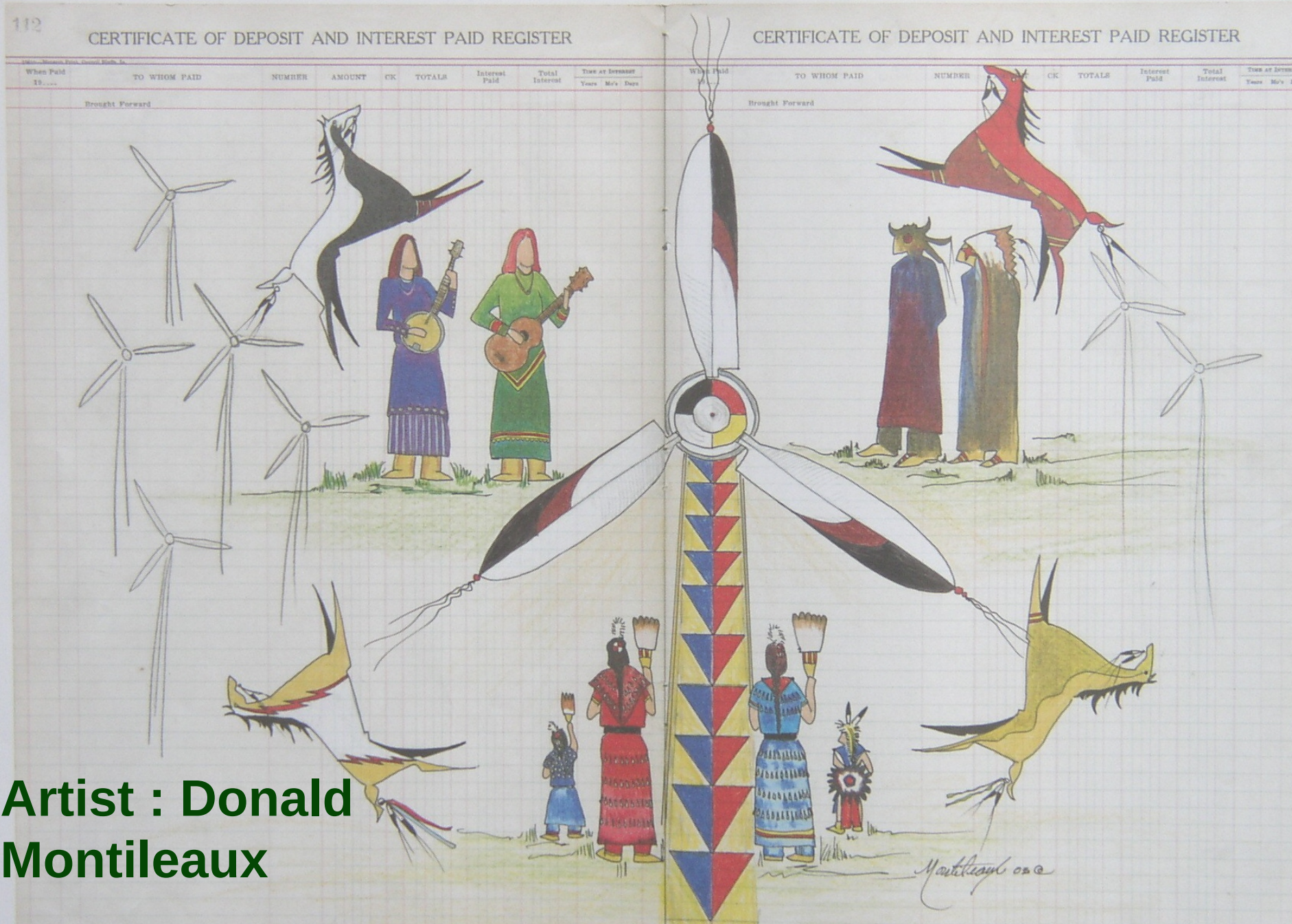
Honor The Earth



Artist : Donald Montileaux

Owl Feather War Bonnet Wind Farm
Rosebud Sioux Tribe

Resource Development Office/Tribal Utilities Commission

Distributed Generation Systems, Inc. (Disgen)

Dept. of Energy Grant

DOE Funding $448,551.00

DISGEN Cost share/in-kind $78,750.00

RST/TUC Cost share/in-kind $27,272.00

The Participants:

Rosebud Sioux Tribe, Resource Development
- Phil Two Eagle, Resource Dev. Dir.
- Ken Haukaas, Wind Farm Coordinator
- Dr. Bill Akard, Sinte Gleska University, Cultural Resources

RST Tribal Utilities
- Tony Rogers, Director

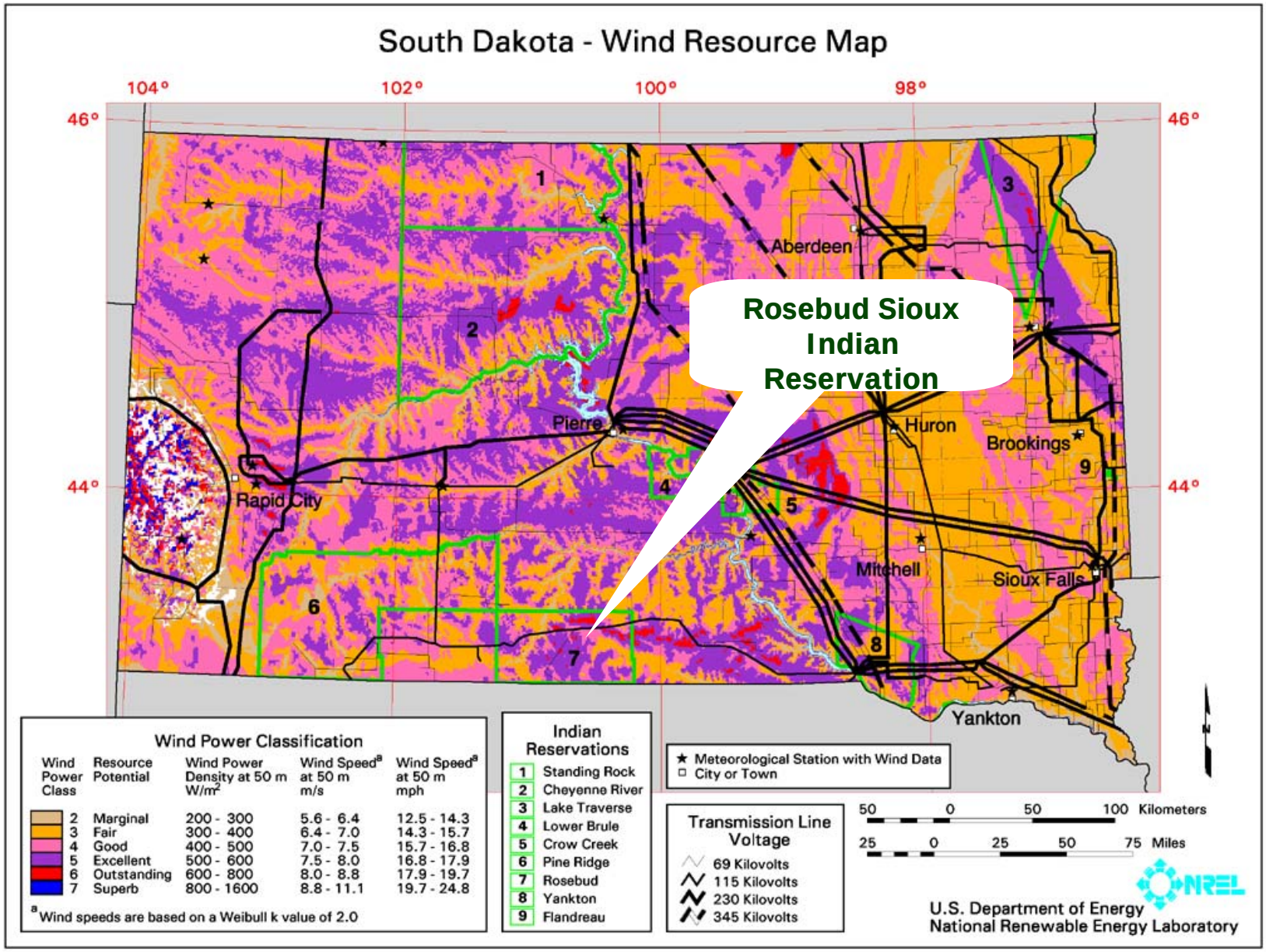
Distributed Generation Systems, Inc (DISGEN)
- Dale Osborn, President
- Belvin Pete, Project Manager

Bureau of Indian Affairs: Lead Agency, Aberdeen Area Office
- Dianne Mann-Klager, Lead/Wildlife Biologist
- Dr. Carson Murdy, BIA Archaeologist

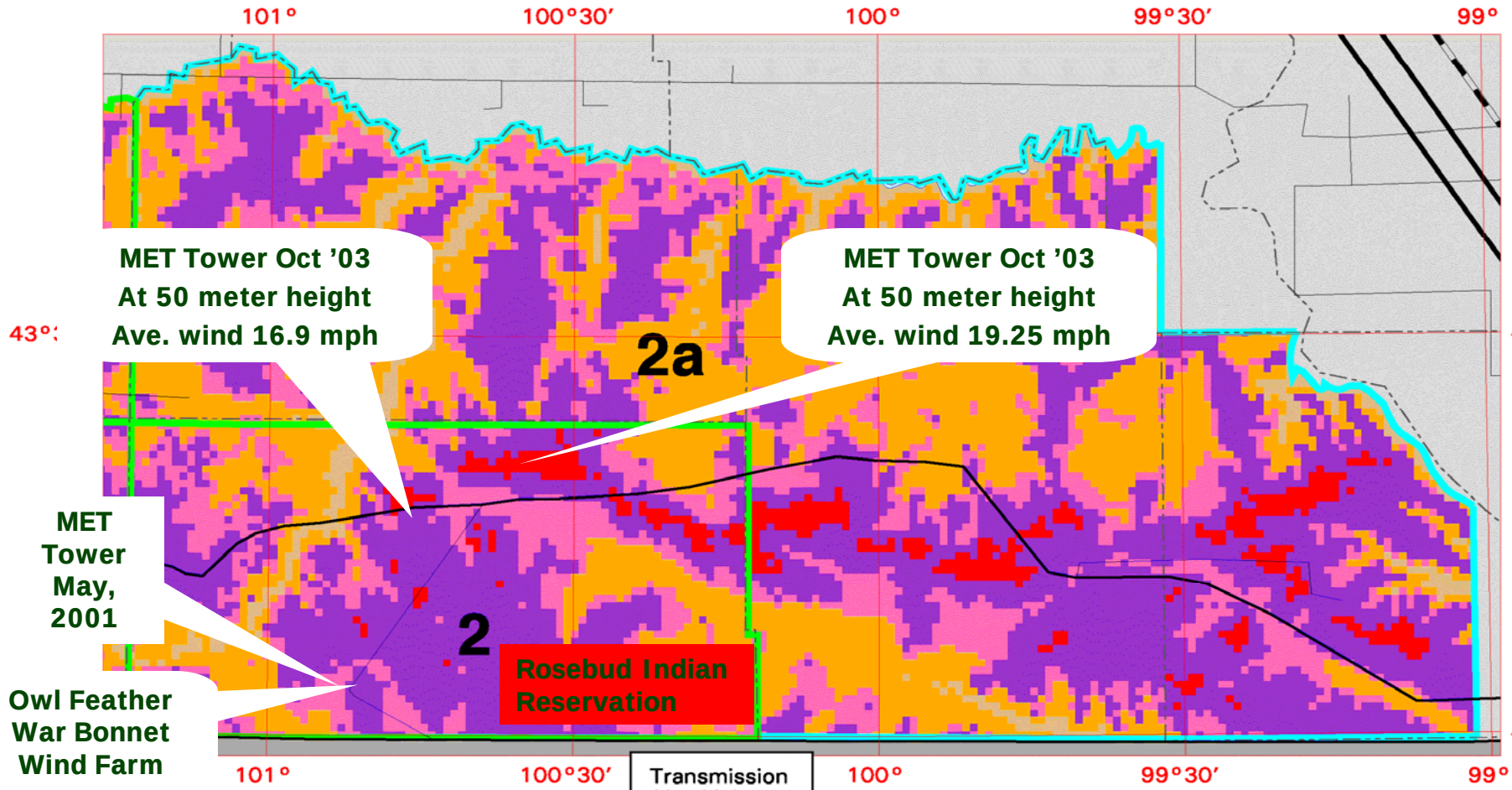
RST Game Fish and Parks/Natural Resources
- Stephanie Middlebrooks, Wildlife Biologist

U.S. Fish and Wildlife Service, Consulting Agency

Western EcoSystem Technology, Inc. (WEST)
- Rhett Good, Environmental Consultant


South Dakota - Wind Resource Map
104°
102°
100°
98°
46°
44°
Rosebud Sioux Indian Reservation
Aberdeen
Pierre
Huron
Brookings
Rapid City
Mitchell
Sioux Falls
Yankton
1
2
3
4
5
6
7
8
9
Wind Power Classification
Wind Power Class | Resource Potential | Wind Power Density at 50 m W/m² | Wind Speed[a] at 50 m m/s | Wind Speed[a] at 50 m mph
2 Marginal 200 - 300 5.6 - 6.4 12.5 - 14.3
3 Fair 300 - 400 6.4 - 7.0 14.3 - 15.7
4 Good 400 - 500 7.0 - 7.5 15.7 - 16.8
5 Excellent 500 - 600 7.5 - 8.0 16.8 - 17.9
6 Outstanding 600 - 800 8.0 - 8.8 17.9 - 19.7
7 Superb 800 - 1600 8.8 - 11.1 19.7 - 24.8
[a] Wind speeds are based on a Weibull k value of 2.0
Indian Reservations
1 Standing Rock
2 Cheyenne River
3 Lake Traverse
4 Lower Brule
5 Crow Creek
6 Pine Ridge
7 Rosebud
8 Yankton
9 Flandreau
★ Meteorological Station with Wind Data
□ City or Town
Transmission Line Voltage
69 Kilovolts
115 Kilovolts
230 Kilovolts
345 Kilovolts
50 0 50 100 Kilometers
25 0 25 50 75 Miles
N
NREL
U.S. Department of Energy
National Renewable Energy Laboratory

South Dakota - Rosebud Reservation Wind Resource Map and Capacity



Wind Power Classification

Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m²	Wind Speed[a] at 50 m m/s	Wind Speed[a] at 50 m mph
2	Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
3	Fair	300 - 400	6.4 - 7.0	14.3 - 15.7
4	Good	400 - 500	7.0 - 7.5	15.7 - 16.8
5	Excellent	500 - 600	7.5 - 8.0	16.8 - 17.9
6	Outstanding	600 - 800	8.0 - 8.8	17.9 - 19.7
7	Superb	800 - 1600	8.8 - 11.1	19.7 - 24.8

[a] Wind speeds are based on a Weibull k value of 2.0

Transmission Line Voltage

- 69 Kilovolts
- 115 Kilovolts
- 230 Kilovolts
- 345 Kilovolts

★ Federal Facility
□ City or Town

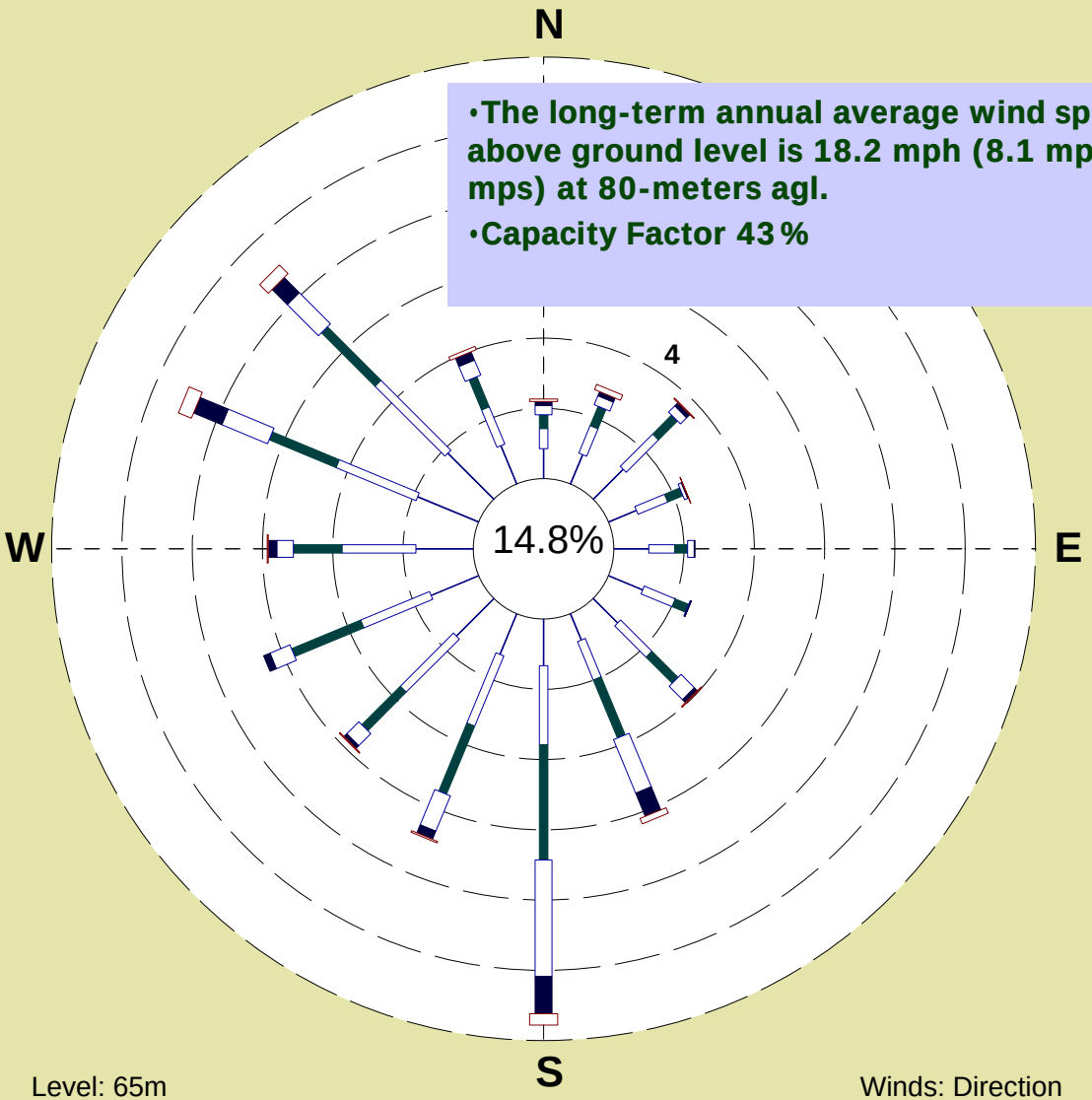
10 0 10 20 30 40 Kilometers
10 0 10 20 Miles

Indian Reservations	Wind Electric Potential (MW) Class 4 - 6	Class 2 - 6
2 Rosebud	17,400 - 34,800	25,750 - 51,500
2a -Original Boundary	30,280 - 60,560	48,975 - 97,950

U.S. Department of Energy
National Renewable Energy Laborat

20-APR-2000 5.

Rosebud Sioux
May 1, 2001 through March 31, 2003



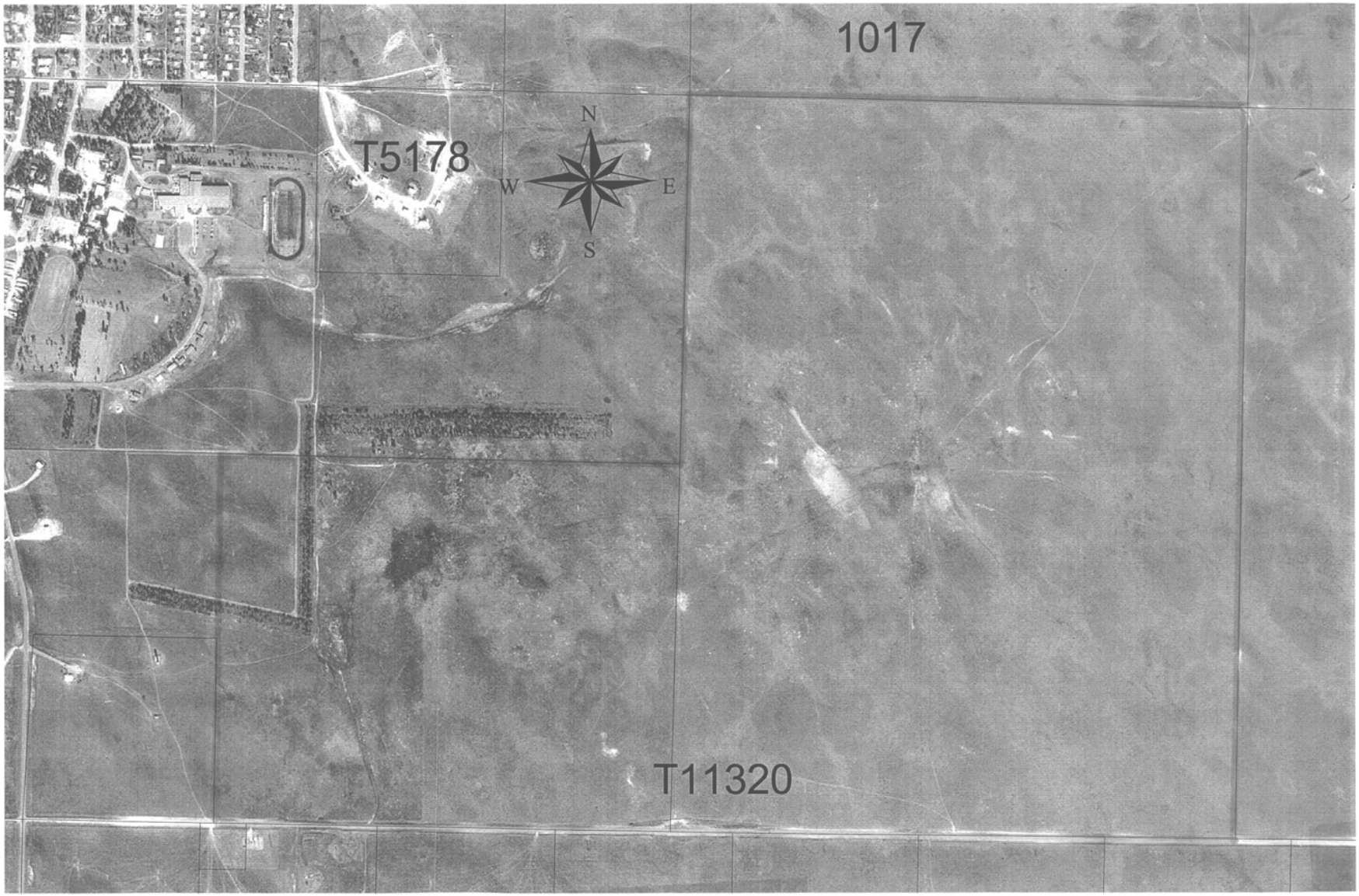
- **The long-term annual average wind speed at 65-meters above ground level is 18.2 mph (8.1 mps) and 18.7 mph (8.4 mps) at 80-meters agl.**
- **Capacity Factor 43%**

10 to 15
15 to 20
20 to 25
25 to 30
30 to 35
>= 35 (mph)

Number of Records Used: 15697

E.F. McCarthy & Assoc. LLC
511 Frumenti Ct. Martinez, CA 94553
E-Mail: wectecefm@aol.com
Tel:925-229-0648; Fax:925-229-0685

Photo Aerial of Project Area



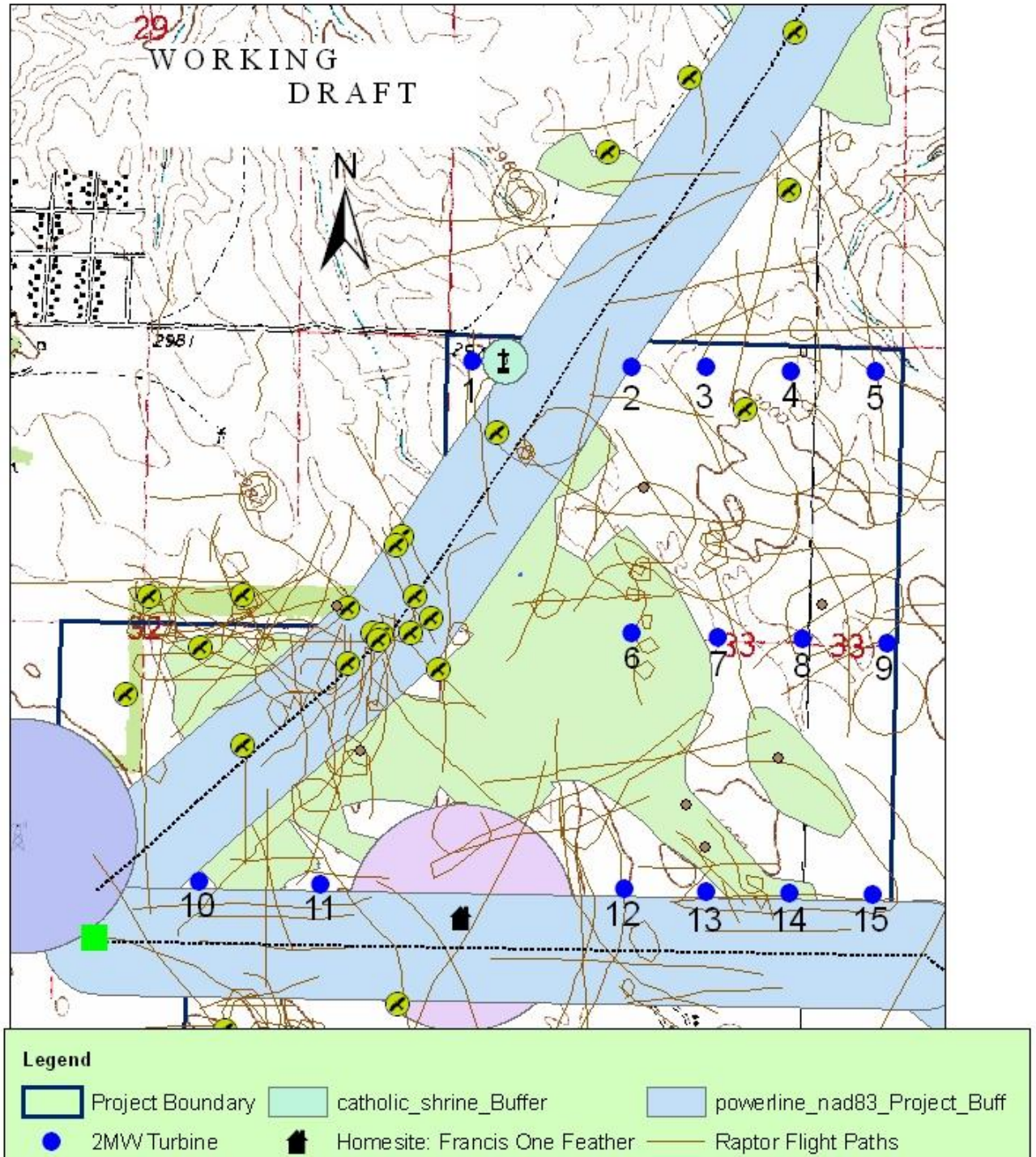
Sections 32, 33, T37N R30W 680 acres

Source: Ken Haukaas RST Resource Development Office

DISGEN

Wind Farm Site, looking East

Wind Farm Site, looking West


29
WORKING
DRAFT
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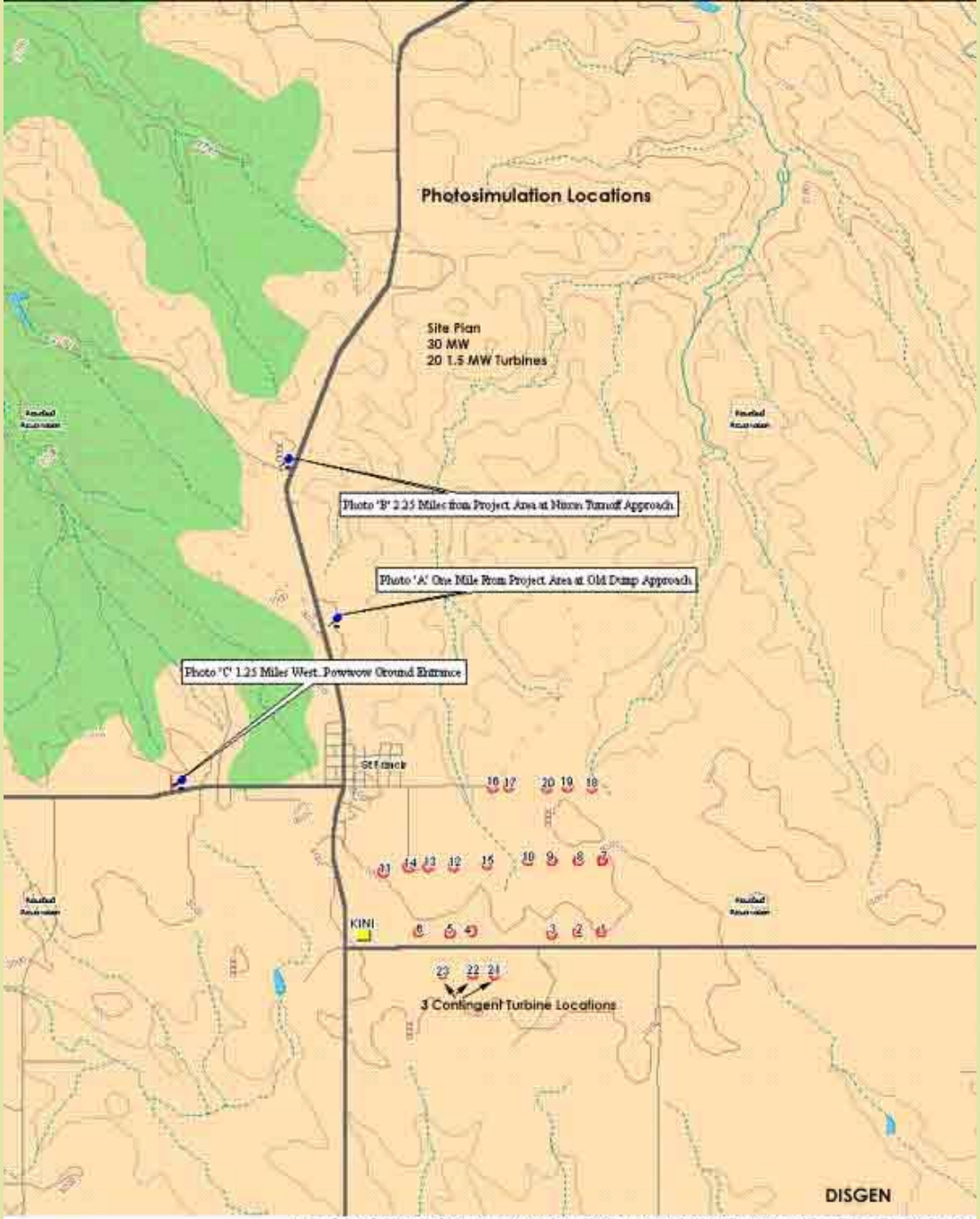
15
32
33
33
Legend
Project Boundary
catholic_shrine_Buffer
powerline_nad83_Project_Buff
2MW Turbine
Homesite: Francis One Feather
Raptor Flight Paths



3 photo simulation locations

DISGEN

Photo from 1 Mile North of Project Area and St. Francis, at Old Dump Approach; Facing South by Southeast

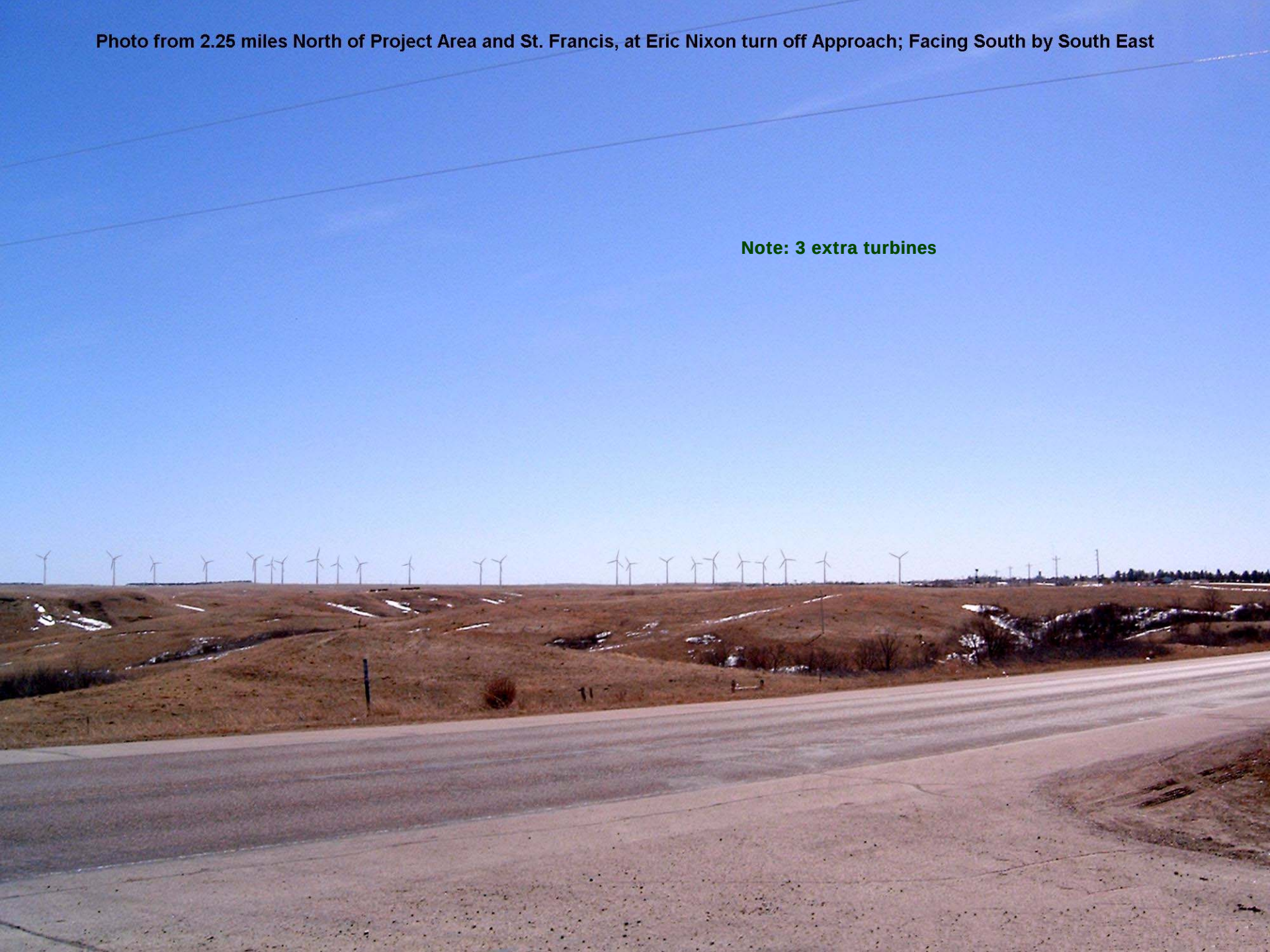


Photo from 2.25 miles North of Project Area and St. Francis, at Eric Nixon turn off Approach; Facing South by South East
Note: 3 extra turbines


Photo from 1.25 Miles West of Project Area at Powwow Grounds Entrance Approach, Facing East by Southeast. St. Francis in Foreground.

Ecological Baseline study
Western EcoSystems Technology Inc.

1. A detailed avian study
   Complete
2. Mapping of prairie dog towns
   Complete
3. Grasslands bird survey
   Complete
4. American Burying Beetle survey
   Complete
5. Greater Prairie Chicken Lek Monitoring
   Complete
6. Raptor nest Search
   Complete
7. General wildlife observations
   Complete
8. Bat survey
   Complete
9. Flora survey
   Complete

A Detailed Cultural Assessment

- Class I. File and literature search

  (NEPA Requirement)

  Requires a review of any and all records on the site through research of state and local records concerning investigations gathered in the past. *Conducted and completed by Dr. Carson Murdy BIA Archaeologist.*

Cultural Assessment Cont:

- Class III, Site Review

(NEPA Requirement)

A 100% intensive site surface review, which consists of walking over the whole 680 acres of area foot by foot.

140 acres completed by Dr. Carson Murdy BIA Arch., the other 540 acres, has been completed by Dr. Bill Akard along with staff and students of Sinte Gleska University 100% Complete

Cultural Assessment Cont: **Ethnographic Study**

- Interview elderly familiar with the area
- Gather oral history relevant on the site
- Insure to all that no culturally significant area was disturbed
- Conducted by Lakota speakers with cultural resource management degrees and conducted in a confidential manner
- Not required by NEPA, but was felt it was quite appropriate and necessary to insure success

Ethnographic Findings & Recommendations

- Native language use area by school children
- Recommend 100% intensive survey of all 680 acres
- Identify, map and classify all medicinal plants and replant/reseed as much as possible those plants affected during construction
- Hire a qualified Cultural Resource Management specialist during all excavation work

Systems Impact and Interconnection Study

- **Examines the local system to determine if the proposed project can be physically interconnected technically and if the local infrastructure can absorb the energy and capacity being proposed.**

  Develop the substation requirements for upgrading of the substation.

Conducted by Nebraska Public Power District, green light has been given to continue on process for interconnection, study now needs to know where power will be purchased. Power Purchase Agreement.

Power Purchase Agreement

- Will be proposed on a best effort basis to several potential markets:
  1. Nebraska Public Power District
  2. Basin Electric
  3. Western Area Power Administration
  4. Omaha Public Power District
  5. Lincoln Electric System
  6. Xcel Energy

  Dale Osborn/DISGEN has been discussing this PPA in an ongoing effort with the above utilities.

Time lines in Development

- Site review by Dale Osborn and Ed McCarthy during the winter of 2003/04, initial turbine locates established.
- Initiation of Cultural Review during winter of 2003/4 with Ethnographic Review and Class I and III Cultural Review.
- Two Scoping Meetings were conducted in March of 2004 in Rosebud South Dakota, Tribal Headquarters, and one in St. Francis, South Dakota in May of 2004.
- In March of 2004, Western EcoSystems initiates the Ecological Baseline Study on the wind farm site.
- Systems Impact Study is concluded in August of 2004.
- Eagle presence on Western edge of site during Dec. and Jan. of 2003/04 initiates discussion with U.S. Fish and Wildlife and Bureau of Indian Affairs on possible solutions to the situation. Prompts change in turbine locates and turbine sizing.

Time line in Development, cont.

- March 2005, Western Ecosystems concludes Ecological Baseline Study. No serious findings were uncovered.
- In June of 2005, Dale Osborn/DISGEN informally contacts then CEO, Mr. Bill Fuhrman of NPPD with the possibility of NPPD purchasing power from this project.
- In July of 2005, Project then contacts Xcel for purchasing power from Project.
- In August of 2005, Project contacts Basin for the purchase of power and a draft power purchase agreement is developed.
- In September of 2005, Discussion of cost of wheeling and development a separate transmission line from the Owl Feather War Bonnet Wind Farm to WAPA line about 15 miles from site.

Time lines in Development, cont.

- Sept. 2005, Grant funding expires
- Oct. 2005, Change of Command at NPPD, Project contacts NPPD again on possibility of purchasing power.
- Nov. 2005, Project gets a draft Power Purchase Agreement with NPPD.
- Through winter of 2005/06, several meetings with RST Council on Partnership on Wind Farm.
- March 2006, Dale Osborn brings forth an MOU to continue project and insure development costs are recoverable for DISGEN.
- May 2006, Council meeting on MOU, with response from Roger Freeman, Citizens Energy Corporation on wind farm and MOU.

Time lines in Development, cont.

- August 2006, impasse on project lingers, DISGEN incorporates Owl Feather War Bonnet Wind Farm LLC and issues a Draft Grant of Easement to Rosebud Sioux Tribe.
- November 2006, RST Council Meets on Grant of Easement and approves.
- December 2006, Tribal President Rodney Bordeaux requests review by BIA DEMD.
- May 2007, Draft PPA with NPPD expires, NPPD issues an RFP for electrical energy by renewable resources, for 30, 60, 90, 110Mw. OFWB LLC responds to all.
- July 2007, BIA DEMD forwards approval on Grant of Easement to BIA Aberdeen.

Anticipated Time Lines

- Nov. 2007, Complete Environmental Assessment and Submit to BIA
- Dec. 2007 Obtain Power Purchase Agreement
- Feb. 2008, BIA issues FONSI
- Feb 2008, Engage Investors/Rural Utilities Service, USDA, Secure Loan
- April 2008 advertise project for bid
- June 2008 Award bid for construction
- July 2008 Construction underway
- Dec 2008 Wind farm on line

Economic Development

- The land royalty payments will be approximately $240,000 per year escalating at 2.5% for 20 years.
- Equates to $5,000.00 per acre per year, or $16,666 per year, per turbine in year 1 increasing at 2.5%.
- The RST will receive the sales and use taxes collected by the State of South Dakota for the construction of this project which is about $1.5 million
- Operations and Maintenance will foster approx. 3.5 jobs for tribal members
- During construction period, project will inject locally in the community about 3-4 million dollars, with approx. 20 to 30 jobs locally for about 3-5 months.
- Added economic benefits have been suggested to the tribe and have been encouraged to develop such opportunities.

New Projects

- MOU with Tribal Utilities, SWA Corp. Tribal Housing Authority, and Trees, Water People. Retrofitting of 6 existing houses, using Active Solar Heat Gain, Photovoltaic, and a residential wind turbine, to reduce the cost of heating these units. Little Thunder Project, Clean Energy Education Project.
- In 2006, BIA DEMD awarded a $15,000 grant to RST to study geothermal resource on reservation lands to a higher degree.
- In 2007, BIA DEMD awarded RST with $175,000.00 to drill deep well on tribal lands next to the town of White River to assist in heating of a health care facility, through direct heat application of geothermal heat.
- RST has received a $15,000 grant to develop a feasibility study to determine interest in developing a biomass to fuel project. MOA has been developed with University of Iowa, Ames, South Dakota State University, Vermillion, Sinte Gleska University, Antelope and the Rosebud Sioux Tribe to understand potential and develop costs.
- Advocating to the local housing authority, The SWA Corporation in the use of a local renewable resource, our tribal timber resource, to engage our people resource to build mutual self help houses.