

Honor The Earth

112

CERTIFICATE OF DEPOSIT AND INTEREST PAID REGISTER

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Who Paid At	TO WHOM PAID	NUMBER	AMOUNT	CHK	TOTALS	Interest Paid	Total Interest	Time or Interest Term	Mo's	Days
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Brought Forward

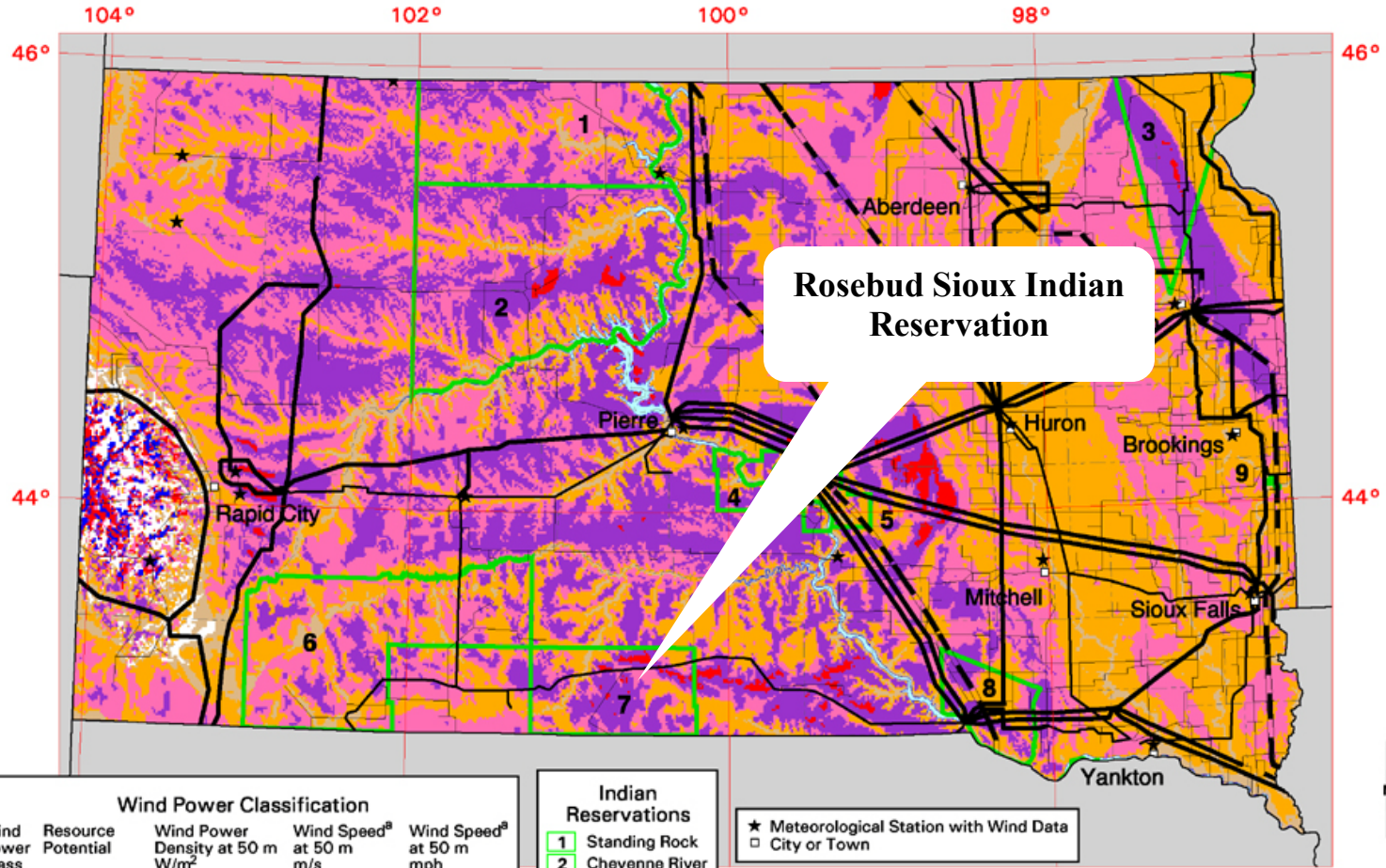
Brought Forward



Artist: Donald Montileaux

Montileaux © 02

South Dakota - Wind Resource Map



**Rosebud Sioux Indian
Reservation**

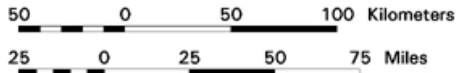
Wind Power Classification				
Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m ²	Wind Speed ^a at 50 m m/s	Wind Speed ^a at 50 m mph
2	Marginal	200 - 300	5.6 - 6.4	12.5 - 14.3
3	Fair	300 - 400	6.4 - 7.0	14.3 - 15.7
4	Good	400 - 500	7.0 - 7.5	15.7 - 16.8
5	Excellent	500 - 600	7.5 - 8.0	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

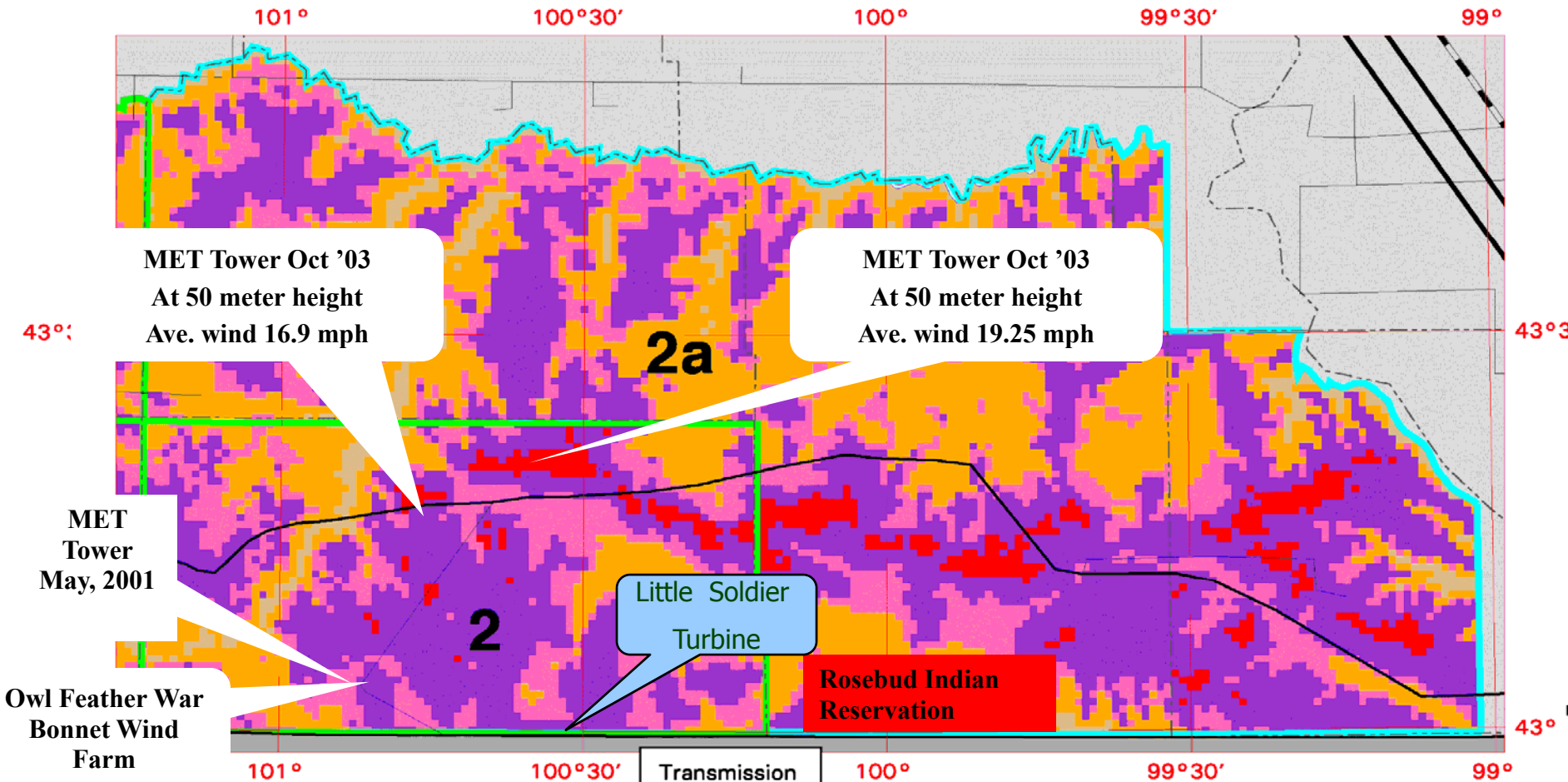
Indian Reservations	
1	Standing Rock
2	Cheyenne River
3	Lake Traverse
4	Lower Brule
5	Crow Creek
6	Pine Ridge
7	Rosebud
8	Yankton
9	Flandreau

★ Meteorological Station with Wind Data
□ City or Town

Transmission Line Voltage	
~	69 Kilovolts
≡	115 Kilovolts
≡≡	230 Kilovolts
≡≡≡	345 Kilovolts



South Dakota - Rosebud Reservation Wind Resource Map and Capacity

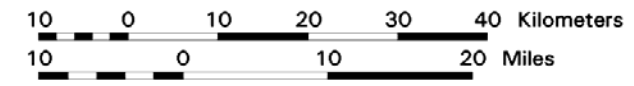


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Transmission Line Voltage	
	69 Kilovolts
	115 Kilovolts
	230 Kilovolts
	345 Kilovolts

	Federal Facility
	City or Town



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

U.S. Department of Energy
National Renewable Energy Laboratory



Little Soldier Turbine

- Commissioned in March '03
- Neg Micon, Vestas, 750 Kw Turbine
- Cost was \$1,226,804.00
- DOE grant of \$566,000.00
- RUS Loan of \$660,804.00
- Initial PPA with Basin Electric for 2.5 years
- is for all of the 750 kwh electricity produced
- and 450 kwh of the green tags produced
- which Basin has sold REC's to Ellsworth
- Air Force Base.
- For the period of March '03 – Sept '03, tribe received \$19,645.90 for electrical sales and for the green tags \$16,830.05



Little Soldier Turbine Native Energy Contribution

- Purchased 300 kWh of the green tags
- from March '03 to Sept '06
- Purchased all of the green tags, 750 kWh
- produced from Sept '06 to the year 2028
- Valued at \$215,000, which has already
- been paid to Rosebud Sioux Tribe



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

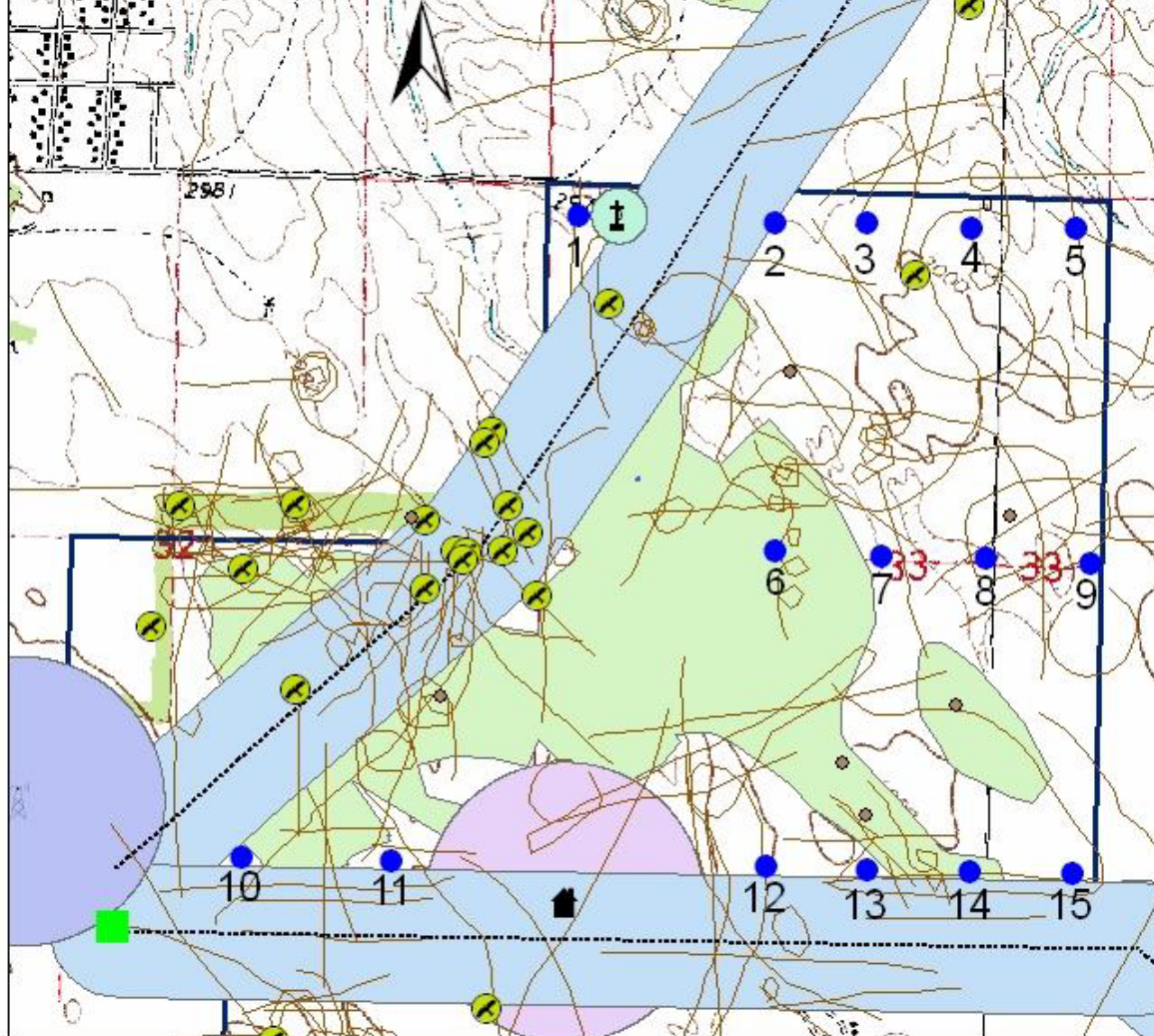
Photo Aerial of Project Area



Sections 32, 33, T37N R30W 680 acres

Source: Ken Haukaas RST Resource Development Office

DISGEN



Legend

- | | | |
|------------------|-------------------------------|------------------------------|
| Project Boundary | catholic_shrine_Buffer | powerline_nad83_Project_Buff |
| 2MW Turbine | Homesite: Francis One Feather | Raptor Flight Paths |
| KINI Radio Tower | homesite_one_feather_point_B | Wetlands |
| KINI_Buffer2 | Nests | Prairie Dogs |
| Substation | Perched Raptors | |
| Catholic Shrine | 115kV Transmission | |
- Feet
 750 375 0 750 1,500 2,250

Wind Farm Site, looking East



Wind Farm Site, looking West



3 photo simulation locations

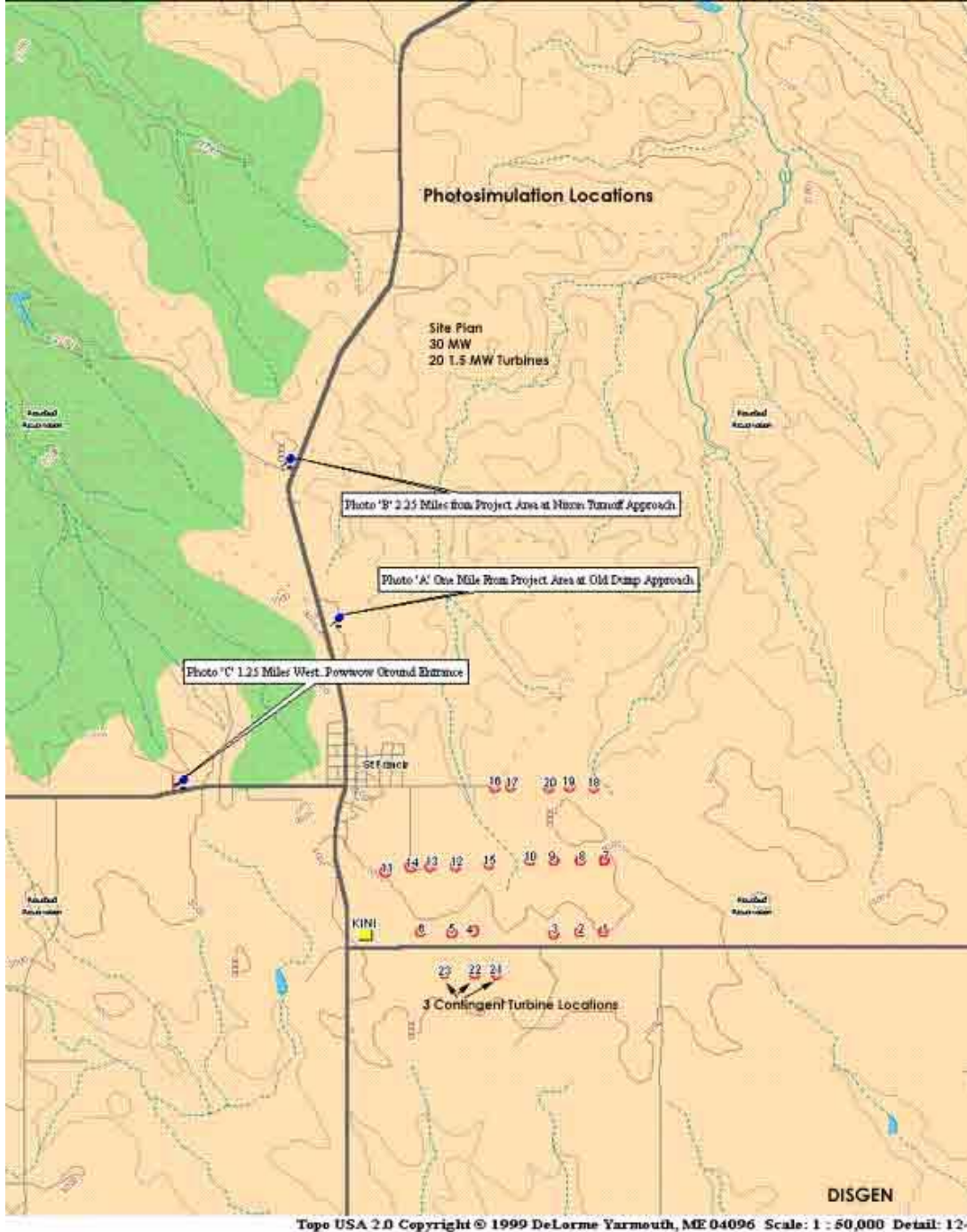


Photo from 1 Mile North of Project Area and St. Francis, at Old Dump Approach; Facing South by Southeast



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

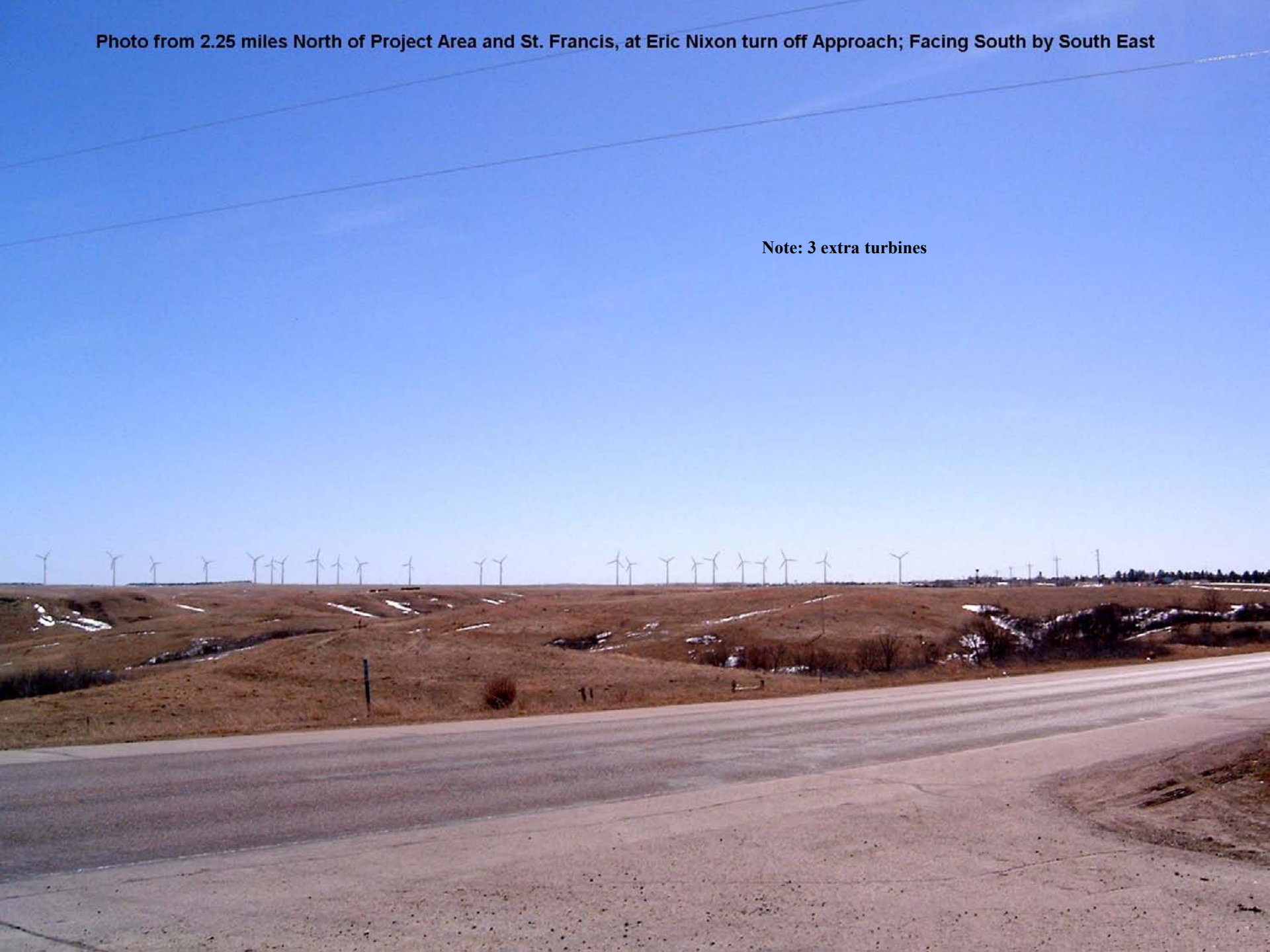


Photo from 1.25 Miles West of Project Area at Powwow Grounds Entrance Approach, Facing East by Southeast. St. Francis in Foreground.



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/OIEED, Lakewood, Colorado.**
- **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/OIEED forwards approval on Grant of Easement to BIA Aberdeen.**

Time lines in Development Cont.

- Feb '08, BIA Supt. Rosebud Agency, receives Solicitors comments on Grant of Use and Lease Agreement
- Feb '08, BIA Aberdeen South Dakota issues FONSI on Environmental Assessment of Owl Feather War Bonnet Wind Farm
- Feb '08, BIA Supt., Rosebud Agency requests a wind farm analysis from The Office of Special Trustee
- June '08, BIA Supt. Rosebud Agency receives wind farm analysis from OST, showing proposal from DISGEN Inc. is as good as or better than any other published reports of compensation packages in the upper Great Plains area. Minor changes recommended and incorporated. Fully 18 months after tribal request for BIA review.
- July '08, Chairman Bordeaux, request reaffirmation from Tribal Council on Nov. 06, tribal resolution on Grant of Use and Lease Agreement, Council imposes TECRO Fee contrary to original resolution

Time lines in Development Cont.

- August '08, RST Council changes Nov. '06 resolution incorporating TECRO Fee of 2% against the total project cost which is estimated to be at 64 million dollars.
- Through Sept and October this issue goes back and forth between the RST Council and TECRO.
- The upfront payment of 1.28 million dollars TECRO Fee reduces the estimated 20 year overall payment to the tribe from 7.2 million dollars to 5.4 million dollars. A loss of 1.8 million over the next 20 years.
- After making the council aware of this situation and with no reversal of the imposition of the TECRO Fee, Chairman Bordeaux, along with BIA, sign the Grant of Use and Lease Agreement at the end of Oct. 2008

Anticipated Time Lines

- **Jan. 2009, Obtain Power Purchase agreement with NPPD**
- **Feb. 2009, Engage Rural Utilities Service, USDA, Secure Loan**
- **April 2009, Contract for construction**
- **June 2009, Construction underway**
- **Dec 2009, Wind farm on line**

Economic Development

- **The land royalty payments will be approximately \$160,000 per year escalating at 2.5% for 20 years.**
- **Equates to \$3200.00 per acre per year for 50 acre footprint of wind farm, or \$11,500 per year, per turbine in year 1 increasing at 2.5% annually for 20 years.**
- **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 \$.5 million total divided over the first 4 years as per SD tax code.**
- **Operations and Maintenance will foster approx. 3.5 jobs for tribal members**
- **During construction period, project will inject locally in the community about 4-5 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, such as developing a concrete batch plant owned by the tribe.**

Lessons learned

- Keep all parties concerned up to date, especially BIA on any projects requiring a lease agreement.
- Economic development such as this should be handled by a Tribal Business Council or that entity within the tribe that handles economic development, not the council at large, unless your council is relatively small.
- Be informed, find out what's out there in lease compensation packages when it comes to wind projects.
- Mentor others within your tribe so that you're not the only one with knowledge of wind development, share your knowledge and gather your champions within the tribe.

New Projects

- The RST is engaging Citizens Wind of Boston Mass for the development of 100 – 250 Mw wind farm/s as per an RFP issued last fall 2007 by the tribe
- All development fees will be incurred by Citizens Wind
- Deep geothermal well for direct heat application, funded by BIA, OIEED at just over \$200,000