

WINDUSTRY'S  
**Community Wind Energy 2006**

**Financing Community Wind: Debt Panel**

*Moderator:* Ed Woolsey

*Speakers/Panelists:* Ken Reiners  
Lee White  
Mark Ahlstrom

**Moderator's Comments**

**Ed Woolsey, Green Prairie Energy**

Part A 00:06-4:20

Importance of policy to community wind:

- Federal policy
- Federal tax credits – we wouldn't be here without the federal tax credits, which are scheduled to expire at the end of 2007.
- The government is getting ready to reauthorize tax credits in 2007, and it is very important that you participate in that at whatever level you can.
- Title 9 of the 2002 farm bill was the first time we had an energy policy in the farm bill and the energy title will be one of the most important parts of the new farm bill.
- The USDA is stepping forward with the 2006 grants and it is important for you to step forward and tell your representatives that you want that funded at serious levels (\$100 million range or larger).
- Iowa legislation needed a broad coalition to pass a community renewable energy bill last year that gave the state a production tax credit. We need local support to push for similar measures in the future. We are working to expand on that legislation this year.
- It is important to let your state legislator know what is going on in your community with regards to wind development; if you have not done that, you are a freeloader.
- Join the organizations that are advocating for wind power in this area (including Iowa Farmers Union, Union of Concerned Scientists, & Iowa Farm Bureau).

**What Makes a Good Wind Project from a Banker's Perspective?**

**Ken Reiner, Vice President of Agstar Financial Services**

Part A 4:34-22:25

Agstar Financial Services is a cooperative that serves agriculture, rural residents, and agribusiness. Agstar has considerable experience generating loans for wind projects. Mr. Reiner's presentation focuses on the importance of having a solid business plan for a wind development project and details 12 "big rocks" that need to be moved as you create a business plan and take that plan to your banker.

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The 12 big rocks are:

1. Management and Expertise
2. Power Purchase Agreement (PPA) details
3. Overall capital cost of the project
4. Identification of all sources of cash revenue
5. Identification of all ongoing expenses
6. Documentation behind the cash flow assumptions
7. Detailed projections of income & expenses
8. Existing and pro-forma financial statements
9. Required permits and easements and their status
10. Applicant's legal structure and operational control
11. Proposed capitalization of project
12. Turbine availability

If you have never done a wind project before, Mr. Reiner strongly suggests that you consult with experts who have experience working in this industry. It is hard to develop a wind turbine project without past experience or some outside expertise. It's not impossible, but difficult.

**Investment Banking Options and Clean Renewable Energy Bonds**

**Lee White, Executive Vice President of George K. Baum & Co.**

Part A 22:30-37:19

George K. Baum & Co. provides access to national capital markets for bond deals. They focus on larger projects that are 5 MW or greater and their average wind project has a value of about \$20 million. It is possible to pool smaller developments together for bond financing, particularly if they all have PPA's with the same utility, use the same brand of turbine, and have the same installation contractor. They can amortize their projects for up to 15 years, but their projects do not qualify for tax exemptions. They have standards for issuing debt that are similar to those mentioned by Ken Reiner in the previous presentation.

Clean Renewable Energy Bonds can only be issued by public organizations, such as state and local governments, schools, and some utility cooperatives. These organizations get 0% interest financing because the federal government pays the interest to the bondholders. These bonds are not available to private citizens or companies, but Lee White is trying to change that. He has

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helped found the Renewable Energy Finance Coalition which is trying to get Congress to change the energy policy to allow privately owned wind projects to be financed with tax exempt bonds.

**Using Wind Data for Due Diligence**

**Mark Ahlstrom, CEO of WindLogics, Inc**

Part A 38:30-Part B 8:21

It is critical to understand your wind resource and the certainty and variations of that resource before you talk to your banker. The energy you get from the turbine varies with the cube of the wind speed. So a small difference in wind speed can have a big difference in the energy production and therefore the financial performance of the project. You have to understand that there are many complex thermal issues occurring up at the blades of the turbines that influence its power production levels. The government spends millions of dollars collecting weather info and this information can be used to create forecast models to predict how much wind a site will have and what the variability will be.

Every uncertainty in the amount of wind production at your site is a financial risk for you and your banker. Your banker will want to see predictive intervals (P values), because the amount of wind varies each year. What is the average amount of wind that can be expected at that site? Over a period of ten years, what is the lowest amount of wind that you could get in one year? What is the lowest amount of wind you could get in one year over a period of 100 years? If you are unlucky enough to put up your turbine during that worst wind year, how will it impact your finances?

In addition to wind variability, there are inefficiencies that can impact the financial performance of the turbine such as wake losses, transmission losses as the electricity is sent from the turbine to the electric grid, and ice problems, to name just three. These losses can reduce output by 9% to 15%. To get the best return on your money and to put the banker at ease, you need to have the best possible understanding of the risks and uncertainties of your project.

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