



Turning Renewable Energy into an Economic Development Opportunity

A Look at Successful Renewable Energy Practices in Rural America

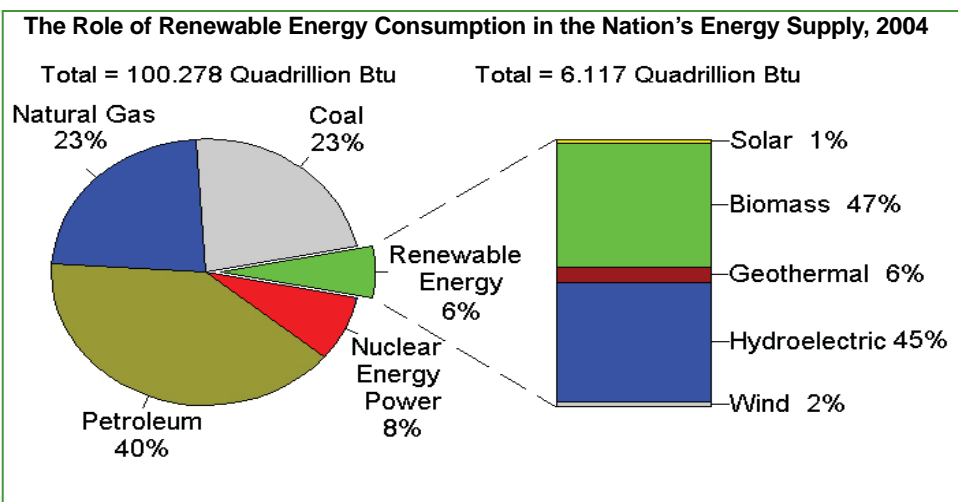
As the shift toward using renewable energy gains momentum in the United States, rural communities are witnessing new opportunities for economic development. Wind, solar, hydro and biomass not only provide an alternative to harvesting fossil fuels, but also act as a potential source of industrial growth. The benefits of this growth come in various forms, including job creation, diversified tax revenue and an increased ability to compete as a region.

Renewable energy is power derived from resources that are regenerative or, for all practical purposes, cannot be depleted.¹ As of 2004, the Energy Information Administration estimated that renewable energy accounted for only six percent of the total energy supply in the United States, 92 percent of which was comprised of hydroelectric and biomass, while solar and wind energy made up three percent.²

With such a small percentage of U.S. energy coming from renewable resources, a unique opportunity exists for Regional Development Organizations (RDOs).³ Because of U.S. dependence on traditional fossil fuels, barriers to market entry for renewable energy remain low, and

consumer demand is rising steadily. Capitalizing on this trend may provide economic development through environmental sustainability.

In order to capitalize on the growth of renewable energy, it is necessary to overcome the barriers that still exist. Market penetration requires substantial capital investment and long term commitment. Limited capacity to attract private industry and access funding present smaller regions with big challenges. Rural areas can experience the “not in my back yard (NIMBY)” attitude which can thwart attempts to build renewable energy sites because of aesthetic, noise or health concerns. Uncertainty surrounding the potential of some energy industries presents another challenge. Russ Montgomery, President of the Regional Economic Development District (REDDI) in Pennsylvania states, “While corn-based ethanol



Graph provided by EIA: www.eia.doe.gov/cneaf/solar.renewables/page/trends/rentrends04.html

production is rapidly increasing, most producers are watching the development of cellulosic ethanol as a potentially higher-yield version of ethanol.”

Overcoming such hurdles requires knowing the long-term benefits of renewable energy and being able to express these benefits to individuals within the community. With their experience in economic development and strong relationships with local jurisdictions and communities, RDOs can play a vital role in alleviating concerns and promoting the advancement of renewable energies.

A study of RDOs successful in attracting renewable energy solutions into their regions revealed a five-component strategy:⁴

- Conduct an inventory of natural resources
- Use incentives to attract private investment
- Become aware of federal and state programs
- Perform community outreach
- Plan for the future

Conduct an Inventory of Natural Resources

Pursuing renewable energy solutions requires an inventory of natural resources. The geographic diversity of the U.S. means regions are conducive to different types of renewable energy applications. When local leaders in Southwest Minnesota realized they had a natural commodity in the Buffalo Ridge, an area of high-wind concentration, nearly 1,000 wind turbines were constructed to harness this natural asset. Although



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primarily driven by private industry, the Southwest Regional Development Commission (SRDC) played a key role in garnering community support and developing incentives to help make the investment more attractive.

As a result of the market for wind turbines, the region was able to attract Suzlon Rotor Corporation to build a turbine production facility in Pipestone, Minnesota. In November 2006, Suzlon opened a 230,000 sq. ft. turbine blade manufacturing facility, and SRDC acted as the Job Opportunity Building Zone (JOBZ) Administrator. The City of Pipestone utilized this program to provide Suzlon with

several tax benefits that encouraged Suzlon to secure the deal. Since the company committed to the location, Suzlon has also partnered with Minnesota West Community and Technical College to develop a curriculum around skills needed in the wind power industry.⁵

The benefits of the Suzlon deal have been numerous with most local merchants recording increased sales and a boom in the downtown real estate market with office buildings almost at full capacity. Employment at Suzlon is currently at 275 full-time jobs with more expected as well as 22 jobs coming from ancillary businesses.

Use Incentives to Attract Private Investment

With the absence of a National Renewable Portfolio Standard (RPS) to set a country-wide benchmark for migrating to renewable resources, each state is responsible for determining whether or not to implement programs to promote alternative energy. State programs are usually driven by financial incentives that help encourage investment and reduce risk by mitigating cost through tax credits, production payments, trust funds and low-cost loans.⁶

States may offer tax incentives to businesses through corporate or property tax credits, allowances and deductions. With these mechanisms in place, renewable energy programs can be used to bolster local tax revenues or act as leverage to private investors by easing tax constraints. The role of the RDO is to support these tax programs and offer assistance to local tax authorities in attracting private investment. The Lake Agassiz Certified Development Company (LACDC) in North Dakota assisted the local government in making a deal to attract U.S. BioEnergy to build an ethanol plant by offering a unique tax break. For the first three years of operation, BioEnergy would be completely exempt from property taxes. After the third year, the company would begin paying incremental property taxes until the fifteenth year of operation, when they would begin paying on the total assessed value of their property. This enabled the Lake Agassiz region to bank on long-term tax revenues and still give BioEnergy a financial cushion in their efforts to ramp up production.

Become Aware of State and Federal Programs

Beyond supporting tax incentive programs, RDOs can encourage private investment by increasing their awareness and leveraging of other state and federal renewable energy programs. Especially among states that offer similar natural resources, a key differentiator in competing for investment dollars becomes the value-added benefits that make a state more appealing. If an RDO can offer grant writing assistance, technical assistance or assistance in generating local support, it may increase the chances of attracting private industry.

In Montana, 26 different types of incentives were available for renewable energy in 2006, including property tax exemptions, microbusiness loan programs and alternative energy investment credits. Similar programs have also been the catalyst for renewable energy in North Dakota.

Tracey Anderson, Fund Manager for the Lake Agassiz Regional Council, comments, "The state of North Dakota has incentives in place that encourage development of the biofuels industry. The job of the Council is to be receptive and facilitate the development process, providing incentives and assistance where we can." By spring 2008, the Lake Agassiz region will be home to two 100 million gallons/year (mgy) biodiesel facilities being built by private companies, Tharaldson and U.S. Bioenergy. Resulting economic activity will come from the almost 90 full-time jobs (half of which would be skilled labor), and over 300 summertime construction workers. The impact on ancillary businesses will be significant (grocery stores, gas stations, restaurants and retail businesses).

At the federal level, several agencies provide grant funding and low-interest loan opportunities to communities looking to establish renewable energy programs. The South Central Oregon Economic Development District (SCOEDD) received an EDA revolving loan fund that helped finance the Klamath Basin Brewing Company, a geothermal-supported brewery. Geothermal technology incorporates heat pumps that use earth energy sources to supply direct heat to buildings and is the most efficient technology currently available for heating and cooling. "Geothermal heat pumps are actually net producers of energy, delivering three to four times more energy than they consume," says Betty Riley, Executive Director of SCOEDD. Of SCOEDD's \$500,000 revolving loan fund, \$150,000 was issued to the Klamath Brewing Company. Klamath has since repaid the loan and is now home to 40 new jobs in the area. Riley says that funding has also been

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acquired from USDA and EDA to create an energy specialist position for the region to provide staff expertise and to actively partner with potential investors on renewable energy projects.

Perform Community Outreach

Local community support is vital for renewable energy initiatives to succeed. Without buy-in at the local level, getting state-wide incentives passed to attract private renewable energy firms becomes futile. Attracting industry needs should be seen as a means of regional improvement and not an inconvenience to its residents. In some communities, garnering local support merely requires educational outreach. Cam Fanfulik, economic development planner for the Northwest Regional Development Commission (NWRDC), explains, "In Northwest Minnesota, communities recognize the importance of job diversity, high-tech jobs and jobs that take advantage of the area's natural competitive advantage in crop production. Having suffered years of severe weather and population out-migration, value-added agriculture and agri-business are becoming vital components of the region's strength as a farm/agriculture production economy."

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Because of this, NWRDC has assisted in grant writing efforts that have raised \$250,000 in USDA loan funds for plant operations, \$850,000 in state funds for infrastructure improvements, and more than \$980,000 from EDA for infrastructure improvements. These funds were applied across several private investment projects for renewable energy in Minnesota.

Environmental attorney Kevin Walli of Fryberger, Buchanan, Smith & Frederick, P.A. in St. Paul, Minnesota states, "The key issue and greatest challenge is making sure that any renewable energy development actually benefits local residents." Nowhere is this becoming more evident than the ethanol industry, where Wall Street-backed corporations have made it difficult for rural cooperative-owned ethanol facilities to compete at the same levels of production. In turn, instead of profits being reinvested locally through purchase of goods and services, they are more likely to be distributed to non-local shareholders as dividends. "One way to combat this trend is to establish a community-based energy development statute that gives some preference to locally-owned projects; this helps to keep money circulating within a region's local economy as opposed to leaking outward," says Walli.

Plan for the Future

In 2007, the Pioneer Valley Planning Commission (PVPC) and the Franklin Regional Council of Governments (FRCOG) of Western Massachusetts unveiled their collaborative Clean Energy Plan designed to revolutionize regional approaches to smaller metropolitan and rural energy needs. Rising energy costs, poor air quality, and the need to improve the region's quality of life prompted the RDOs to derive a regional solution to the area's energy issues, and also stimulate the local economy by providing high-paying, high-skilled jobs to the region.

PVPC and FRCOG created the Pioneer Valley Renewable Energy Collaborative (PVREC) which developed a regional strategy, the Clean Energy Plan, to address environmental concerns and energy demands by reducing the area's demand for energy, specifically its dependence on non-renewable energy sources (fossil fuels and nuclear energy). Studies examined the technology available and determined the ideal areas throughout the Pioneer Valley that would benefit from particular facilities for creating sustainable and renewable sources of energy. The overarching goal of the project is to provide regional solutions to global warming and reduce the area's carbon footprint on the environment.

The Pioneer Valley Renewable Energy Collaborative focuses on four main energy goals:

- Reduce the region's demand for energy
- Replace conventional fuels with renewable sources of energy
- Reduce greenhouse gas emissions
- Create new jobs in the community

Each goal requires individual, private and government participation to reach maximum potential. As energy use continues to rise in the Pioneer Valley, the commission is actively involved in efforts to cut demand by reducing energy needed for lighting and heating as well as the energy needed for transportation. PVREC intends to replace 15 percent of fossil fuel and nuclear-run facilities with biomass-fueled plants, wind turbines, methane-powered electric plants and a bio-diesel plant in economically and environmentally viable areas, all of which are powered by renewable sources of energy. The commission also has plans to expand public transportation options (bus, rail, bike and pedestrian) and invest in suburb-to-suburb connections, reducing dependence on private automobiles.

These changes will reduce greenhouse gas emissions within the region by three percent by 2009 and reduce emissions 80 percent below 2000 levels by 2050. These environmental practices will also produce economic opportunities. The construction and maintenance of these facilities require skilled laborers and professionals who will earn competitive salaries. These opportunities are crucial to Pioneer Valley as the region continues to lose manufacturing jobs, the community's once prosperous economic anchor. Creating new opportunities ensures stability and growth of local economies.

PVREC also acknowledges that global warming represents an environmental concern not only for metropolitan areas, but for rural communities as well. They have partnered their local campaign with international organizations, United Nations Intergovernmental Panel on Climate Change and the ICLEI Local Governments for Sustainability, to participate in the global sharing of knowledge, techniques and practices. The PVREC staff conducted extensive research to determine what steps other governments and organizations were taking to develop and implement renewable energy practices. Feasible and sustainable development requires well-formulated policy, an educated community, and partnerships with corporations and other governments that present a forward-thinking and unified plan. PVREC has developed a regional solution to their community's dependency on conventional energy sources. This is just one more example of regional development organizations accepting opportunities to lead their communities in the formulation and implementation of environmentally and economically sound plans for combating environmental concerns that exist because of rising energy demands.



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Additional information on government agencies that offer tools for renewable energy development:

DSIRE – www.dsireusa.org DSIRE is a comprehensive source of information on state, local, utility and federal incentives that promote renewable energy and energy efficiency

USDA Rural Redevelopment – www.rurdev.usda.gov/rd/energy/ Rural Development's energy programs support the development of renewable energy systems and expansion of the economic viability of biomass projects

U.S. Department of Energy – www.eere.energy.gov Government agency dedicated to renewable energy efficiency campaigns

EPA Clean Energy Program – www.epa.gov/solar/state-andlocal/index.htm EPA's new voluntary Clean Energy-Environment State Partnership Program supports states that are developing and implementing cost-effective clean energy and environmental strategies.

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¹www.eere.energy.gov/consumer/information_resources/index.cfm/mytopic=60001#R

²www.eia.doe.gov/cneaf/solar.renewables/page/rea_data/rea_sum.html

³**RDOs:** Also known as Economic Development Districts, Area Development Districts, Local Development Districts, Regional Planning Commissions, Councils of Government, Planning and Development Districts and a host of other names, Regional Development Organizations (RDOs) are multi-jurisdictional planning and development agencies providing assistance to local governments, businesses and nonprofit organizations.

⁴Study of NADO members performed June 2007 by Ben Mallory and Mike Bellamente

⁵Jay Trusty, Executive Director, Southwest Regional Development Commission

⁶www.eia.doe.gov/cneaf/solar.renewables/rea_issues/incent.html

This report was authored by Research Foundation Environmental Program Manager Mike Bellamente and Graduate Fellow Ben Mallory. This material is based upon work supported by the Environmental Protection Agency under Agreement No. EM -83329901. Any opinions, findings and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the Environmental Protection Agency.



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