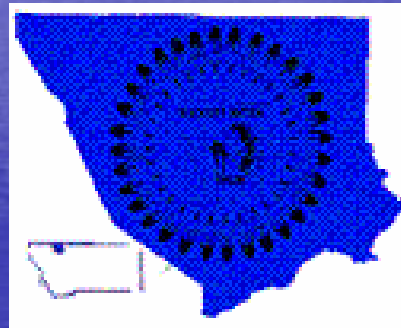


Blackfeet Nation Energy Organization Development



First Steps to Renewable Energy
Grant Awarded by Department of Energy
Presented by Jeri Lawrence
Blackfeet Renewable Energy Director

Introduction

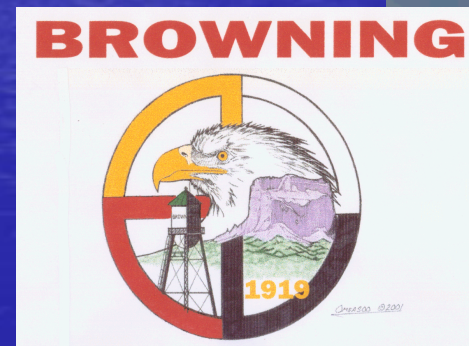
- The Blackfeet Reservation is located in Glacier and Pondera Counties of Montana.
- Northwestern part of the state at the eastern base of the Rocky Mountains
- 1, 525, 671 acres, Measuring 52 miles at its longest point and 58 miles at the widest,
- shares its western boundary with Glacier National Park and its northern boundary with the province of Alberta, Canada.

Introduction

- The unemployment rate of the Blackfeet Reservation averages roughly 63%.
- Total population of the entire reservation is approximately 10,100.
- 15,355 enrolled members, 8,000 of whom are living on the reservation.
- 4,500 descendants of enrolled tribal members living on the reservation.

Wind Power for the Wastewater Treatment Plant

- In late 1999, the Town of Browning, Montana and the Blackfeet Nation installed four **Bergey** Excel 10-kilowatt (kW) wind turbines adjacent to the Town's sewage treatment plant.
- Turbines provided about one-quarter of the plant's electricity, displacing energy bought from the grid.



Wind Power for the Wastewater Treatment Plant

- This project was funded primarily with a DOE grant (\$180,000 cash). Other project participants also made cash and in-kind contributions (Blackfeet Housing Authority, \$25,000 cash; Town of Browning, \$25,000 cash; Siyeh, \$5,000 in-kind).
- Browning has a significant wind resource. Because the project objective is to displace grid electricity, the site had to be located adjacent to the treatment plant.
- **Installation:** Siyeh and Marty Wilde of Coyote Energy Inc. coordinated the construction of the civil works.
- **Community Involvement:** Local manpower was used to construct the civil works and install the turbine.

Wind Power for the Community

Small-Scale Utility Grade Wind Turbine Demonstration & Feasibility Study (1994-1996) |

- The project included measurement of wind resource at several sites on the reservation, and the installation and operation of a utility-grade 100-kilowatt wind turbine.
- The turbine supplied electricity to the tribal community college, and excess power was sold to the local utility.



First Steps to Renewable Energy Grant : Blackfeet Energy Organization Development

- To enter the arena of commercial energy supply and marketing contracts, it is necessary for the Blackfeet Nation to be a recognized energy development organization.
- In order to make profitable large-scale power arrangements, the energy development organizational entity must maintain stability outside of tribal policy variations and turnovers in Tribal politics. It is necessary to develop new organizations or institutions to effectively implement our tribal energy plans and projects.

Project Objective:

- The Blackfeet Nation shall further pursue all renewable energy development efforts by implementing a tribal energy organization through the accomplishment of these objectives:
- 1) Explore, develop & implement a Tribal Energy Organization
- 2) Revise the Strategic Energy Development Plan
- 3) Develop our management capabilities
- 4) Serve as a resource for tribal leaders, programs, members.

Progress to Date

- Four (4) meetings
- Professional Consultant hired
- Drafted Energy Organization Articles of Inc. for Blackfeet REI
- Program Director hired
- Established Renewable Energy Program
- Renewable Energy Committee formed
- Assembled Blackfeet wind resource data, publications, documents
- Assessing various Funding and Financing Strategies for securing a stable Energy Organization
- Explored Energy Organization Alternatives
- TEPA for environmental review in development

Renewable Energy Development Opportunities

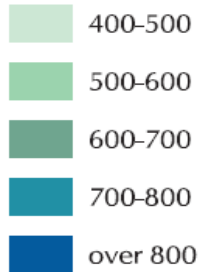
Wind Energy

Wind Power, Watts/Sq Meter

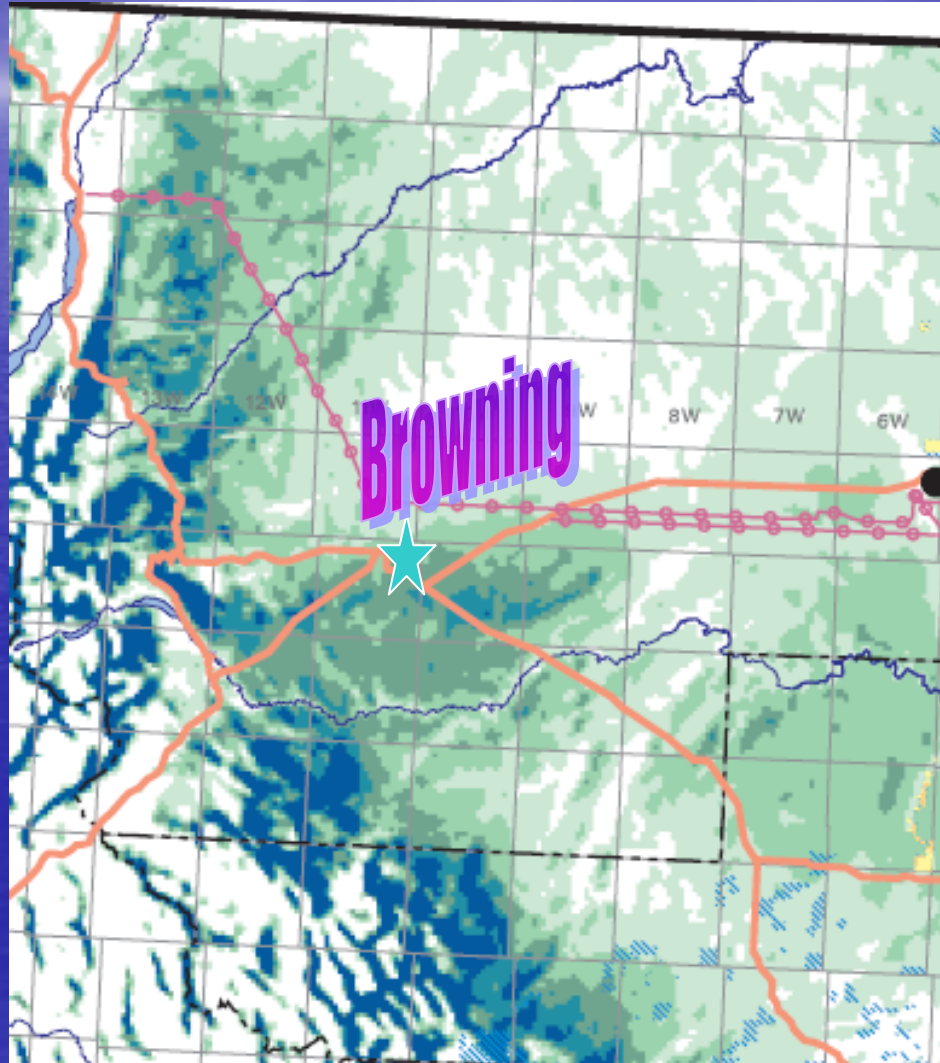
On Qualified State Land



On Other Lands










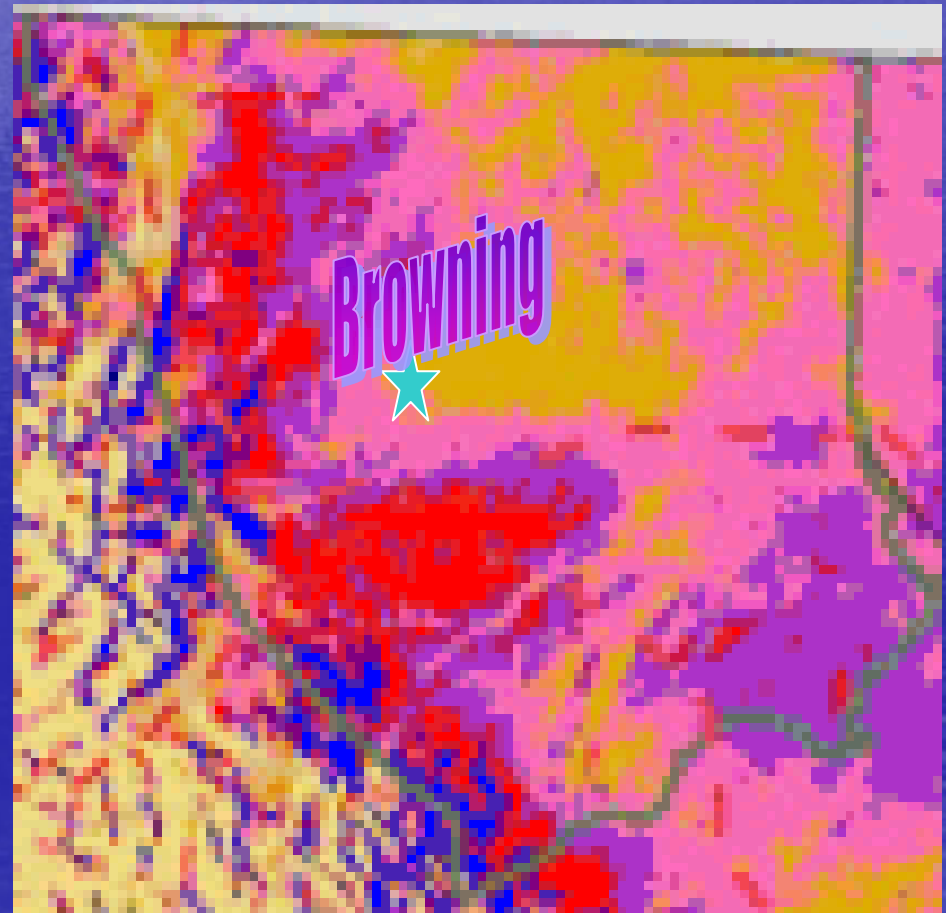
400-500
500-600
600-700
700-800
over 800



Renewable Energy Development Opportunities










Wind Energy

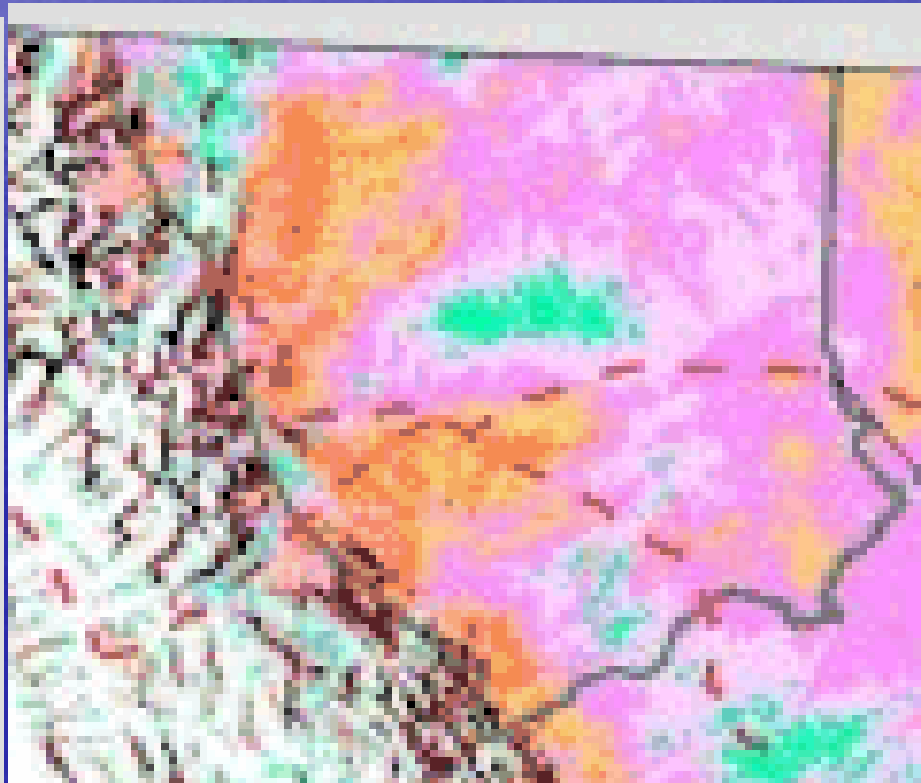
	Wind Power Class	Resource Potential
	Class 1	Poor
	Class 2	Marginal
	Class 3	Fair
	Class 4	Good
	Class 5	Excellent
	Class 6	Outstanding
	Class 7	Superb



Renewable Energy Development Opportunities

Wind Energy

Wind Speed at 50 meters		
	m/s	mph
	0 - 5.0	0 - 11.2
	5.0 - 5.5	11.2 - 12.3
	5.5 - 6.0	12.3 - 13.4
	6.0 - 6.5	13.4 - 14.5
	6.5 - 7.0	14.5 - 15.7
	7.0 - 7.5	15.7 - 16.8
	7.5 - 8.0	16.8 - 17.9
	8.0 - 8.5	17.9 - 19.0
	8.5 - 9.0	19.0 - 20.1
	9.0 - 9.5	20.1 - 21.3
	9.5 - 10.0	21.3 - 22.4
	>10.0	>22.4



Renewable Energy Development Opportunities

Hydropower

- St. Mary Canal Rehabilitation Project
- Design & Engineering plans are conducive for producing Hydropower

Renewable Energy Development Opportunities

BIOMASS

- Fuels for Schools Project –coordinating with the Browning Public School District & Blackfeet Forestry Development Program to provide wood chips to new school
- Biodiesel Project (small scale) currently assessing other opportunities

Renewable Energy Development Opportunities

SOLAR POWER

Hydrogen Power

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