

TECHNICAL REVIEWERS' RATING SUMMARY

R009-B

Spirit Lake Nation Wind Farm

Spirit Lake Tribal Nation

Principal Investigator(s): Baker Tilly Virchow Krause, LLP

Request for \$500,000; Total Project Costs \$1,362,900

<u>Rating Category</u>	<u>Weighting Factor</u>	<u>Technical Reviewer</u>			<u>Average Weighted Score</u>
		<u>6A</u>	<u>6B</u>	<u>6C</u>	
1. Objectives	9	3	3	4	30.00
2. Achievability	9	3	2	4	27.00
3. Methodology	7	4	3	4	25.67
4. Contribution	7	2	2	2	14.00
5. Awareness	5	3	3	3	15.00
6. Background	5	3	3	4	16.67
7. Project Management	2	4	3	4	7.33
8. Equipment Purchase	2	4	3	3	6.67
9. Facilities	2	3	3	3	6.00
10. Budget	2	4	4	5	8.67
Average Weighted Score		156	136	179	157.00
Maximum Weighted Score					250.00

OVERALL RECOMMENDATION

FUND	x		
FUNDING MAY BE CONSIDERED		x	x
DO NOT FUND			

R009-B
Spirit Lake Nation Wind Farm
Submitted by Spirit Lake Tribal Nation
Principal Investigator(s): Baker Tilly Virchow Krause, LLP
Request for \$500,000; Total Project Costs \$1,362,900

- 1. The objectives or goals of the proposed project with respect to clarity and consistency with North Dakota Industrial Commission/Renewable Energy Council goals are: 1 – very unclear; 2 – unclear; 3 – clear; 4 – very clear; or 5 – exceptionally clear.**

Reviewer 6A (Rating: 3)

Reviewer 6B (Rating: 3)

The application presented a number of objectives; however, the project itself seemed to meet three of the eight objectives. The main objectives this project meets is adding to the state's renewable energy projects; creating renewable energy jobs; and educating the general public regarding renewable energy projects. The application did not thoroughly engage the reader with the process of how they will engage the public and what kind of education classes they will be conducting. In addition, this wind farm project will collect baseline information for the particular project area...as far as how it will lead to other ideas and activities is unclear. Also, no particular new practices are readily clear in this application. In most respects, it seems as if it is a straight forward wind farm project.

Reviewer 6C (Rating:4)

Assuming that the up-front studies, permitting, negotiations, etc. leads to eventual installation of the 100 MW wind development, the proposal addresses several of the Goals & Purposes of the Commission. Specifically: promote efficient, economic and environmentally sound development...; create jobs related to the production and utilization of North Dakota's renewable energy resources; ensure economic stability, growth, and opportunity...; and, to an extent, add wealth for landowners and agricultural producers. It is less clear that it encourages and promotes the use of new technologies..., or promotes public awareness.

- 2. With the approach suggested and time and budget available, the objectives are: 1 – not achievable; 2 – possibly achievable; 3 – likely achievable; 4 – most likely achievable; or 5 – certainly achievable.**

Reviewer 6A (Rating: 3)

Reviewer 6B (Rating: 2)

The timeline is very tight on this project. In specifically, the avian, bat, and wetland studies have to be completed within certain time restraints for the appropriate resource agencies. For instance, usually (unless given prior approval) a wetland field delineation has to be completed between May 15- October 15. Avian and bat studies are also very dependent upon migration routes and studies are time specific. The MISO Interconnection Agreement also seems very optimistic; this

process is usually very lengthy. However, it is unclear from the application how long Spirit Lake Nation has been in the queue for MISO. It is also unclear if Spirit Lake Nation is exempt from the ND Public Service Commission's application processes. Also, the project is located within 95% of Whooping Crane Central Flyway Confirmed Sightings (taken from the North Dakota & Montana Whooping Crane Corridor Migration Corridor 2007) and this could also have the potential for additional consultation with the US Fish & Wildlife Service.

Reviewer 6C (Rating: 4)

The timeframes suggested and the budget available suggest that the project objectives are achievable. The statement in the application that if the MISO study indicated a transmission constraint, the project would be set back a year, seems overly optimistic.

- 3. The quality of the methodology displayed in the proposal is: 1 – well below average; 2 – below average; 3 – average; 4 – above average; or 5 – well above average.**

Reviewer 6A (Rating: 4)

Reviewer 6B (Rating: 3)

The methodology seems as if it is adequate for a wind farm project. However, it does not seem as if much of the work has been completed.

Reviewer 6C (Rating: 4)

It appears that the partnership with Baker Tilly Virchow Krause provides a level of experience and professionalism with project development methodology that is above average. The Gantt Chart referred to and the process for decision making (“go/no go”) appear sufficient.

- 4. The scientific and/or technical contribution of the proposed work to specifically address North Dakota Industrial Commission/Renewable Energy Council goals will likely be: 1 – extremely small; 2 – small; 3 – significant; 4 – very significant; or 5 – extremely significant.**

Reviewer 6A (Rating: 2)

Reviewer 6B (Rating: 2)

Again this project seems fairly straight forward; with this in mind...it doesn't seem that it will have significant impact to the state for scientific or technical contributions. There was not enough justification for new technologies or even adding to the overall baseline of information for wind farm projects. There have been many wind farms built in this state and this seems on par with the rest of these projects.

Reviewer 6C (Rating: 2)

It's unclear how the development of a new wind farm in North Dakota, when so many already exist, provides much in the way of scientific and/or technical contribution to Renewable Energy

Council goals. There is a unique flavor to the proposed development in that it would be a large tribally-owned project.

- 5. The principal investigator's awareness of current research activity and published literature as evidenced by literature referenced and its interpretation and by the reference to unpublished research related to the proposal is: 1 – very limited; 2 – limited; 3 – adequate; 4 – better than average; or 5 – exceptional.**

Reviewer 6A (Rating: 3)

Reviewer 6B (Rating: 3)

The information presented seems adequate; however, there was no evidence provided by additional literature or unpublished research.

Reviewer 6C (Rating: 3)

Not sure how to answer this, since the proposal doesn't really involve current research activity or referenced literature.

- 6. The background of the investigator(s) as related to the proposed work is: 1 – very limited; 2 – limited; 3 – adequate; 4 – better than average; or 5 – exceptional.**

Reviewer 6A (Rating: 3)

Reviewer 6B (Rating: 3)

The information presented seems adequate. It discussed the company's background but not the investigator's. Also, it is unclear if the investigator has completed projects in North Dakota or within the upper Great Plains.

Reviewer 6C (Rating: 4)

The Principal Investigator is listed as the firm Baker Tilly Virchow Krause, LLP. The firm has a solid reputation in consulting and accounting practice, along with project development and oversight and indicated experience with at least 10 wind developers and wind projects in over 15 states. Spirit Lake Tribal Nation has had experience with wind monitoring projects and the operation of a small wind turbine located adjacent to their casino operation.

- 7. The project management plan, including a well-defined milestone chart, schedule, financial plan, and plan for communications among the investigators and subcontractors, if any, is: 1 – very inadequate; 2 – inadequate; 3 – adequate; 4 – very good; or 5 – exceptionally good.**

Reviewer 6A (Rating: 4)

Reviewer 6B (Rating: 3)

The plan was a bare minimum of milestones, finances, and communications.

Reviewer 6C (Rating: 4)

Again, the project partnerships with Baker Tilly as financial advisors and project management advisors, along with legal advisors Michael, Best & Friedrich and electrical engineering advisors WES Engineering are strong. The application also indicates that the intention is to utilize GE wind equipment and technical support. Milestones are clearly laid out in the application and, if anything, seem conservative, provided the MISO interconnection plans proceed in a timely manner. The communications plan seems a bit weak with a suggestion that the Spirit Lake Nation complete project update interim reports along with quarterly conference calls with grant officials.

- 8. The proposed purchase of equipment is: 1 – extremely poorly justified; 2 – poorly justified; 3 – justified; 4 – well justified; or 5 – extremely well justified. (Circle 5 if no equipment is to be purchased.)**

Reviewer 6A (Rating: 4)

Reviewer 6B (Rating: 3)

The information is limited on the procurement of turbines. It is not detailed regarding their communications with GE.

Reviewer 6C (Rating: 3)

The expenses listed on page 13 of the application do not appear to include the purchase of equipment, except for item #3 “Met towers at new project location.” There will likely be the need for certain pieces of equipment for the various studies and environmental reviews, but these would likely be relatively minor in nature.

- 9. The facilities and equipment available and to be purchased for the proposed research are: 1 – very inadequate; 2 – inadequate; 3 – adequate; 4 – notably good; or 5 – exceptionally good.**

Reviewer 6A (Rating: 3)

Reviewer 6B (Rating: 3)

It is unclear if wind easements have been completed with landowners. It is also unclear in communications if GE will have turbines in the specific timeline or if the project proponents will have to look for another turbine manufacturer.

Reviewer 6C (Rating: 3)

See previous answer to #8. This is not a research project.

10. The proposed budget “value”¹ relative to the outlined work and the financial commitment from other sources is of: 1 – very low value; 2 – low value; 3 – average value; 4 – high value; or 5 – very high value. (See below)

Reviewer 6A (Rating: 4)

Reviewer 6B (Rating: 4)

Finances seem in order.

Reviewer 6C (Rating: 5)

According to the budget on page 12 of the application, the share requested from the Renewable Energy Council fund is approximately 10 percent of the overall project costs, not including a substantial amount of in-kind services provided by the applicant.

¹ “Value” – The value of the projected work and technical outcome for the budgeted amount of the project, based on your estimate of what the work might cost in research settings with which you are familiar.

10a. Financial commitment from other sources – A minimum of 50% of the total project must come from other sources to meet the program guidelines. Higher priority is to be given if the application has private industry investment equal to or at least 50% or more of total cost.

The minimum 50% cash match is demonstrated.

Section C. Overall Comments and Recommendations:

Please comment in a general way about the merits and flaws of the proposed project and make a recommendation whether or not to fund.

Reviewer 6A (Fund)

The requested funds are reasonable regarding the amount of higher- risk development funds that are required to move a project forward. If the results of the interconnection and transmission studies are favorable, this would be an excellent project for the Tribe and for ND. It would definitely create jobs and opportunities for the Tribe and for the surrounding communities.

I recommend funding this project.

Reviewer 6B (Funding May Be Considered)

The application was well written and the proposed project seems as if it would be of value to the Spirit Lake Nation and to the state of North Dakota. The proposed project also would create economic revenue for the tribe, the area, and the state. In addition, the creation of renewable

energy jobs would also help the tribe and the state. The idea of teaming with the local community college is also a very wonderful asset to the community and college.

The proposed project has merit, but it also seems more like a straight forward wind project and lacks substantial new technology or products. There are also other colleges offering technical degrees in the wind industry in the state. There was not a lot of information on what has been done with the project, how they were tying into the grid, or how this project is different from other wind projects in the state. In addition, the timelines are tight.

Reviewer 6C (Funding May Be Considered)

There is no question that a 100 MW wind farm owned and operated by the Spirit Lake tribe would provide much needed jobs and an economic boost to the Spirit Lake Tribal Nation. The high unemployment situation currently at the Reservation would be helped, but certainly not alleviated. The intention is that the up-front studies, reviews, negotiations, etc. will lead to development of a 100 MW wind farm and that a Power Purchase Agreement will be entered into with, presumably, a utility company. The application doesn't make a strong case that the power from the proposed project is easily marketable.

One thing the application hinted at was the eventual construction of an educational center related to the development. It seems that a better approach would be to work with the wind technician program at Lake Region State College and maybe develop a satellite program for the Spirit Lake Tribal Nation.

This reviewer did request an opinion (without divulging information on the specific project) from an expert wind developer about the proposed costs for the various studies, reviews, permits, negotiations, etc. That individual indicated that the total of \$1.3 million plus was a realistic amount for those up-front costs.

My recommendation is to consider funding.