

## **West Central Telephone**

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# **Telecom's Wind/Solar Remote Power Kit Ready for Market**

*Project Nominated by Xcel Energy for National SLICE Award*

## ***For Immediate Release***

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Sebeka, MN — After more than two years of intensive research, system tinkering, and number crunching, Zenergy by West Central Telephone Association (WCTA) has completed development of a small wind and solar power kit for remote telecom equipment. The kit can also be used for other remote power needs such as farms and cabins. The research was funded by a \$137,000 grant from the Xcel Renewable Development Fund (RDF)\*, and a final presentation of the research project was made to the RDF Advisory Board in May, 2010.

The RDF grant administrators were so impressed by the project that they have nominated Zenergy by WCTA for the national State Leadership in Clean Energy (SLICE) award. The award is given to recognize state programs that are most effectively accelerating adoption of clean energy technologies and advancing clean energy markets.

For the research project, the Zenergy team installed five test systems at West Central Telephone's remote switching nodes and collected data over several months to determine the technical and financial feasibility of using the kits to power the telecommunications equipment. They also experimented with different settings and system configurations to find the most efficient combinations for various applications.

The kits have been developed to provide backup power to the nodes for three days in a worst-case scenario of having absolutely no sun or wind resources, and indefinitely when green power is available. Each kit produces 2,245 kWh annually on average, offsetting 4,500 pounds of carbon dioxide, seven pounds of sulfur dioxide, and over one-half gram of mercury. (One gram of mercury is enough to contaminate a small lake.) Each kit will also offset the use of over 30,000 gallons of fresh water per year used to produce electricity.

The payback periods for the five different setups were based on the grants and rebates available at the time of the research, and were found to range from 10 to 15 years, using a modest estimate of 5 percent electric rate increases, and not including the potential financial gains from advertising, and renewable energy and/or carbon credits.

Market research performed as part of the study showed that in addition to the large potential of the telecom market, where reliable backup power is an inherent and vital cost of doing business, many other markets might benefit from the remote power kits, including ranches, cabins, weather stations, and even developing nations.

The project included designing a remote internet-based monitoring software solution, as well as a custom equipment cabinet, both of which are now commercially available through Zenergy ([www.zenergyguide.com](http://www.zenergyguide.com)). The kits are expected to be available for mass-market by the end of 2010.

RDF grant administrator Mark Ritter said of the project, ““WCTA has exhibited leadership in the renewable energy field by going beyond the normal telecommunication business model and looking at new ways to add additional reliability and stability to their services. Their research is not only applicable to telecommunication but is also appropriate for other sectors that need remote power. Their project has been exemplary in demonstrating how rural cooperatives can bring innovative solutions to meet shareholders needs at affordable rates.”

*\* Project funding provided by customers of Xcel Energy through a grant from the Renewable Development Fund.*

Zenergy is a service provided by West Central Telephone Association (WCTA) to bring renewable energy technologies to the region. Design and installation services available include small wind, solar electricity, solar thermal air and water, back-up battery and generator systems, and energy efficient lighting and equipment.

West Central Telephone Association is a full service telecommunications company providing local and long distance services, advanced telephone, broadband Internet services, IPTV, business phone systems, complete telecommunications wiring services and much more.

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