

# Wisconsin Community Based Windpower Project Summary Focus on Energy Grant

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## **PROJECT SUMMARY**

### **Introduction and Project Goals**

The Wisconsin Community Based Windpower Business Plan project sought to develop a business model that allows for smaller investors to participate in the ownership and financial returns from wind power projects.

Community-based projects - which might involve individual or small clusters of utility-scale turbines - have the potential to promote wind energy, to democratize ownership in the wind industry and to enhance rural economic development. Concerns that have been expressed about wind development could be alleviated if local people have an ownership stake in, and thus benefit financially from, wind energy projects.

The challenge for the study group was to find a means for a group of small investors to take advantage of federal tax benefits including depreciation and the Production Tax Credit<sup>1</sup> for renewable energy.

Since small investors are unlikely to have the tax appetite to utilize these incentives, a hybrid model was developed. A group of small investors would form a Limited Liability Corporation (LLC), find a good wind site and put together a business and development plan. They would then approach a larger investor or corporation in need of a passive investment opportunity.

According to the project analysis, both parties would come out ahead. The larger investor would recoup its investment within two or three years and shareholders in the LLC would see a reasonable return that would grow after ownership is assumed.

### **Business Model**

The business plan proposed the following structure:

- 1) A group of small investors would form an LLC which would develop a project plan, find a site and aggregate funds. The group would identify a larger corporate or

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<sup>1</sup> The Production Tax Credit (PTC) is currently 1.8 cents per kilowatt hour. The PTC requires periodic reauthorization from Congress. Reauthorization is pending passage of federal energy legislation.

investment entity looking for investment opportunities and a utility willing to contract for the power.

- 2) The LLC would then loan its invested funds to the larger partner (most likely a C-Corporation) to help finance the purchase and installation of the wind farm. The LLC would also retain an option to purchase the wind farm after ten years.
- 3) The C-corporation would invest its own equity and borrow additional funds from a commercial lender as necessary. The C-corporation would be the sole owner of the wind farm for the first ten years. As such it would benefit from both the PTC and depreciation.
- 4) The LLC of small investors would receive interest income from its loan to the C-corporation for ten years. The C-corporation would pay only interest on its debt to the LLC, with the principle due in one balloon payment at the end of ten years.
- 5) At the end of the ten year period, the LLC would exercise its option to purchase the wind farm from the C-corporation at a pre-negotiated purchase price equal to the principle amount of the balloon payment owed to the LLC.
- 6) The LLC then becomes the sole owner of the wind farm, which, as a debt-free wind farm, can be profitably operated for its remaining life.

The model outlined above assumes that a fair amount of good will exists between the C-corporation and the LLC in order to pursue their mutual interests in the project. The body of the report specifies the formal agreements that should be negotiated to protect the interests of both firms.

### **Project Siting and Interconnection**

Identification of a potential site for the project began with preliminary site analyses conducted by Chris Deisinger of MSB Energy Associates. Based on criteria developed at by the project team, two sites were chosen for further analysis:

- a) Arlington Agricultural Research Station (Columbia County)
- b) Site #2 (located in Dane County)<sup>2</sup>

The body of the report analyzes the strengths and weaknesses of each site in detail. In summary, the two sites have comparable strengths but the wind resource at Arlington is superior:

- wind resource of 14.5 mph annual average at Arlington and 13.5 mph annual average at Site #2 (80 meter tower height at both locations);
- reasonable interconnection potential within 0.5 to 1.5 miles of both sites;

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<sup>2</sup> While an actual location and siting considerations were analyzed in the case of Site #2, there was no attempt by the project to identify landowners, contact them or solicit their opinion of a project. The Directors of the UW's Arlington Research Station were contacted and have given their support to the use of that location for analytical purposes, although there is no currently ongoing work toward actual installation of a wind turbine.

- local permitting procedures do not appear to be burdensome or insurmountable at either site<sup>3</sup>.

Research indicated that the utility in whose service territory the Arlington site was based would not be interested in buying the power itself and therefore wheeling and transmission charges would add extra operating costs. Additional research indicated that the utility in whose territory Site #2 was located would be interested in buying the power from the project.

Thus, although it has an inferior wind resource, interconnection to the grid would not only be simpler but less expensive at Site #2. Because the two potential sites are comparable, but also differ in detail, the business plan analyzed the financial performance of the proposed wind farm *at both sites*.

### **Financial Analysis**

The business model developed for this report proposes that two separate legal entities be created: a C-corporation that will own the turbine for the first ten years of its operation, and an LLC of small investors which assumes ownership after year ten. The financial analysis for the business plan developed two sets of financial projections at each site, one for the C-corporation and the other for the LLC.

Because the C-corporation will own the wind farm for only the first ten years, the financial projections for the C-corporation end on day one of Year 11. Although the LLC doesn't assume ownership until the first day of Year 11, it must operate as a loan fund for years 1-10. Therefore the financial projections for the LLC cover 20 years.

The financial analysis in the business plan includes Sources and Uses of Funds (Capital Budget); Income Statement; Balance Sheet; and Return on Investment Analysis. A narrative describes each financial statement and identifies the source of information for estimates and projections.

The simplified Capital Budget below provides a summary of the approximate capital costs of starting the proposed wind farm at one site. Note that estimates include two turbines of 1.5 MW. The funds are obtained from three sources: equity from the large investor, a bank loan, and a loan from the LLC of small investors.

#### **USES OF FUNDS**

Turbine & Works	\$	2,824,500	
Site Preparation & Installation	\$	413,500	
Utility Interconnection	\$	34,500	
Other Costs	\$	60,000	<i>Legal, Insurance</i>
Working Capital	\$	50,000	
<b>TOTAL USES OF FUNDS:</b>	<b>\$</b>	<b>3,382,500</b>	

#### **SOURCES OF FUNDS**

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<sup>3</sup> Note that the project team did not engage in negotiations with local town officials.

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C-Corp equity (30% of total capital)	\$ 1,014,750
Commercial Loan (50% of total)	\$ 1,691,250
LLC loan (20% of total)	\$ 676,500
TOTAL SOURCES OF FUNDS	\$ 3,382,500

The financial projections in this business plan demonstrate that the goals of the project can be met.

1. The project provides the C-corporation an opportunity to receive substantial tax benefits from depreciation and the federal production tax credit:
  - With an investment of slightly more than \$1 million, the C-corporation receives tax benefits that enable it to recoup its investment in 2-3 years at either site.
2. The project provides the small investor members of the LLC a reasonable return on their investments throughout the life of the wind farm. The LLC makes a small profit for years 1-10, and much larger profits thereafter:
  - During years **1-10** each LLC member receives an annual rate of return of about 5%.
  - During years **11-20** each LLC member receives an annual rate of return of about 20%.

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