Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation

Office of Economic Development

October 25, 2010
Nakota & Dakota Nations
• 2.1 Million Acres (50% Fee)
• ≈16,000 Membership
• 6 Communities along Highway 2
• 100 mi. x 35 mi.
• Southern Boundary - Missouri River
Fort Peck Tribes
10 Year Plan

- Whole Community Responsible for Tribal Safety & Wellbeing
- Thriving Wholesome Communities With Functional Infrastructure Systems
- Tribally Driven Economic Development & Ownership
- Model Green Tribal Community
- Using Natural Resources, Modern & Traditional Methods To Care For Ourselves
- Widespread Use of IT For Critical Data Management
- Building A Foundation Towards A Shared Future
- 21st Century Workforce
- Responsibly Engaged Government Developing Meaningful Tribal Policy

Fort Peck Tribes
10 Year Plan
Fort Peck Energy Office

“The People’s Electricity”
VISION

Become the Regional Leader in Renewable Energy Generation and Delivery

MISSION

Build Energy Independence For The Tribe One Family At A Time
EECBG

- Train 6 installers of GSHP at the IGSHPA
- Install 20 GSHP on tribal houses
- Monitor savings via electric bills
- Calculate Carbon Credits
Black Line is the Reservation Boundary
MT Bureau of Mines and Geology Map - 1981
Potential Geothermal Sites.
Geothermal

- 1979 Feasibility Study - Scientific Foundation
- MIT-Study 2006
- Montana Bureau of Mines Information
- Co-Produced Liquids Technology - Using abandoned oil wells, current wells.
MIT STUDY

OIL FIELDS
132° C at 2.2km

GRANITE BASEMENT
250° C at 6.5km (or less)

Little deep exploration

Few temperature data available

Generally normally pressured
Geothermal Feasibility Study

- Data from existing wells
- Fault line
- Technology improvements since 1979
- District heating for Poplar, MT
- Wind Sites - Bechtel Study (1995)
- 30m Anemometer Towers/ 1 Radio Tower
• Wind Speeds are Class 5 and Class 6
• Low Turbulence Intensity (less stress on turbines)
• Vertical Sheer is high (more power captured with taller tower)
The maps/models were created by WindMap, a software program suitable for modeling wind speeds, wind power density and turbulence levels for a variety of exposure conditions. The software is based on computational fluid dynamics (CFD) and is used to estimate wind speeds, power density, and turbulence levels. In producing these models, the input was a 250-km scale USGS digital elevation map for the area covering the Reservation; DEM maps were also used as well as existing wind data collected by Bechtel for Cameron Point and Wall Ridge, which was also incorporated.

Fort Peck Average Annual Wind Speed (M/s) at 60M
References

• MIT Study -
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