Sicangu Lakota Oyate
(Rosebud Sioux Tribe)
Hihan Sapa Wapaha
Tate Woilagyapi Project
(Owl Feather War Bonnet Wind Project)

30 Mw Wind Energy Facility

Phil Two Eagle, Director
Resource Development Office

Dale Osborn, President
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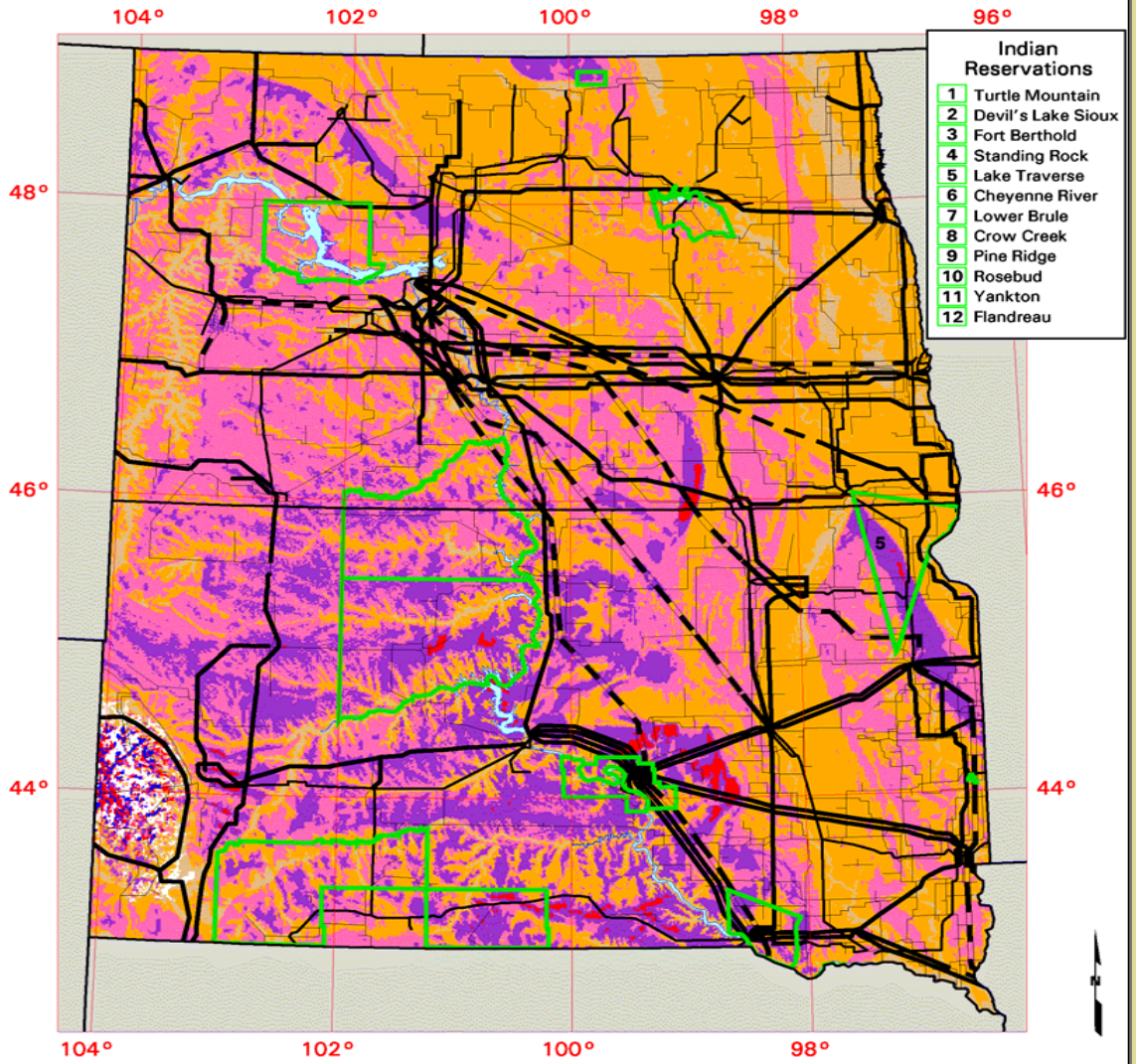
Objective

To complete all the necessary actions required for the pre-construction development of a 30 Mw wind project on the Rosebud Sioux Tribe Reservation in South Dakota

North and South Dakota - Wind Resource Map



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

Transmission Line Voltage

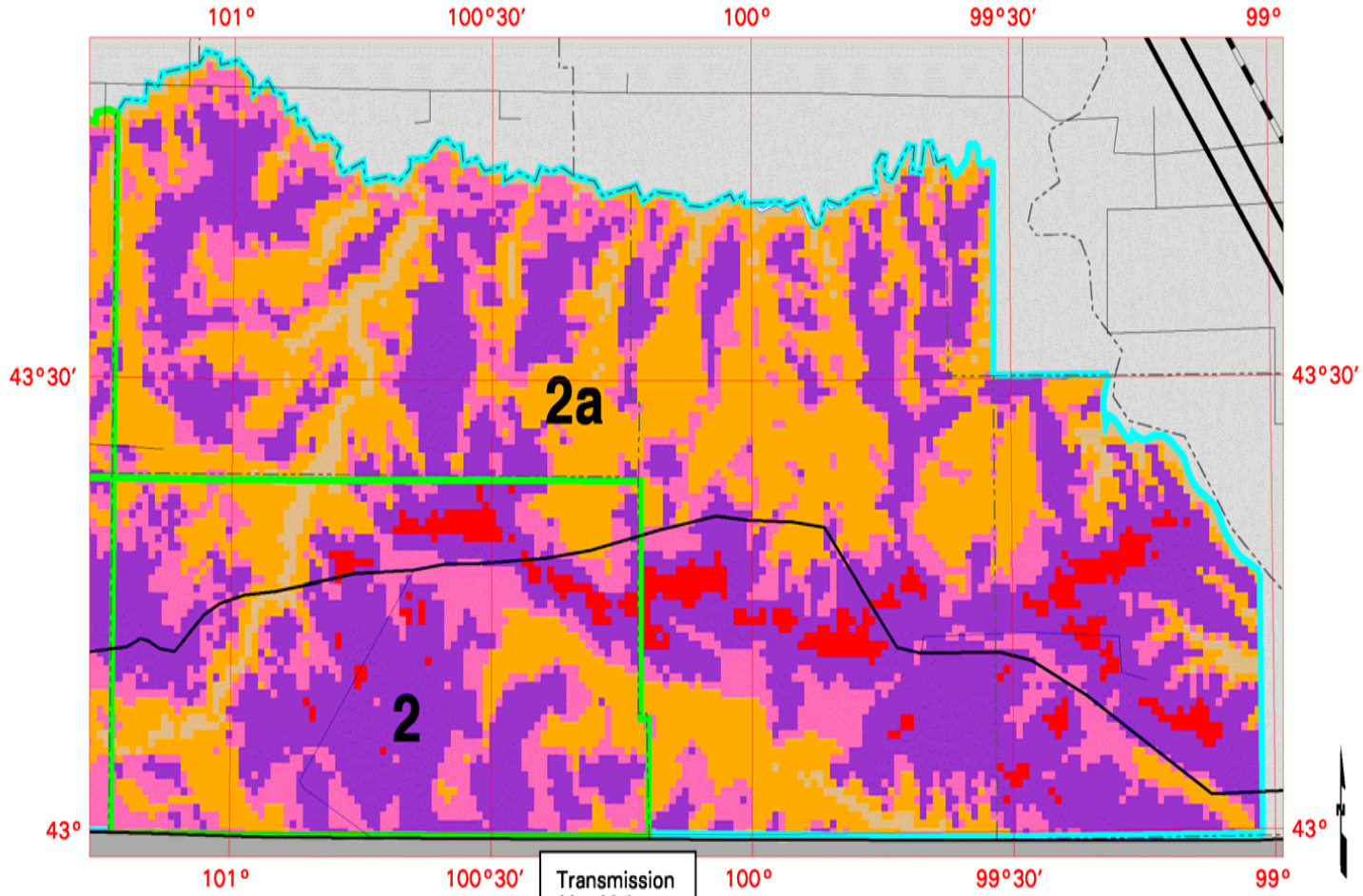
- 69 Kilovolts
- 115 Kilovolts
- 230 Kilovolts
- 345 Kilovolts
- Under Construction

40 0 40 80 Kilometers

30 0 30 60 Miles

U.S. Department of Energy
National Renewable Energy Laboratory

South Dakota - Rosebud Reservation Wind Resource Map and Capacity



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★ 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

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NREL

20-APR-2000 5.1.1

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- **RST has been awarded a DOE Wind Energy Development Grant**
- **Disgen co-wrote the proposal with Phil Two Eagle and Tony Rogers.**
- **Disgen will serve the RST as Contractor for the pre-construction development.**
- **The Owl Feather War Bonnet Project is planned for the community of St. Francis.**

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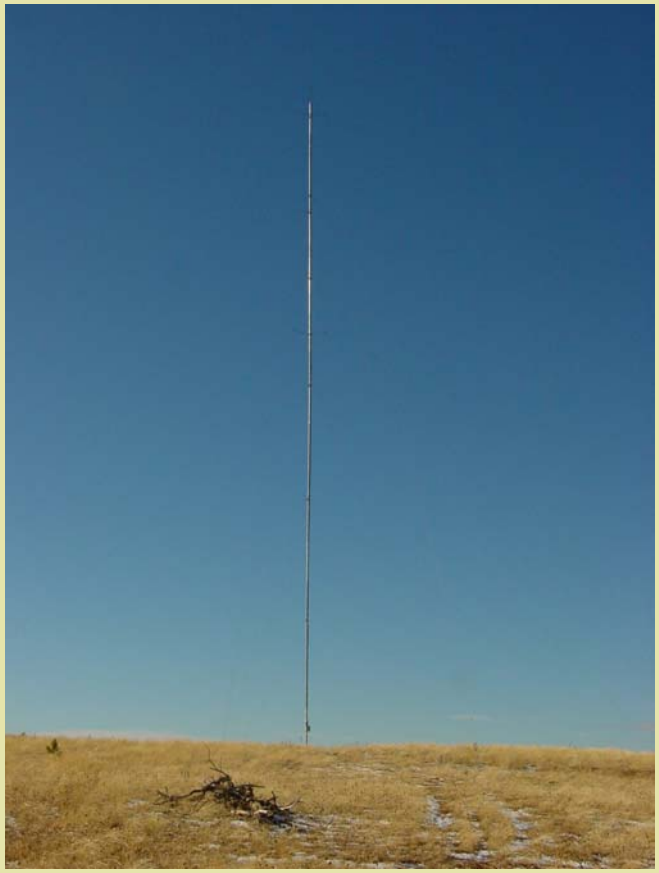
Status

- Began Data Collection in May 2001 on KINI tower
- Site has an 18 mph resource at 65 meters
- A 115 kV NPPD line is adjacent
- Cherry-Todd REC substation is also adjacent



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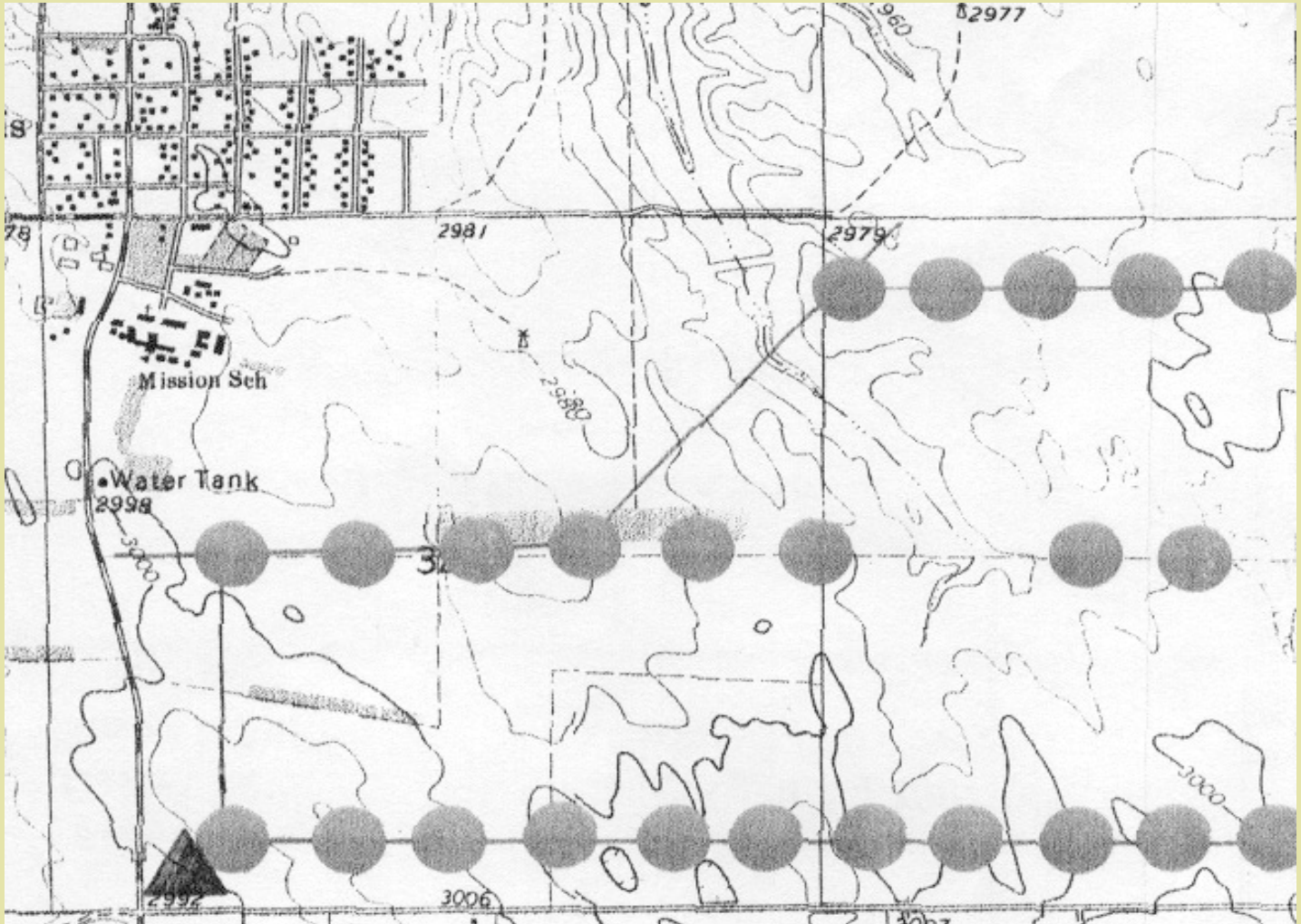

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Key Studies

- Avian research
- Beetle research
- Cultural studies
  - Archeological
  - Ethnographic
- Interconnection studies
- Soils studies
- Photo-simulations

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Required Contracts

- RST land agreements
- RST permits
- BIA permits
- Interconnection agreement
- Taxation agreements
- Power sales agreement
- Financing agreements