

The Oklahoma WinCharger

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(A Newsletter for Oklahoma Wind Stakeholders)

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Oklahoma Wind Power Initiative

A Collaborative Project by the
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based at the

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Oklahoma Renewable Energy Council is formed

Wind power and other renewable energy stakeholders came together on May 4th, the day after the Oklahoma City wind power conference, to organize a group to serve as the central voice for advocates of Oklahoma's vast renewable energy resources. Four meetings have been held since that date, with recorded attendance as high as 38 participants. The group decided to adopt the name "Oklahoma Renewable Energy Council" (OREC) at its June meeting.

OREC has grown into a broad coalition of individuals, companies, organizations, and agencies working to develop Oklahoma's bountiful renewable energy resources. Specifically, OREC meets to:

- share information on opportunities and challenges;
- provide education and outreach to the public;
- support landowners in developing their natural resources;
- provide information to the Oklahoma Electric Restructuring Advisory Committee; and
- provide analytical and technical (e.g., wind resource mapping) support for Oklahoma's legislators and national representatives.

OREC met last on September 20. Member organizations now number about twenty-three, with more joining all the time. Members include landowners, state and federal legislators (State Representative James Covey and U.S. Congressman

Frank Lucas), wind farm developers, non-profit advocacy groups, and many more. Membership is open, and there are no costs to participate. OREC meets monthly (usually the second Wednesday of the month from 10am to noon), in alternating locations. Meeting dates, times and locations, and agendas will be published on the OREC web site and in this newsletter (see Calendar of Events).

OREC is a non-profit organization and is currently applying for 501-C3 status. For more information, visit www.okstate.seic.edu/orec, or contact Tim Hughes, OREC Interim Chair (thughes@ou.edu or 405-447-8412).

Federal Tax Credit Proposed for Small Wind System Purchases

The following is taken from the American Wind Energy Association's WIND ENERGY WEEKLY, Vol. 20, #952, 6 July 2001.

U.S. Representative J. C. Watts (R-Okla.) has introduced a 30% investment credit for household wind systems. H.R. 2322, the Home and Farm Wind Energy Systems Act, is cosponsored by Reps. Wes Watkins (R-Okla.), Frank Lucas (R-Okla.), and Vernon Ehlers (R-Mich.). At a news conference on the bill, Watts said he has spoken with President Bush about it and that he hopes to see the proposal approved by Congress this fall. Watts commented, "we think it's a great way to create an energy alternative for homes, for farms and small

businesses." The current cost of residential wind turbines, Watts said, is hindering their sales. With a tax incentive to lower the up-front cost of the machines, increased sales will result, helping manufacturers to increase their volume and lower costs even further.

Mike Bergey, president of Bergey Windpower of Norman, Okla., a leading small turbine manufacturer, welcomed Watts' bill. A typical 10-kilowatt residential wind turbine, he said, costs about \$32,000 and takes about 15 years to pay for itself in terms of lowered electricity costs. As an example of what can be done if the initial cost of the systems is reduced, Bergey pointed to the state of California, which enacted a 50% rebate last year. Since the rebate went into effect, Bergey said, 70% of his company's sales have been to customers in the Golden State.

While annual sales of household wind turbines are numbered in the hundreds of units, Bergey added, "There are over 20 million homes in America with an acre or more of land that would be suitable for one of these machines."

Randy Swisher, executive director of the American Wind Energy Association (AWEA), applauded Watts' proposal. "Small wind turbines have been overlooked for far too long as a potential contributor to our nation's energy supply," Swisher said. "In terms of energy produced per dollar expended, they are one of the best options for homeowners and small businesses to consider. Hopefully, a tax incentive will help make that happen."

Editor's Note: WinCharger readers who are considering the purchase of a wind system for their home will likely want to await the outcome of H.R. 2322. Future issues of the WinCharger will have reviews of resource assessment and siting issues that prospective owners of small turbines should consider. Also, you may learn more about small wind systems by downloading the booklet "Small Wind Electric Systems" from OWPI's web site: go to www.seic.okstate.edu/owpai and click on the Landowner selection. If you cannot access this document online, you can write or call the WinCharger to request a copy be mailed to you.

Renewable Energy Perspective Presented to OK Electric Restructuring Advisory Committee

As mandated by Senate Bill 440, passed last legislative session, the Oklahoma Electric Restructuring Advisory Committee has been formed to study issues related to utility restructuring in our state. At this committee's September 19 meeting in Lawton, transmission issues were addressed. Thanks to Senator Kevin Easley (District 18), Chairman for this committee, transmission impacts on renewable energy development were considered.

Wayne Walker, Director of Project Development for Zilkha Renewable Energy, a utility-scale wind power developer, took a major lead in presenting scenarios for economic growth in Oklahoma. These scenarios were based on wind power and other renewable energy resource development, existing transmission capacity, and hoped-for improvements to transmission. Tim Hughes, Project Director for the Oklahoma Wind Power Initiative, provided analyses of wind resource maps developed by OWPI investigators at OU and OSU, in order to give estimates of developable wind power potential in Oklahoma. Using OWPI's latest wind assessment map and assuming no transmission constraints, it was estimated that over 9000 Megawatts (a \$ 7.2 Billion capital investment) is feasible in 6 prime areas in western Oklahoma. However, with current transmission constraints, the cap on development will likely be 1000 MW or less.

More detailed reviews of wind power development potential will be presented in future issues of The WinCharger.

Renewable Energy's Potential Contribution to National Security

In light of recent tragic events, it may be beneficial to reflect on how energy sources in the future may be impacted and how regions such as Oklahoma can help provide more energy to the nation.

With the September 11 attacks on the World Trade Center and Pentagon, attention has turned once again to issues of energy vulnerability, particularly with regards to the Middle East. But these concerns are not new. The U.S. has long known that there are risks associated with imported energy, especially when it comes from politically unstable regions. In fact, in the Bush Administration's National Energy Policy, published in May 2001, an

entire chapter was devoted to national energy security and international relationships. The plan endorses “a practical, market-based approach that encourages the adoption of efficient technologies, including those relating to natural gas, nuclear energy, and renewable energy.”

Renewable energy can contribute to a long-term strategy to reduce our need for oil from places like the Middle East, North Africa, and Southeast Asia. Modern technology, in tandem with cleaner energy resources, can help reduce the dependence of the U.S. and the developing world on fossil fuels, and provide means for tremendous economic development along the way.

However, renewable energy resources like wind power are not quick fixes, nor will they likely provide the majority of our energy needs in our lifetimes. Still, renewable energy can significantly supplement energy sources like natural gas and coal, for which domestic use comes almost exclusively from supplies within North America. If we are to reach the point where renewables can provide more energy security, steps must be taken to see that a program is developed to encourage their use.

Over the coming decade, emerging technologies such as fuel cells, more efficient electric vehicles, and hybrid vehicles (ones that run off gasoline *and* fuel cells) will allow for a transition of vehicle fleets away from 100% gasoline-dependent sources. Some, such as electric vehicles, could be charged from the existing electric transmission grid. Others, such as cars powered by fuel cells, could be refueled from off-grid sources. More use of wind and biomass generated electric power can free more natural gas to be diverted for use in compressed natural gas powered vehicles. Wind energy can even be used to generate hydrogen, providing fuel to cars directly, but technological developments are still needed for this scenario to work.

America’s domestic energy resources – including wind, solar, and biomass – provide an opportunity to alter our development path to one that is more politically secure while offering opportunities for economic growth, especially for rural areas. Renewable resources provide opportunities to supplement depleting supplies and provide alternatives for imported fossil fuels. Best of all,

renewable resources are domestic, meaning that America can make great strides toward the energy independence envisioned in the Bush Administration’s National Energy Policy.

Energy Conference to be held in Stillwater, OK

The 34th Annual Frontiers of Power Conference will be held in Stillwater, Oklahoma during October 29-30, 2001. This Conference is co-sponsored by the Engineering Energy Laboratory and the School of Electrical and Computer Engineering of Oklahoma State University. The Conference seeks to provide for the frank and open discussion of the current problems facing the electric utility industry. The Registration Fee of \$150.00 includes attendance at all sessions, one luncheon, a banquet, and a copy of the Conference Proceedings. The program is being finalized and will be available soon. For more information, please contact:

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Wind Energy 2001 Conference, Dodge City, KS

Large-scale wind farming has come to Kansas at the Montezuma Wind Farm, near Dodge City. The Kansas Wind Energy 2001 Conference offers those with interest in wind energy the opportunity to explore all facets of wind energy production. A tour of the Montezuma wind farm is also included. Registration is only \$15, with a deadline of Oct. 16. For more information, see www.kcc.state.ks.us or call (785) 271-3349

Wind Farm Plans Announced for Harper Co.

Starting with this issue, the WinCharger will try to highlight development of wind resources in various sections of the state. We start this series with the announcement by Chermac Energy Corporation that it has plans to build two wind energy farms in Harper County (**Figure 1**).

These wind farms will provide up to 120 megawatts of power (enough to provide for about 20,000 homes) and will cost \$120 million. Chermac's 'Sleeping Bear' project will provide up to 96 megawatts of power, while its farm south of Buffalo will provide up to 25.5 megawatts.

Chermac said it expects the projects will produce their first electricity by September of next year with both projects in by December of 2004. Jaime McAlpine, president of Chermac, wants to develop as much as 500 megawatts of wind power over the next five years.

McAlpine said the projects would add technical jobs and increase tax revenue in the Harper County area.

Editor's note: much of the above was excerpted from an article in the Daily Oklahoman Business Section, August 21, 2001.

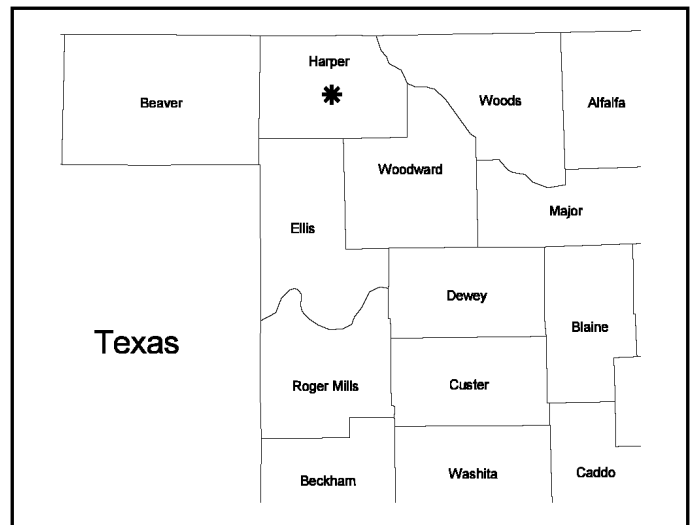


Figure 1. Future location (*) of the South Buffalo Wind Farm.

Discussions in Future Issues of the WinCharger

Coming topics include:

- Tax benefits for communities near wind farm installations;
- Potential wind farm development in the Slick Hills area of SW Oklahoma (north of the Wichita Mountains);
- Tips on judging whether a small wind turbine is right for your home, farm or other property; and
- more

If you have topics you would like to see addressed in future issues of 'The Oklahoma WinCharger', please call or write to:

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Calendar of Coming Events	
Oct. 10	Oklahoma Renewable Energy Council meeting, 10 am to noon, State capital, room 432A. See www.seic.okstate.edu/orec for more information, or call the WinCharger.
Oct. 22	Kansas Wind Energy 2001 workshop, in Dodge City. For more information, see www.kcc.state.ks.us or call (785) 271-3349
Oct. 29-30	OSU Energy Conference, Stillwater. For more information, call 405-744-9912.
Nov. 14	Oklahoma Renewable Energy Council meeting, 10 am to noon, location to be announced
Dec. 12	Oklahoma Renewable Energy Council meeting, 10 am to noon, location to be announced