Blackfeet Nation “Energy Organization Development Project”
Final Report

June 15, 2008

For review by the:

U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3305

Prepared by:
Blackfeet Renewable Energy Department
P.O. Box 850
Browning, Montana 59417
Phone (406)338-5194 Fax (406)338-7530

Executive Summary

The Blackfeet Nation Energy Organization Development project, which was funded through the auspices of the Department of Energy First Steps to Renewable Energy Grant, has produced a centralized effort that assists the Blackfeet Tribal Business Council in the proper management, development, and informed decision making ability to negotiate and develop Blackfeet Renewable Energy opportunities, with a special emphasis on wind energy development. In addition, the Blackfeet Nation has been armed with an enhanced ability to examine environmental and legal issues, perform market research, identify additional lands for possible acquisition and development, and examine wind energy projects by other tribes that serve as models. The product of this effort has been that the Blackfeet Nation formerly petitioned the Bureau of Indian Affairs to approve and charter an Indian Reorganization Act, Section 17 Corporation, the Blackfeet Renewable Energy Inc.

Project Overview

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

Figure 1

Map of Blackfeet Territory

The unemployment rate of the Blackfeet Reservation averages roughly 63%. The reservation's economy centers on agriculture and the petroleum industry, although the

latter employs few people on the reservation as production has been cut back over the years since the initial development of the Blackfeet Oil & Gas resources. The total population of the entire reservation is approximately 13,500. The area near the city of Browning contains the majority of the reservation's population. Browning is the center of the reservation's tribal government and the hub of reservation life. The Blackfeet Tribe enrollment statistics indicate that there are nearly 15,355 enrolled members, 8,000 of whom are living on the reservation. Enrollment statistics also show there are approximately 4,500 descendants of enrolled tribal members living on the reservation. Education levels are very low on the reservation. It is estimated that only 37% of the adults on the reservation have a high school diploma and 12% have less than a 9th grade education. Less than 3% of the reservation population has a four-year degree and 1% has an advanced degree.

The fostering of economic development systems for the Blackfeet Reservation continues to be one of the tribe's major goals. The Blackfeet Indian Reservation's present economic development systems are limited to provide the majority of its residents with a substandard quality of living. The population of the reservation is increasing, the birth rate is increasing, the emigration rate is decreasing yet the services necessary to meet the growing needs of the population is decreasing. Additional tribal goals are to maximize the economic benefits to the tribe and to create employment for tribal members, as well as to provide power for the entire reservation, thereby progressing toward clean energy independence using sustainable technologies

It is the hope of the Blackfeet Tribal Business Council and Blackfeet Tribal members that development of the reservation's wind resources will result in improvements of the tribe's economic systems. Specifically, these desired improvements would be the creation of new jobs, and job training, and the addition of a new revenue source from the sale of electricity to the energy industry.

The only way to build an economy is through increasing the economic base. Development of natural resources, including energy sources like renewable resources, adds to the economic base. Wind energy will greatly contribute to the economic base of the Blackfeet Tribe. If the power from a tribal wind farm is sold to utilities in neighboring states and Canada, for instance, then the income earned by local wind farm employees or land lease fees adds to the economic base of the Blackfeet economy. The economic base of the Blackfeet Tribal economy is also increased through exporting electricity off of the reservation and importing dollars through taxes, fees, operations and maintenance jobs and possibly revenues earned by the tribe taking part in the ownership of the wind farm.

Energy development also promotes economic development through building capacity within the tribe to manage and carry out projects. Energy development is linked to economic development through self-determination in that the revenues from energy development projects on tribal lands can diversify funding for tribal programs away from federal grants. The Blackfeet Tribe will direct the value created through energy development toward developing other economic producing projects as well in the Tribal economy.

Tribal economic development receives an additional boost through capacity building as tribes participate by actually developing power projects. This course includes an involved permitting process that requires interaction with local community governments, the Blackfeet Nation Communities, the Federal Energy Regulatory Commission, the Environmental Protection Agency, and potential power purchasers. When the Blackfeet Renewable Energy Inc. can successfully develop a project, the abilities and knowledge gained by our tribal energy organization will provide the Blackfeet Nation with a comparative advantage for future power project developments.

As the Blackfeet begin to exercise more control over energy development on Blackfeet Tribal lands, the Blackfeet Nation shall contribute immensely to the energy industry as the energy producers. Taking on the responsibility of managing energy projects and taking part in energy projects as subcontractors, partners and project owners also greatly impacts the Blackfeet Nation's qualified ability to participate as a full partner in a growing renewable energy market. The Blackfeet Tribe may exercise sovereign powers to institute taxes on energy companies, require employment of tribal members, and regulate energy companies operating on Blackfeet Tribal lands. The funds earned by energy development may be applied toward building stores, banks, and other services on Blackfeet Tribal land, thereby boosting economic development.

The Blackfeet Tribe is interested in pursuing the development and taking part ownership of a commercial scale wind power facility on Blackfeet Tribal lands. The potential for favorable wind resources appears likely, therefore, a Tribal Energy Development organization was needed to adequately equip the Blackfeet Tribe to achieve success in such a large undertaking. Because the reservation's suitable wind resource covers an estimated 1,750 square miles (1.12 million acres) little difficulty is expected in finding suitable land for development. Most of the reservation's wind land is currently used for grazing or agriculture, land uses compatible with wind farms.

The Blackfeet Nation, home of the Blackfeet Tribe of Montana, has a very substantial wind resource. The Wind Resource potential Areas of the Blackfeet Reservation are designated as Class 6 "Outstanding" and Class 5 "Excellent" for Wind Energy Development for utility-scale wind turbine applications. The Northwest Power Planning Council estimated in 1991 that an area of 3,250 square miles on the reservation could support up to 15,000 MW of generation if transmission constraints could be overcome. The Blackfeet Reservation's wind resource which covers nearly 1.5 million acres has been adequately documented and identified by the Bonneville Power Administration as the single largest area of good wind land in the northwestern United States. Wind measurements have been taken periodically throughout many locations of the reservation producing data that was consolidated throughout the various tribal projects. Several locations have shown long-term average wind speeds between 17 and 18 mph at varying heights.

Figure 2

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

This project for “Blackfeet Nation Energy Organization Development” was built upon work completed under a previous DOE grant. As part of that small-scale utility-grade wind turbine demonstration project, wind measurement data was collected and the Blackfeet Nation Comprehensive Electric Energy Development Plan was published and presented to the Blackfeet Tribal Business Council. The Blackfeet Nation has undertaken feasibility studies as well as resource assessments to provide substantial data that illustrates great promise to achieve the Tribe’s long-term economic goal of commercial wind energy development and energy self-sufficiency through the planning, development, and implementation of Blackfeet Renewable Energy Inc. Previous Blackfeet projects provide a sound basis for the decision on proceeding to development of a commercial wind farm.

Objectives

In order to enter the arena of commercial wind 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. The Blackfeet Nation is continuing to pursue wind energy development efforts through the development of a tribal energy organization, BREI, and through the accomplishment of these objectives:

- Objective 1: Explore and develop a Tribal Energy Organization
- Objective 2: Revise the Strategic Energy Development Plan
- Objective 3: Develop our management capabilities
- Objective 4: Serve as a resource for tribal leaders, programs, members,

Description of Activities Performed

The Blackfeet Nation adopted an organizational approach to help overcome certain obstacles to economic development through the capitalization of our renewable energy resources by establishing a semi-autonomous tribal development corporation.

The Blackfeet Tribal Business Council (BTBC) passed a resolution to implement Blackfeet Renewable Energy Inc. (BREI) to champion and coordinate all Renewable

Energy Development on the reservation. THE BTBC petitioned the Secretary of the Department of the Interior to authorize the incorporation of BREI under the Indian Reorganization Act as a Section 17 Corporation with authority to engage in business enterprises on behalf of the tribe as a federally chartered organization. BREI is a wholly owned development corporation vested with sufficient autonomy to make effective and prudent business decisions regarding certain Blackfeet resource developments. The BTBC Council has empowered the corporation to make business commitments and has granted limited waivers of immunity for development projects which may be necessary to attract outside financing and talents. BREI facilitates major economic development projects that require complex financing, including public funding sources. The BREI mission is to create economic development for all members of our community.

As a result of this effort the BTBC created a functional tribally owned and operated energy organization that will be capable of forming power purchase and distribution agreements including all necessary elements required to obtain status and financing from various funding and investment sources. In addition, a business structure was created that is sustainable and based on accurate cost of service and essential principles of integrated resource planning and sound business practice. Through this approach, The Blackfeet Tribe is maintaining its ability to exercise sovereignty over appropriate civil affairs in order to achieve a significant degree of self-governance with regard to energy matters.

As part of revising the Strategic Energy Development Plan of the Blackfeet Nation, a review and an inventory of wind energy data as well as assessment of the opportunities available for development has been performed. BREI is currently examining current environmental and legal issues, performing market research and exploring wind energy projects by other tribes that can serve as models

Since the development of our Energy Organization, Blackfeet Renewable Energy Inc., the Blackfeet management capabilities have been strengthened as our staff has participated in Renewable Energy Resource Management/Training Opportunities and has gained particular knowledge of successful experienced Tribal wind energy development management programs. Through negotiations with various wind development groups, BREI has assembled a Wind Energy Team by requesting and obtaining technical assistance from the National Renewable Energy Lab, Department of Energy Mineral Development and private consultants and attorneys.

BREI also serves as a resource for tribal leaders, programs, members and the community through the support of energy efficiency and conservation programs on the Blackfeet Reservation. BREI aims to provide educational information upon request to the Tribal Council, programs, members and the communities with regard to energy efficiency, conservation, and renewable energy resource development.

Our efforts to build Blackfeet Tribal Energy Development Capacity have involved enhancing our professional knowledge through education, participation in workshops and meetings for communities, staff and through development of renewable energy or energy efficiency informational items for the Blackfeet Tribal leadership, staff and membership.

The Blackfeet Nation strives for continued capacity strengthening of the Blackfeet Renewable Energy Resource economic development and management efforts on Blackfeet Tribal lands by also identifying our total management capacity needs. BREI has focused on an effort to empower Blackfeet Tribal Community members and Renewable Energy Inc. staff to become proficient in the Renewable Energy industry so that alternative energy development will grow to be both economically sustainable and consistent with the cultural, social, and economic goals of the tribe. As a beneficial result, the development of a well informed and educated staff has become capable of making informed decisions regarding future tribal alternative energy development actions.

Once BREI was established, our management decided to proceed with a new wind monitoring program for our community wind project. Accurate site-specific wind data is needed to evaluate the economics of all wind power projects. BREI will be taking an important step in understanding the feasibility of a community wind power project and will obtain location specific data that can be used as the basis for financing a construction project to install wind turbines. This point source data will better define the Blackfeet Nation wind resource and support future wind project development opportunities and will generate wind data that shall improve our general knowledge and understanding of our wind resources. The 60 meter data collected off of temporary towers can be used to estimate power production from turbines with proposed hub heights above 50m. We also conducted a survey of the proposed monitoring site to collect the basic information needed to start the wind assessment study. Information such as: general topography of the land, soil conditions, description of buildings or other visible structures in the surrounding area (North, South, East, and West), and description of vegetation cover in the surrounding area (North, South, East, and West) have also been determined. Once the 12-month study is complete, BREI will have the raw data verified by a third-party certification company.

Conclusions, Recommendations & Lessons Learned

This project has provided the Blackfeet Nation with a Tribal Development Corporation that ensures that Blackfeet Tribal and various investment funds are best utilized in an energy business enterprise that serves the interests of the Tribe. The corporation has the necessary flexibility and freedom from political interference to be profitable and thereby attract needed outside capital to create and sustain jobs and revenue, and survive for the long term. The company, Blackfeet Renewable Energy Inc., assures the Tribe of a major role in setting its long-term energy development business goals and strategies. Such a corporation provides the Blackfeet Tribe with the opportunity to present outside investors with a stable and reasonably secure investment environment.

Developing a successful commercial scale wind energy project is a complicated and technical operation. At present, BREI is negotiating with a leading wind development group in the United States to finalize agreements for the construction of a large scale commercial wind farm and a new transmission line. Continued Tribal Energy Development Capacity will strengthen the ability of the Blackfeet Wind Energy Development Team to carryout the efforts toward and beyond commercial operation of a newly developed commercial wind farm. BREI is currently in the process of negotiating a

commercial lease for such a scale wind project on tribal lands. Tribal efforts to pursue commercial wind energy development should be focused on favorable financing and in securing a favorable power purchase agreement.

In addition, BREI is currently developing a community scale wind project for the Blackfeet Nation that will eventually be wholly owned by the Blackfeet Tribal Membership. BREI has selected a site for the location which is near Highway 2 and Meriweather Road, East of Browning approximately 10 miles. As the wind monitoring study continues, the recommendations from our technical team are to continue with the development of this project through the negotiations of a power purchase agreement, feasibility studies and permitting. This area has a great wind resource with a suitable distribution system, appropriate land for building the project, will not adversely impact the environment and is readily assessable.

Our next step is to develop a Tribal Energy Resource Agreement for this community wind projects. Under Title V, Section 503 of the Energy Policy Act of 2005 (Pub. L. 109-58) amends Title XXVI (Indian Energy) of the Energy Policy Act of 1992, the Blackfeet Tribe shall seek the opportunity to enter into a Tribal Energy Resource Agreement (TERA) with the Department of the Interior. The TERA shall promote Blackfeet Tribal oversight and management of energy and mineral resource development on Blackfeet Tribal lands and further the goal of Indian Self-Determination. A TERA offers the Blackfeet Tribe an entirely new alternative for entering into energy-related business agreements and leases and for granting rights-of-way for pipelines and electric transmission and distribution lines without the Secretary's review and approval.

The Energy Policy Act of 2005 requires that the Secretary, before approving a TERA with a tribe, make a determination of a tribe's capacity to manage the full scope of administrative, regulatory, and energy resource development that the tribe proposes to assume under an approved TERA. Recognizing that the Blackfeet Tribe intends to enter into a TERA with the Department, the Tribe is now equipped to do so after the successful development of an energy organization, Blackfeet Renewable Energy Inc. on the behalf of the Department of Energy's First Steps to Renewable Energy Grant.

The Blackfeet Nation also intends to proceed with necessary Tribal policy and law development. BREI is working with several Tribal Departments to develop tribal guidelines for siting wind projects on Blackfeet Tribal lands. We have also determined that a wind development code, a right of way code and environmental review code (tribal environmental policy act) are needed and will be developed as well.