

REAP

Rural Electric Cooperatives Turning Consumers into Producers

Farm Bill Energy Title: Rural Energy for America Program
Tuesday, July 19, 2011
Bill Midcap
Renewable Energy Director
Rocky Mountain Farmers Union
bill.midcap@rmfu.org



Rural Electric Cooperatives (REA)

- ❖ REA's serve 75% of the land mass in the U.S.
 - ❖ Vast renewable energy resources'
- ❖ Serve an estimated 42M people in 47 states
- ❖ 18M businesses, homes, schools, churches, farms in 2500 counties
- ❖ Own and maintain 2.5M miles , or 42%, of the nation's distribution lines
- ❖ Employ over 70,000 people
- ❖ Pay over \$1.4 B in state and local taxes

America's Electric Cooperative Network



Rural Electric Cooperatives

- ❖ REA's have the knowledge and know how to get things done—they are the ultimate in Community Owned Energy
 - ❖ Member owned—they offer the greatest opportunity for investment in their own communities
- ❖ REA's are just now discovering the advantages of USDA energy programs like REAP
 - ❖ Early adapters have shown the program works
 - ❖ Iowa's key to success in REAP is the support that their rural electrics give
- ❖ REA's with the assistance of REAP will continue to turn rural electric consumers into rural electric producers
 - ❖ Relates to rural jobs, stronger rural economies, & energy security
- ❖ Most REA's borrow capitol from USDA RUS and REAP can support RUS efforts for capitol in rural areas



Rural Electric Cooperatives

- ❖ **REA's with the assistance of REAP**
 - ❖ Could invest in their communities by
 - ❖ Engage in project planning for distributed generation and generate more home grown power from wind and solar energy
 - ❖ In turn this will reduce harmful Greenhouse Gases.
 - ❖ Increased energy security thru energy produce at home

To discontinue the REAP program now would be similar to a farmer eating his own seeds he intends to plant for next year...



Nobles Electric Cooperative

- This utility scale wind project is in Worthington MN. Rick Burud is the GM and this project received a \$500,000 grant from REAP.
- “This construction allowed us to get into the wind business; to produce our own power to serve our members. That was important,” said Burud.



Kit Carson Electric

Kit Carson Rural Electric based in Taos, New Mexico is helping rural businesses become more energy efficient with the help of a \$100,000 REAP grant. Kit Carson is doing energy audits on farms and ranches, churches, and mom & pop grocery stores. They have even performed an audit for an art gallery in Taos.



Southern Iowa Electric Cooperative

\$165,000 REAP grant and an additional loan guarantee help SIEC install this 90-ton geothermal system in a new facility, total cost of the system was over \$350,000. REAP funding made the project a success. The project shows REA's can lead by example and encourages members to learn of ways to save energy.



Rural Electric Convenience Coop Gob Nob Wind Turbine

This 900-Kilowatt turbine was placed on top of a 60-foot pile of coal mining wastes, or "gob," putting the blades into a higher elevation to catch the precious wind currents. Funded in part by a \$375,000 REAP grant it delivers power to Rural Electric Convenience Cooperative members.



Verendrye Electric Cooperative

With the help of a \$100,000 REAP grant, Verendrye Electric, based in northeast ND began an innovative program of leasing small solar photovoltaic panels for powering stock-watering pumps to farmers as an alternative to paying for the cost of extending electric lines.



Cascade Community Wind

- ❖ Located in the Northwest region of Washington state received a \$48,000 grant
- ❖ 120kw Vestas on 80 ft tower is the first of 3 and it will produce up to 200,000 kWh annually, enough to power 45 energy efficient homes. Installation cost was estimated at \$350,000



Nebraska Irrigation Efficiency Projects

Irrigation is essential to farming in dry western Nebraska. Yet these large irrigation systems use tremendous quantities of both water and energy. Many of these irrigation systems are relying on diesel generators which became very expensive to operate when fuel prices shot up.



Five Star Dairy

- Five Star Dairy, an 800-head dairy farm owned by Lee Jensen, began operating its anaerobic digester in June 2005. The digester includes an engine generator set that will use the biogas to generate up to 775 kW of electricity, enough power to supply 600 homes. Microgy, Inc. constructed and will maintain Five Star's digester.



Last Mile Electric Cooperative

- REAP grant in 2003 for \$77,449 to finance nine 10 kW turbines installed on farms and ranches. One of these turbines is on Montana rancher Jess Alger's land near Stanford. He expects wind to power most of his home and farming operation.



REA's have multiple benefits

- ❖ Grants for their own renewable energy systems.
- ❖ Grants for multiple systems on member (non-residential) properties.
- ❖ Energy Audit and Renewable Energy Development Assistance – audits, energy education.
- ❖ Feasibility studies – Explore coop renewable energy initiatives



Bill Midcap
Rocky Mountain Farmers Union
bill.midcap@rmfu.org
303.283.3528
www.rmfu.org



- To find additional success stories of REA's involved in renewable energy projects and REAP go to <http://farmenergy.org> click on success stories and click on rural electric cooperatives.