shall consider and apply those more stringent standards, unless the commission finds good cause not to apply the standards.



Necessary Permits

- Federal
 - Federal Aviation Administration
 - Ensure turbines are placed in an area suitable for existing flight paths
 - Large Generator Interconnection Agreement (LGIA)
 - Migratory Bird Treaty Act
 - Threatened & Endangered Species Act
- State of Minnesota
 - Large Wind Energy Conversion System (LWECS)
 - Certificate of Need (CON) for Projects Greater than 50 MW
 - SHPO, DNR & USFWS
- County Requirements
 - Building Permits
 - Road Agreements, Crossing Permits, Field Approach
 - Right of Way Permits



Siting Requirements

- 3 x 5 Rotor Diameters (RD) from Project Boundary
 - 3 RD in Non-Prevailing Wind Direction (850 ft. Roughly)
 - 5 RD in Prevailing Wind Direction (1,450 ft. Roughly)
 - In Place to Protect Wind and Property Rights of Adjoining Landowners
- Occupied Structures
 - 500 ft. Plus Distance Necessary to Meet Noise Standard
- Noise Standard
 - 750+ ft. Generally Required to Meet 50 dBA Noise Limit
- 250 Feet From Edge of Road Right of Way
 - In Order to Prevent Ice Shed on Roads
- Wetlands
 - No Turbines in Wetlands but no Setback



Project Opposition

- Project Opposition
 - Residents opposing the construction of the project
 - Community engagement to work through these issues
- Issues Raised
 - Visual Effects
 - Property Value Concerns
 - Noise Concerns
 - Avian Concerns
 - Shadow Flicker



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