Electricity from the Wind: Economic Development for Rural Communities

It may seem hard to believe, but according to the U.S. Department of Agriculture's 2003 farm income forecast, 94 percent of total farm household income comes from off-farm sources. Many rural families work off-farm jobs in addition to farming to make ends meet.

Dan McGuire, chief executive officer of the American Corn Growers Foundation (ACGF), said that low commodity prices combined with high production costs are responsible for this. McGuire said that the farm income forecast is a compelling reason for farmers and ranchers to support wind energy because it provides a source of income and fosters economic development in rural communities.

"Wind farming does pay," he said.

McGuire cites a Minnesota project that demonstrates why farmers, ranchers, and rural communities should get involved with wind energy as a new source of income. The Kas Brothers' Wind Farm at Pipestone, completed in 2001, is the first farmer-owned commercial wind farm in the United States. Developer Dan Juhl installed two NEG Micon 750-kilowatt (kW) turbines with an estimated annual electricity production of 4.5 million kilowatt-hours (kWh). That wind farm now yields $30,000-$40,000 annually for the first 10 years of operation and is expected to yield $110,000-$130,000 annually thereafter, depending on the level of electricity production.

McGuire said that this project is an excellent example of community-based economic development. Local contractors Olsen Electric and K-Wind participated. Xcel Energy contracted to purchase the electricity. Local banks provided the financing. The wind turbine, the power contract, the maintenance agreement, and insurance allow the banks to make the loans with little risk. Local ownership also keeps the electricity revenue circulating in the community. This wind farm model is so successful that Juhl has several new projects in the works this year.

Although Minnesota has emerged as a leader in implementing wind energy in rural communities, Texas is also setting an example for states to follow. After the Texas legislature passed a renewable energy requirement, utilities and wind companies invested $1 billion in 2001 to build 912 megawatts (MW) of new wind power projects. The results? According to a report published by the SEED Coalition and Public Citizen's Texas office, "The completed plants created 2,500 quality jobs with a payroll of $75 million, will deliver $13.3 million in tax revenue for schools and counties and pay landowners $2.5 million in royalty income in 2002 alone. The multiplier effect of this new investment activity will stimulate another 2,900 indirect jobs in Texas. Wind power is bringing relief to rural Texas and creating jobs statewide."

Wind power also is providing "a nice kick" to the local economy of Milton-Freewater, Oregon, according to Mayor Lewis Keys. The new 41-MW Combine Hills Turbine Ranch wind farm in his district will provide wind power for area residents, who also will benefit from the infusion of construction dollars.

"Having been a farmer of wheat, barley, and peas for 35 years, it was hard to imagine the surrounding land being used for anything other than farming, but now I can see the diversity of its uses," Keys said.

Leroy Ratzlaff, a third-generation landowner and farmer in Hyde County, South Dakota, agrees. Ratzlaff and his family used a homemade wind generator in the 1930s before rural electrification reached their farm. In 2003, he leased his land to a wind developer that installed seven wind turbines, providing a much-needed economic boost.

"It's not as risky as farming," Ratzlaff said.

SIDEBAR: U.S. CORN GROWERS SUPPORT WIND ENERGY
In April of 2003, the American Corn Growers Foundation commissioned a nationwide, random, and scientific survey of 500+ corn farmers in the 14 states representing nearly 90 percent of the nation's corn production. The poll found that 93.3 percent of the nation's corn producers support wind energy; 88.8 percent want farmers, industry, and public institutions to promote wind power as an alternative energy source; and 87.5 percent want utility companies to accept electricity from wind turbines in their power mix.

Because much of the nation's wind energy potential is found in rural areas, wind energy offers an unprecedented opportunity for rural economic development. Wind energy can offer:

Benefits to Rural Landowners

Rural landowners who lease their land to wind developers typically receive about 2 percent to 4 percent of the gross annual turbine revenue ($2,000 to $4,000 for each turbine), which can help compensate for a downturn in commodity prices. The Union of Concerned Scientists estimates that typical farmers or ranchers with good wind resources could increase the economic yield of their land by 30 percent to 100 percent. Wind turbines have a small footprint and do not occupy much land, so farming and ranching operations can continue.

"It's almost like renting out my farm and still having it," Ratzlaff said. "And the cows don't seem to mind a bit."

Increased Local Tax Base

Wind power projects bring new tax revenue to rural communities. Payments generally range from 1 percent to 3 percent of the project's value. At 1 percent, property tax payments would provide approximately $10,000 per MW for rural communities each year. These revenues can be used to build new schools, roads, bridges, and other infrastructure.

Here are some examples of states that are increasing their tax revenue because of wind energy projects: Pecos County, Texas, added $4.6 million to its property tax revenue in 2002 alone. In Iowa, 250 MW of wind development provide $2 million per year in property tax revenues for local communities. A 20-MW wind farm in Kewaunee County, Wisconsin, will result in annual property tax payments of $200,000 to the county, or 50 percent of its annual budget. And the development in Hyde County, South Dakota, will result in $250,000 for the county.

New Jobs

Wind power projects create new jobs in rural communities in manufacturing, transportation, and construction of projects. Roads must be built. Towers must be erected. Once the projects are complete, jobs are created in the operation and maintenance of the projects. The wind power plant in Lake Benton, Minnesota, is now the second largest employer in town (after the school district). In Iowa, construction provided 200 six-month construction jobs and 40 permanent maintenance and operations jobs at an average wage of $16 per hour.

The U.S. wind industry currently contributes to the economies of 46 states. And according to a study by the New York State Energy Research and Development Authority, wind energy produces 27 percent more jobs per kilowatt-hour than coal plants and 66 percent more jobs than natural gas plants.

Benefits to the Communities

Not only do rural communities benefit directly from wind power projects, as demonstrated above, but they also benefit indirectly. When new jobs and additional farming income are created, the paychecks are spent in local stores and restaurants, boosting the local economy and creating additional jobs.

Of course, wind energy offers many benefits beyond rural economic development. Wind energy is "homegrown" energy that can extend non-renewable energy sources, helping to secure our energy future, reduce energy costs, and reduce our dependence on foreign energy. Wind power produces no air or water emissions, which improves the health of our environment.

But perhaps the greatest benefit of all is the hope that wind energy projects can offer to rural Americans who wish to remain on their family farms and make a living from them.

"We never dreamed this would happen," Ratzlaff said about the turbines on his land. "It's going to make for a merry Christmas!"

[insert your organization's name] prepared this article with information provided by the Department of Energy's Wind Powering America Program. For more information, please visit http://www.windpoweringamerica.gov/

SIDEBAR: Learn More about Wind and Economic Development in Your Rural Community

- **Windustry**
  This organization partners with the Institute for Agriculture and Trade Policy to promote wind education and outreach. The organization's Web site at www.windustry.org features a section called Wind Farmers Network of America. If you don't have Internet access, write to Windustry, 2105 First Avenue South, Minneapolis, MN 55404; or call (800) 946-3640.

- **American Wind Energy Association**
  AWEA offers a fact sheet entitled "Wind Energy for Your Farm or Rural Land." It is available online at http://www.awea.org/pubs/factsheets/WindyLandownersFS.pdf. You can also access a list of developers at http://www.awea.org/directory/developers.html. Write to The American Wind Energy Association at 122 C Street NW, Suite 380, Washington, DC 20001; or call (202) 383-2500.

- **American Corn Growers Foundation**
  Learn more about the foundation's Wealth from the Wind program at http://www.acgf.org/. Write to the foundation at P.O. Box 18157, Washington, DC 20036; or call (202) 835-0330.

- **Wind Energy Resource Atlas**
  To find out whether you have a strong wind resource in your area, visit http://rredc.nrel.gov/wind/pubs/atlas/.