

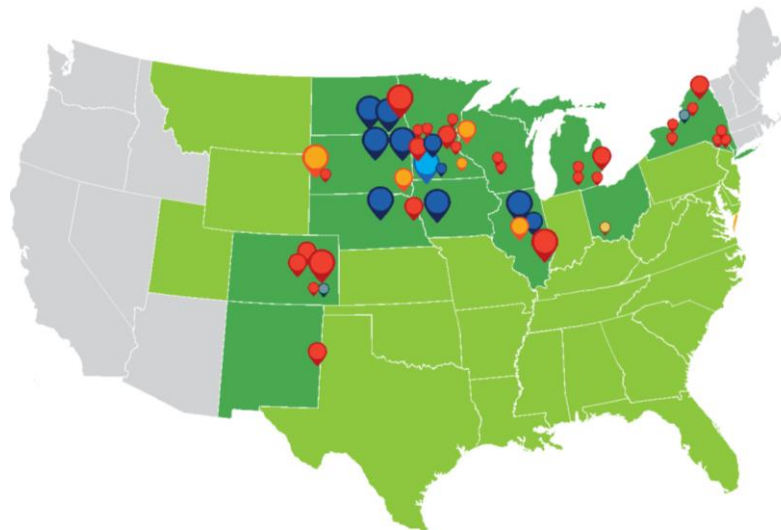


**South Dakota Public Utilities Commission**  
***Public Input Hearing***

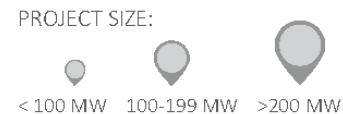
FEBRUARY 5, 2018

## About Geronimo Energy

Geronimo Energy is full-service, American renewable energy company that has successfully delivered over 1,800 megawatts of wind and solar projects that are currently in operation or under construction throughout the United States. Project partners for this portfolio include:



- Geronimo Presence
- Geronimo Expansion Presence
- Advanced Wind Projects
- Advanced Solar Projects
- Early Stage Wind Projects
- Early Stage Solar Projects
- Greenfield Wind Sites Identified
- Greenfield Solar Sites Identified



# Crocker Wind Farm

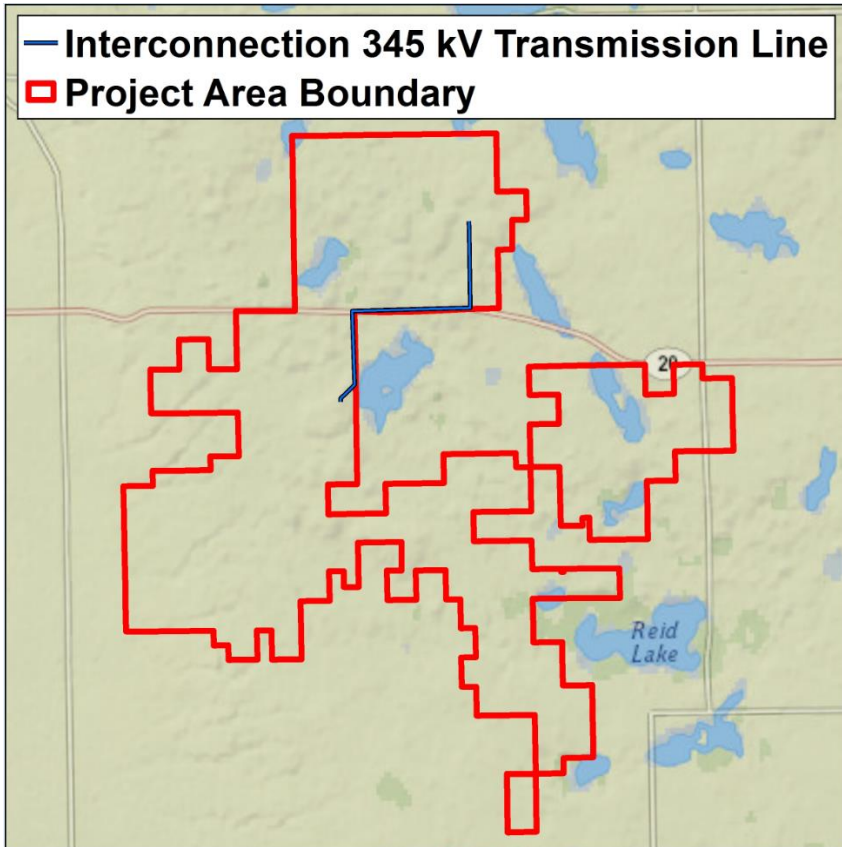
## PROJECT DEVELOPER

- Crocker Wind Farm, LLC, a wholly owned subsidiary of Geronimo Energy, LLC

## PROJECT DETAILS

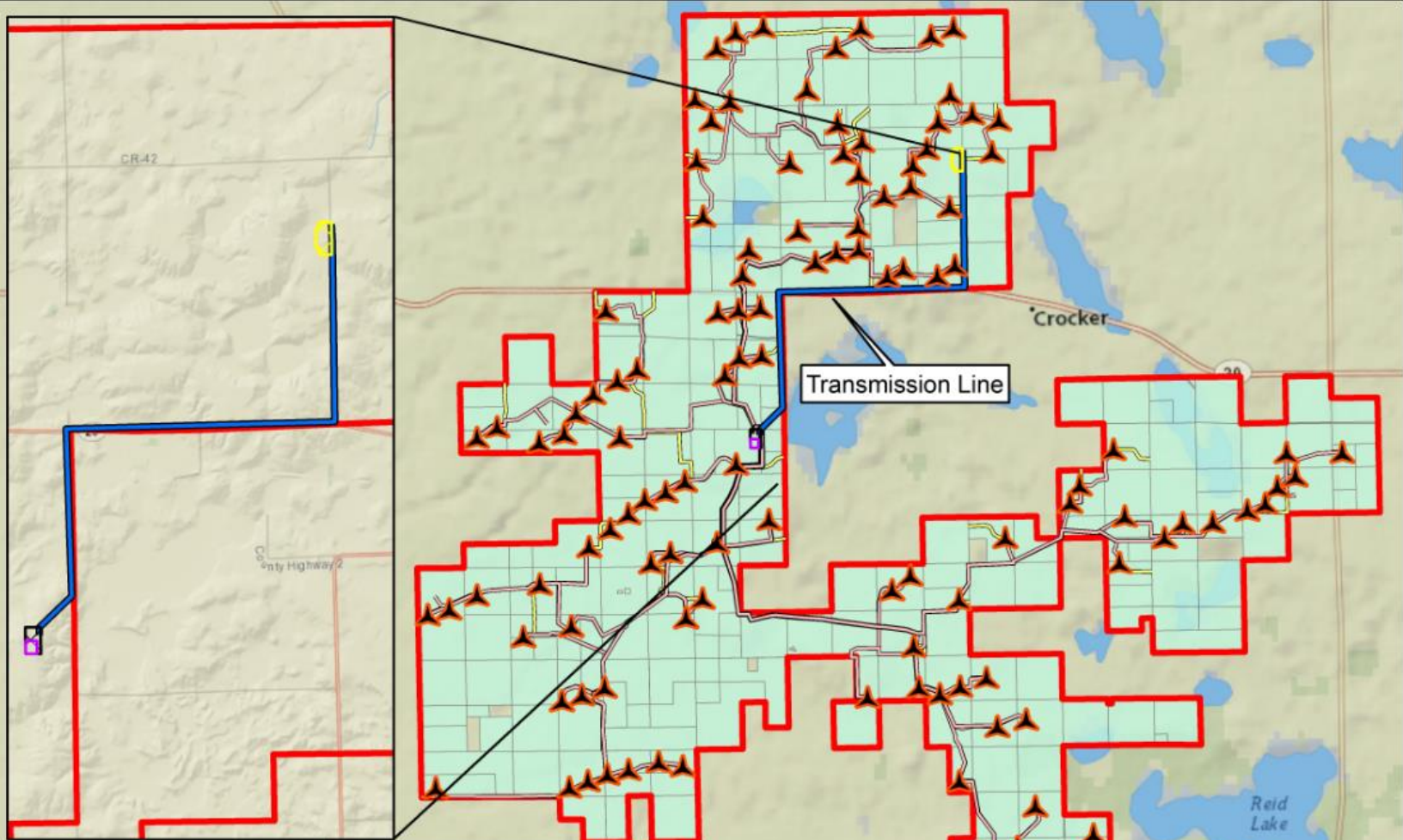
- Up to 400 MW
- Up to 120 turbines, depending on model selected
  - Maximum height of 499 feet
  - Maximum rotor diameter of 446 feet
- Underground 34.5 kV collection system
- Access roads
- Up to 4 permanent MET towers
- Substation co-located with O&M building
- Transmission line route ~ 5.2 miles of 345 kV interconnecting to the Basin Electric Groton-to-Watertown transmission line and associated switchyard

## Project Location/Schedule



- Located near Crocker in Spring Valley, Warren, Ash, Woodland and Cottonwood Townships
- Project area ~ 30,000 acres
- ~60 participating landowners
- Project facilities will be located on up to ~157 acres, less than 1% of project area
- Targeting construction as early as the second quarter of 2018
  - ~12-18 months to construct
  - COD end of 2019





-  Turbine Location
-  Project Substation
-  O&M Facility
-  Interconnect Switchyard
-  Interconnection 345 kV Transmission Line
-  Preliminary Collection Line
-  Preliminary Access Road
-  Project Area Boundary
-  Participants

## Project Design Updates

Following input from agencies and non-participants, Crocker has modified the Project to reflect the following:

- $\frac{3}{4}$  mile setback from non-participating residences
- One configuration for all potential turbine models with limited micro-siting flexibility
- Reduced proposed use on USFWS grassland easements which will only be used if approved by the USFWS

The Application presents a thorough analysis of the modified Project, and demonstrates compliance with the county CUP setbacks and PUC's siting criteria. As shown on the following slide, the community stands to gain significant economic benefits from the Project.

# Economic Benefits (based on 400 MW project)

Capital Infrastructure  
Investment roughly  
**\$600 million**



**~250**  
temporary  
construction  
jobs



**~\$46 million**  
over 20 years  
(~\$2.3 million average  
per year)

**Landowner  
Payments**  
to participating  
landowners

**~\$1.6 million**  
over 20 years  
(\$80,000 per year)

**Community  
Fund**

**10-20  
Full-time  
Jobs**

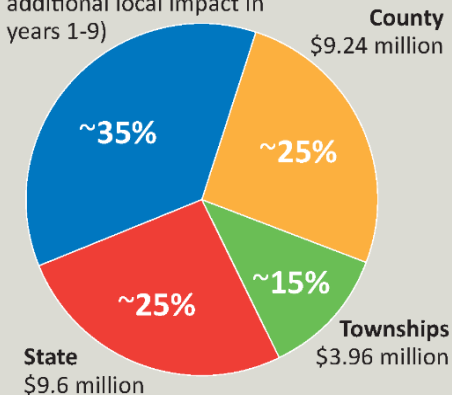
(up to \$24 million in  
wages over 20 years)



**Tax Revenue**

**~\$36+ million**  
over 20 years  
(~\$1.8 million per year)

**School Districts (state  
and local impact)**  
\$13.2 million total  
(includes \$4.6 million  
additional local impact in  
years 1-9)



## Economic Benefits – Community Fund

### WHAT IS IT?

- 501(c)(3) organization
- Guarantees annual payments for 20 years of an operational wind farm
- Purpose: provide charitable funds from the project to the local project area
- Up to \$80,000 per year for a 400 MW project
  - \$20,000 per year for every 100 MW
- Spending of the fund is fully controlled and advised by a nominated board of signed landowners and/or members of the community

### What have other project communities done with these funds?

- Purchased new fire truck and ambulance
- Provided scholarships
- Provided local business grants
- Improved or built city and school parks



## Project Development Milestones

### SECURE SITE

- Land acquisition is complete through voluntary lease agreements with landowners

### COLLECT DATA

- Three meteorological towers in the Project Area with years of data

### INTERCONNECTION AGREEMENT

- Existing agreement allows project to connect to the transmission grid

### LANDOWNER INPUT

- Meetings for feedback on facility locations

### FIELD STUDIES

- ~90% complete, includes field review and environmental studies

# Project Development Milestones (cont.)

## Field Studies



■ Complete

■ In Process

STUDY	STATUS
Communication Tower Study	Complete
Microwave Beam Path Study	Complete
Shadow Flicker Assessment	Complete
Noise Compliance Report	Complete
Grassland Avian Use Study	Complete
Avian Use Study	(completion in March 2018)
Eagle and Raptor Nest Surveys	Complete
Eagle Monitoring	(completion in March 2018)
Sharp-tailed Grouse and Greater Prairie Chicken Lek Surveys	Complete
Dakota Skipper and Poweskiek Skipperling Habitat Assessment	Complete
Dakota Skipper Presence/Absence Surveys	Complete
General Bat Acoustic Survey	Complete
NLEB Presence/ Absence Acoustic Survey	Complete
Wetland and Waterbody Delineations	(78% complete - completion in Spring 2018)
Natural Community Inventory	(78% complete - completion in Spring 2018)
Archaeological and Cultural Studies	(80% complete - completion in Spring 2018)

## Project Development Milestones (cont.)

### PRELIMINARY CONFIGURATION

- Utilized environmental analysis and stakeholder input to develop Project configuration

### SECURE PERMITS

- Local: Conditional Use Permit from Clark County
  - Conditions satisfied: implemented  $\frac{3}{4}$  mile setback, committed to Aircraft Detection Lighting System (ADLS), executed agreement with ITC
- State: Facility Permit Application filed with the SD PUC
  - Public input hearing and evidentiary hearing
- Federal: Environmental Assessment developed with the USFWS
  - Approval to construct/operate Project facilities on USFWS easement land

## Project Development Milestones (cont.)

### FINALIZE CONFIGURATION

- Select turbine with turbine supply agreement and complete geo-technical studies

### SELL POWER

- Power will be sold under a PPA or potentially owned by a utility



## Public Infrastructure

*Crocker will complete coordination with local infrastructure owners and road authorities, including:*

- Execute crossing agreements with rural water, pipelines, residential electrical services
- Provide SD PUC Road Bond
- Execute County/Township Road Agreements:
  - Pre-construction conditions
  - Modifications for construction
  - Terms for maintenance/cost reimbursement
  - Post-construction restoration



## Key Parts of Wind Farm Construction

- Access Roads
- Foundations
- Delivery of Equipment
- Erection of Turbines
- Collector System
- Substation
- Transmission Line
- Restoration and Repair



## Key Parts of Wind Farm Construction

### *Access Roads*





# Key Parts of Wind Farm Construction

## *Foundations*



# Key Parts of Wind Farm Construction

## *Delivery*





# Key Parts of Wind Farm Construction

## *Erection*





## Key Parts of Wind Farm Construction *Collector System*



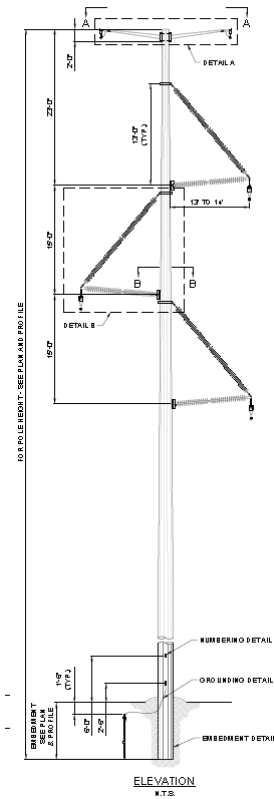
## Key Parts of Wind Farm Construction *Substation*



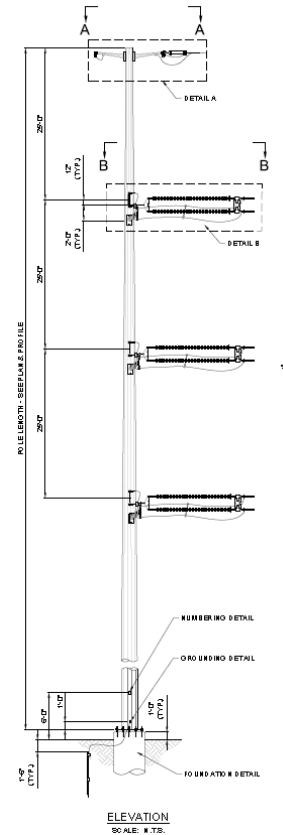
# Key Parts of Wind Farm Construction

## *Transmission*

Typical Single  
Circuit Pole



Typical  
Deadend  
Single  
Circuit Pole





## Key Parts of Wind Farm Construction *Restoration*



## Decommissioning

*At the end of commercial operation, the Project owner is responsible for removing facilities:*

- Turbine removal
- Underground collection
- Substation and interconnection facilities
- Turbine and substation foundation removal
- Access roads
- Financial assurance will be provided as required by permits and applicable law



**Thank you!**



**Geronimo Energy**  
**952-988-9000**