




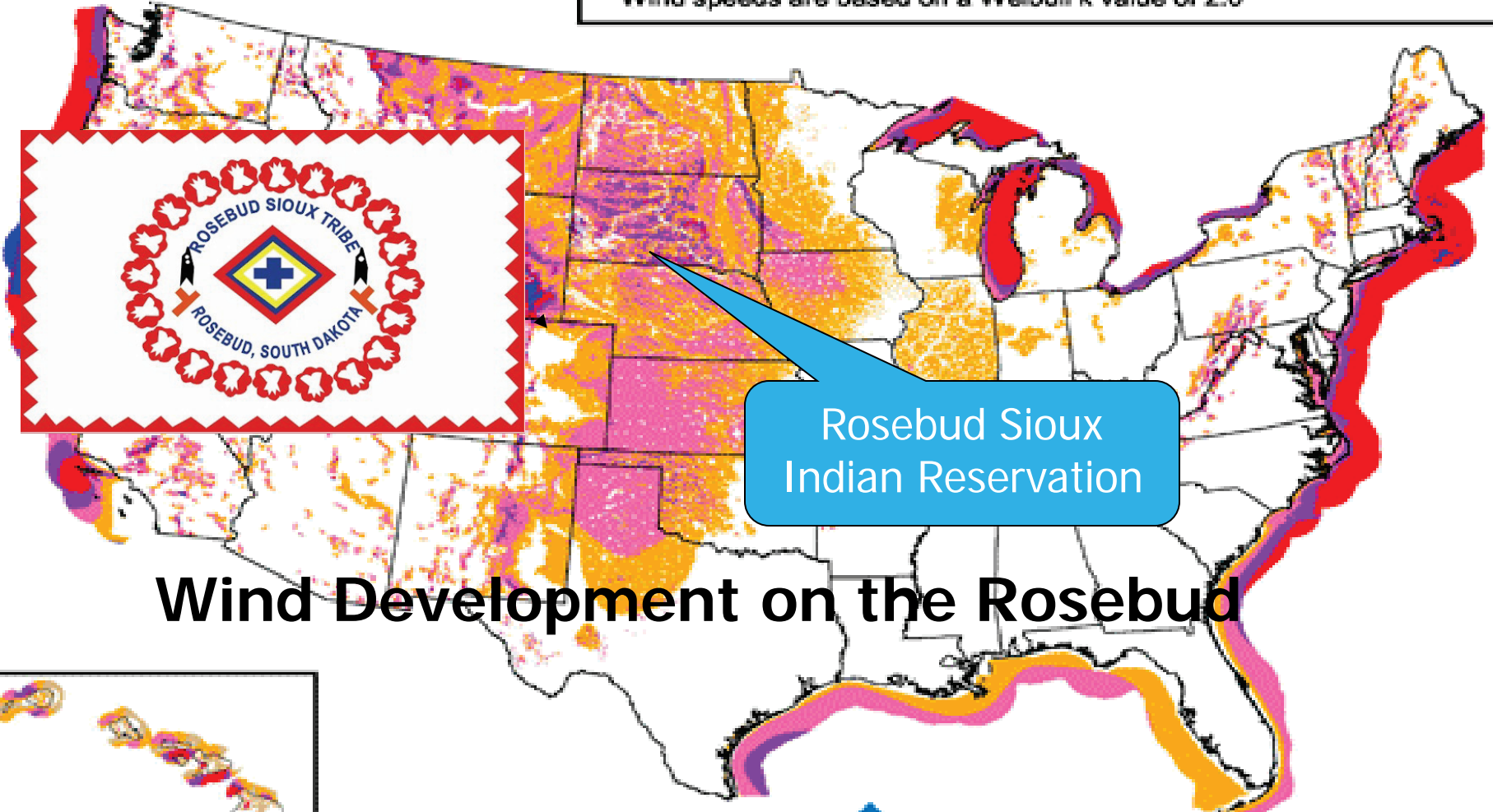
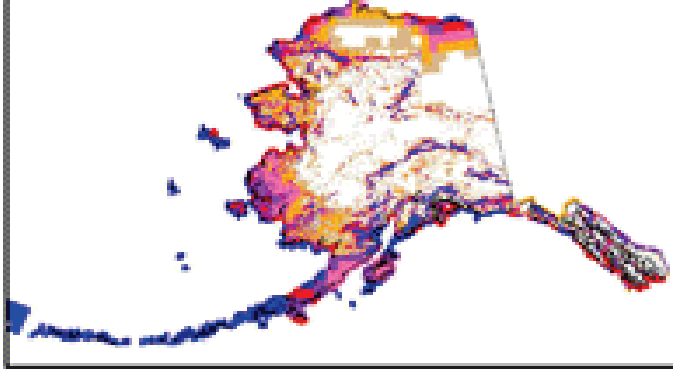


## Wind Power Classification

Wind Power Class	Resource Potential	Wind Power Density at 50 m $W/m^2$	Wind Speed <sup>a</sup> at 50 m m/s	Wind Speed <sup>a</sup> at 50 m mph
	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

<sup>a</sup>Wind speeds are based on a Weibull k value of 2.0

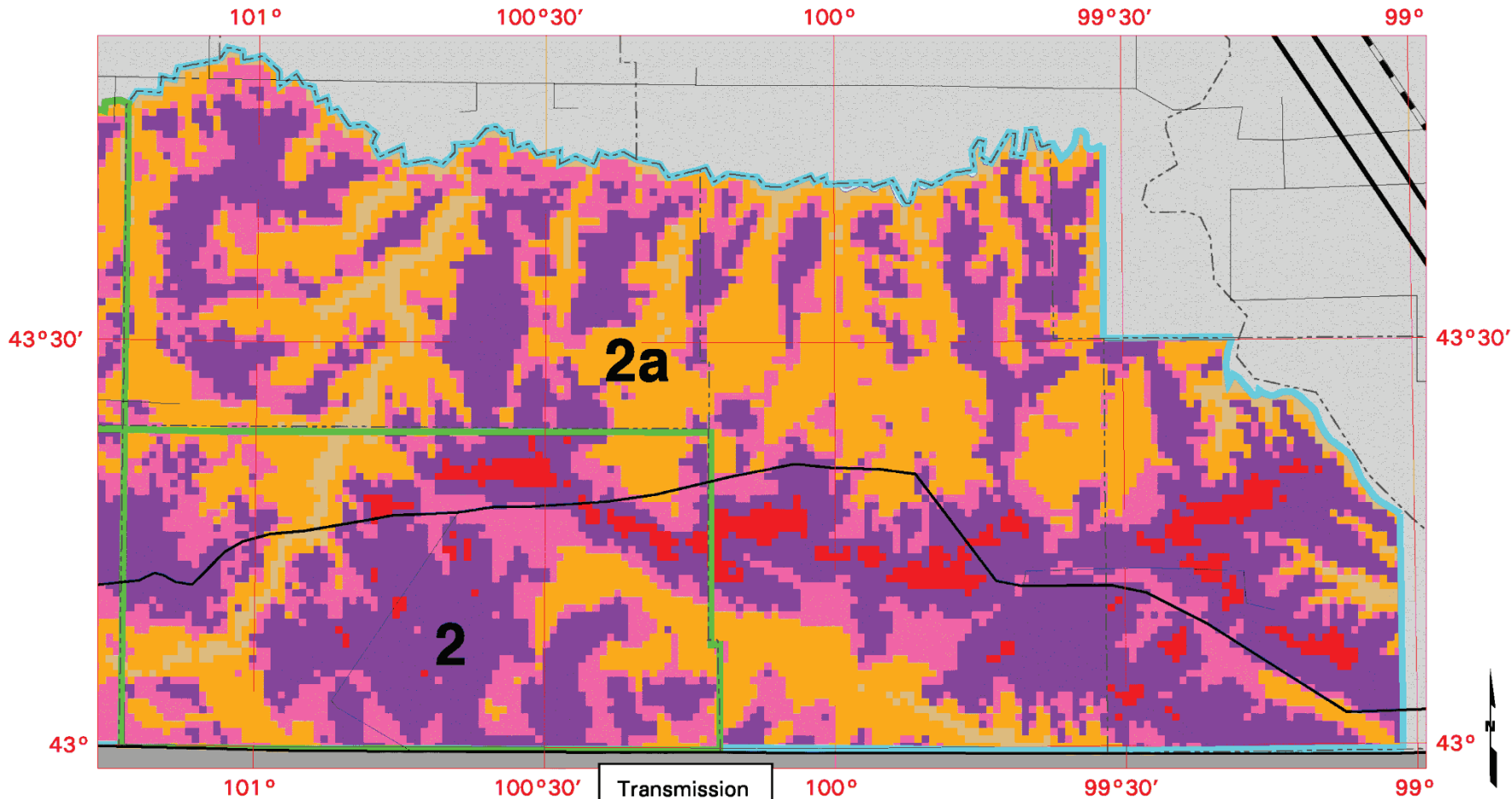


Rosebud Sioux Indian Reservation

## Wind Development on the Rosebud



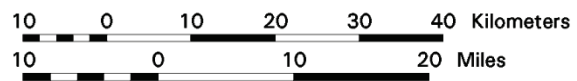
# South Dakota - Rosebud Reservation Wind Resource Map and Capacity



Wind Power Classification				
Wind Power Class	Resource Potential	Wind Power Density at 50 m W/m <sup>2</sup>	Wind Speed <sup>a</sup> at 50 m m/s	Wind Speed <sup>a</sup> 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

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
2 Rosebud	17,400 - 34,800	25,750 - 51,500

U.S. Department of Energy  
National Renewable Energy Laboratory

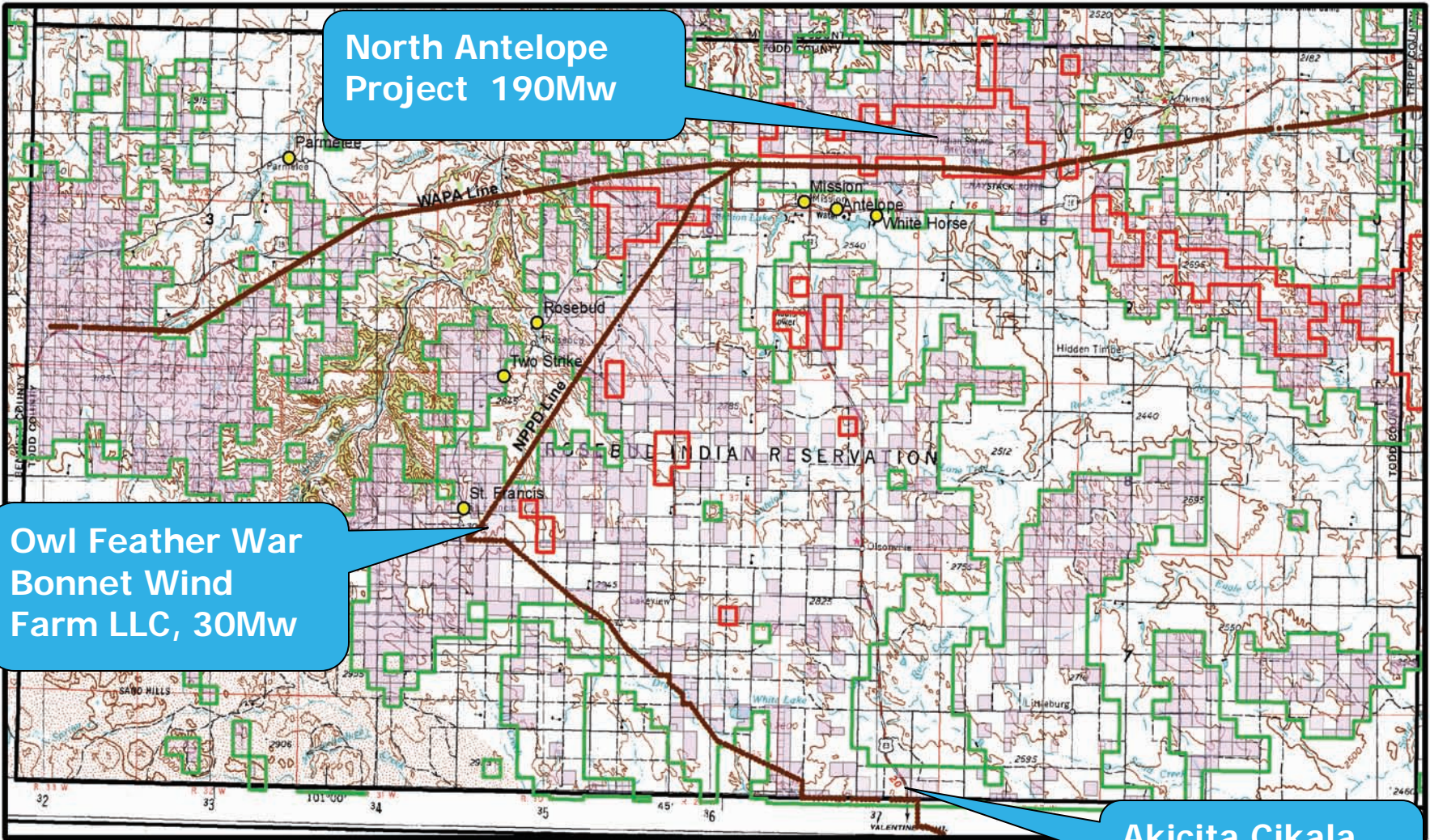




North Antelope  
Project 190Mw

Owl Feather War  
Bonnet Wind  
Farm LLC, 30Mw

Akicita Cikala  
750 Kw turbine



- Wind Potential Class 6
- Wind Potential Class 5
- Tribal Trust Lands within Wind Class 5 and 6
- County Line
- WAPA and NPPD Poles

0 2 4 8 12 16 Miles

Tribal Trust Lands within Wind Class 5 and 6 in Todd County  
(Includes Tribal land, Allotment Land, and Trust Deed Land)

Total Trust Land within Wind Class 5 in Todd County = 232,094 Acres

Total Trust Acres within Wind Class 6 in Todd County = 35,116

Martin, SD Topographic Map  
Scale 1:250,000



# Akicita Cikala Turbine

## Neg Micon 750kw

### Commissioned March 2003





# Owl Feather War Bonnet Wind Farm

2003 Dept. of Energy Grant

DOE Funding \$448,551.00

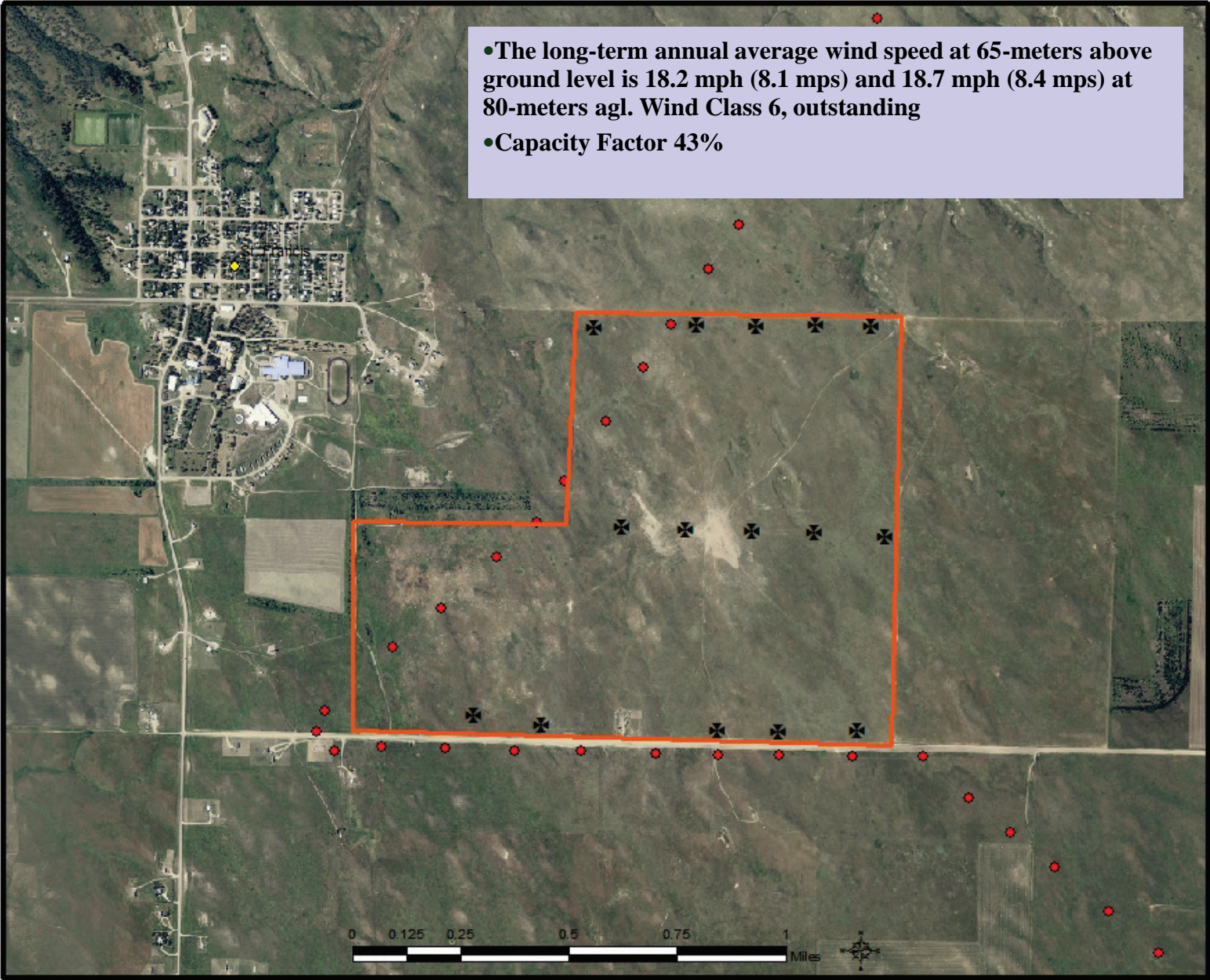
DISGEN Cost share/in-kind \$78,750.00

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





- The 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. Wind Class 6, outstanding
- Capacity Factor 43%





# Time lines in Development for the Owl Feather War Bonnet Wind Farm

- Initiated all preconstruction activities in Fall of 2003
- Cultural Assessment, Class I and III survey completed by 2004
- Systems Impact Study was completed by fall of 2004
- Environmental/Ecological Assessment completed by 2005
- RST and DISGEN sign Grant of Use and Lease agreement based on a % of gross revenue stream in Nov. 2006, RST to act as a passive landowner receiving payments.
- Grant of Use and Lease agreement sent to BIA DEMD/IEED in Dec. '06, receives BIA approval in June 2008, 18 months later.
- BIA issues a Findings Of No Significant Impact based on an Environmental Assessment in Feb. '08

# Economic Benefits to RST

- The land royalty payment in first year will be approximately \$218,000 per year escalating as per the PPA price. (Based on 49.90 per Mwh or .0490 cents per Kwh)
- Assume 50 acre footprint for 15 turbines, equates to \$4360.00 per acre per year, or \$14,533 per year, per turbine in year 1. All other acreage on site can continue to be grazed or farmed.
- The RST will receive a portion of the contractors excise taxes collected by SD. Approx \$616,000.00 in four yearly payments of \$154,000.00 each
- Construction will inject approx. 5-6 million dollars, with 20-30 jobs produced locally for about 3-5 months.
- Operations and Maintenance will foster approx. 3.5 jobs, approx. \$210,000.00 per year
- TECRO fee of 2% x \$70 million, will bring forth \$1.4 million for the tribe 30 days after commissioning.



# Rosebud Sioux Tribe and Citizens Wind

RFP was issued in Fall of 2007, 3 firms responded and RST chose Citizens Wind and entered into an MOA in winter of 2008 for a 5 year period of development.

Basic Agreement: Citizens has exclusive wind rights over all Tribal lands for a period of 2.5 years, at end of the 2.5 year, they must identify land and start paying a lease agreement securing the lands. In the remaining 2.5 years they must have in the ground at least one operating wind farm. All data gathered will be shared.

The RST and Citizens Wind are considered a partner in the development phase, the RST has a 20% interest with Citizens having a 80% interest as they bring the technology and money to the table, and we bring our land and wind to the table. RST can raise our interest to 33% by infusing dollars into the development phase.

We intend to charge \$100,000 per Mw in development fees to the future owner of the wind farm/s. For every Mw developed RST will get at least 20,000, with potential to receive \$33,000 per Mw immediately after commissioning.

# North Antelope Highlands Project timelines

Jan '09, a preliminary Systems Impact Study identified approx. 190Mw of capacity remained on WAPA 115kv that runs through the reservation that runs West and East

Feb '09, Citizens filed interconnection request with WAPA for the North Antelope Highlands project , a 100Mw and a 90Mw wind farm.

Feb '09, Citizens set up 2 extra MET towers on site to gather additional data and correlate with RST wind data, RST data indicates site is in Class 7.

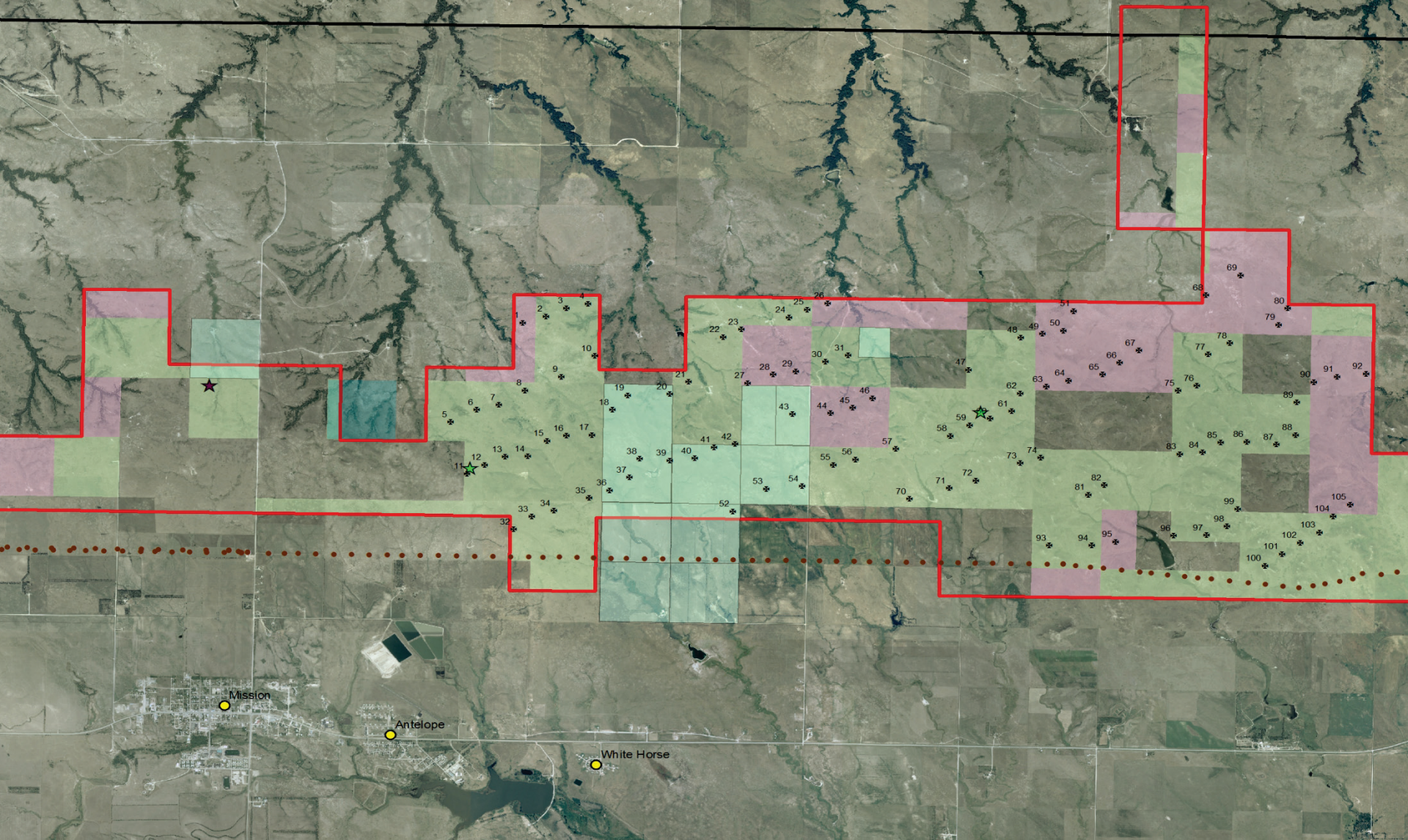
Throughout the spring, summer and fall, Avian studies have been conducted on the site and are complete.

Citizens developed a site layout on turbine locates with 105 turbine locates to date.

Cultural studies , Class I and III to be conducted Summer of 2010



# North Antelope Highlands Projects 1 & 2





# RST Economic Benefits with Citizens Wind

- 190 Mw will garner Citizens Wind and RST development fees of \$19,000,000.00, of which tribe has initially a 20% stake, with an option of 33%. A possibility of \$6,270,000.00 for the tribe at 30 days after commissioning of this project.
- RST will receive 3.5% of gross revenue stream, equates out to about \$13,503.31 per turbine in first year against the Power Purchase Agreement (based on a price of \$47.50 per Mwh or .04750 cents per Kwh. escalating at 2.5% annually)
- RST to receive those property taxes that would otherwise be paid to the state if farm was built on private land outside the reservation boundaries. On 3/14/08, the state of SD enacted HB 1320 which basically set these dollar amounts. Those taxes equal \$1.3 Mill. in first year , this would equate to an additional \$13,684.00 per turbine for the tribe in the first year.



# Additional Economic Benefits for RST and local community

- At \$2.2 million per Mw, 190 Mw project will cost an estimated \$418 Million
- Contractors excise tax will garner the tribe \$3,678,400 at the end of 4 years.
- Input about \$15 Million construction dollars to the local community
- Provide 100 Jobs during const.
- Provide 15 Jobs in O&M, plus training program
- Local community and tribe to develop support added value businesses in support of project.

## RST use of revenue stream

- Develop energy sources from our wind resource, the sun resource, our waterways, our geothermal resources, into a reservation wide distributed generation system, to lessen our dependence on the larger grid to become self sustainable.
- Tribe to support an entity such as Rosebud Energy Service Corporation, RESCO, starting our own tribal utility company, purchasing the existing distribution system from the local cooperative.
- Support our peoples need by upgrading the efficiency of their houses and improving their heating and cooling systems with renewable energy devices through grant for our poor people and/or grant/cost share for our people who may be able to afford some of the costs to began to install these upgrades.
- Support start up funding for small tribally owned companies developing residential renewable energy devices , with the intent to expand outward beyond the reservation boundaries to much larger markets creating jobs and industries.



*And as I looked and wept, I saw that there stood on the north side of the starving camp a sacred man who was painted red all over his body, and he held a spear as he walked into the center of the people, and there he lay down and rolled. And when he got up, it was a fat bison standing there, and where the bison stood a sacred herb sprang up right where the tree had been in the center of the nation's hoop. The herb grew and bore four blossoms on a single stem while I was looking – a blue, a white, a scarlet, and a yellow, and the bright rays of these flashed to the heavens*

*I know now what this meant, that the bison were the gift of a good spirit and were our strength, but we should lose them, and from the same good spirit we must find another strength.*

From the book, *Black Elk speaks*, 1932

