

# The Oklahoma WinCharger

May/Jun. 2005 (A Newsletter for Oklahoma Wind Stakeholders) Vol. 5, #3



## **Oklahoma Wind Power Initiative**

A Collaborative Project by the  
University of Oklahoma and Oklahoma State  
University  
based at the

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## **Weatherford Wind Farm Online & Expanding**

The Weatherford Wind Energy Center (WVEC) was declared commercially operational on April 30, 2005. Just a few days after, Public Service Company of Oklahoma (PSO) announced that they would be purchasing an additional 40.5 MW from an expansion that will begin soon on the WVEC. The additional 27 turbines will be located on 1,400 acres southeast of the original project site.

“PSO is excited about commercial operations of the Weatherford Wind Energy Center, as it allows us to provide clean, renewable and low-cost wind power to our customers,” said Stuart Solomon, PSO president and chief operating officer.

The expansion project will be built by Florida Power and Light Energy, who also built the first phase of the 106.5 MW project. The expansion will bring the total project size to 147 MW, which will be enough to power approximately 45,000 Oklahoma homes.

## **Farm Bill Workshops Held in Weatherford & Afton**

The Oklahoma Wind Power Initiative, the Oklahoma Renewable Energy Council with assistance from the Wind Powering America program recently held workshops on how to apply for grant funding through the



Above: Wind turbines stand in Weatherford ready to produce electricity.

Section 9006 program of the Farm Bill. Approximately 100 people attended the workshops on May 10<sup>th</sup> and 12<sup>th</sup> heard presentations on wind power, ethanol production, funding opportunities through the Oklahoma Department of Commerce,

and explanation of the details of Section 9006 program.

Section 9006 of the Farm Bill provides close to \$23 million for renewable energy and energy efficiency projects nationwide. Farmers, ranchers, and rural small businesses are eligible to apply for funding through this program. Applications for this year's funding are due on **June 27, 2005**.

If you would like more information on Section 9006 of the Farm Bill, contact Sally Vielma in the USDA office at (405) 742-1039, or via email at [Sally.Vielma@ok.usda.gov](mailto:Sally.Vielma@ok.usda.gov). If you would like to have copies of the presentations that were given at the workshops contact Kylah McNabb at (405) 447-8412 or at [windgirl@ou.edu](mailto:windgirl@ou.edu). The materials will be posted soon on the OWPI website (<http://www.ocgi.okstate.edu/owpi>).



Above: Attendees at the Afton Farm Bill Workshop listen to a presentation.

Special thanks to Southwest Oklahoma State University, and Northeast Technology Center-Afton Campus for allowing us to host our events at your locations. Special thanks to our speakers as well: Mason Mungle with the Oklahoma Farmers Union, Carolyn Sullivan with the Oklahoma Department of Commerce, and Sally Vielma with the U.S. Department of Agriculture Rural Business Development Office.

### **ND Establishes Renewable Energy Office & Incentive Programs**

A broad package of renewable energy legislation to foster wind energy and biofuel

production and to enhance overall transmission infrastructures was recently signed into law by Governor John Hoeven. The plan also includes extensive ethanol provisions, which were previously the focus for the state's energy incentives and marketing interests.

Also in the package is the establishment of an Office of Renewable Energy that will be housed within the Division of Community Services within the North Dakota Commerce Department. The office will promote the development of renewable energy (including wind power) within the state as well as conservation and education initiatives among the general population.

A number of incentives are intended to aid in the promotion of wind power generation, including the establishment of the North Dakota Transmission Authority – which will provide significant investment in new transmission infrastructure; an interstate Renewable Energy Credit trading program; raising the minimum threshold for certain permitting requirements to 100 MW; reduction of siting fees for certain facilities; and, reduction in the assessment values in certain regulatory appraisals for wind turbine electric generation units.

For Additional Information:

North Dakota Governor's Office

<http://www.hoevergovernor.com/news/detailsnews.asp?newsID=145>

North Dakota Office of Renewable Energy

<http://www.state.nd.us/dcs/Energy/>

*Editor's Note: The above is a summary from AWEA's Wind Energy Weekly #1140.*

### **Kansas Creates Transmission Authority**

The State of Kansas has established the Kansas Electric Transmission Authority. According to a press release from Governor Kathleen Sebelius, the agency will promote wind power development in the state to "ensure reliable operation of the integrated electrical transmission systems, diversify and expand the state's economy, and facilitate the consumption of Kansas energy through improvements in the state's electric transmission infrastructure."

Kansas is ranked third - after North Dakota and Texas - in potential wind energy resources. The

authority has bond issuing authority for the construction of transmission lines aimed at improving rural infrastructure and access. There is a special emphasis on promoting new wind power facilities and the incorporation of wind generators on farms and ranches, particularly in underserved rural corridors.

The Kansas Energy Council states that Kansas has been a net energy importer since 1996 with growth projections suggesting there is little chance to become an exporter in the near future without substantial increases in net power generation. A goal of the authority is to increase the level of renewable energy to at least 1000 MW, or 10% of the state's generation capacity, by 2015.

For additional Information:

Kansas Electrical Transmission Authority information (via KEC)

<http://www.kec.org/pages/BillSummary03.pdf>

*Editor's Note: The above is a summary of AWEA's Wind Energy Weekly #1139.*

### **Clipper to build Manufacturing Plant in IA**

Clipper Windpower Inc. has announced plans to open a manufacturing plant in Cedar Rapids, Iowa. The plant will assemble 2.5 MW wind turbines at the \$22 million 60,000 square foot facility. The plant will employ about 140 people.

Clipper has reportedly received some economic incentives from the Iowa Economic Development Board as well as other government entities with details unavailable at press time. Plans are for the plant to eventually manufacture the turbine components with hopes to expand to additional model lines in the future.

Clipper is a unit of General Electric that manufactures turbines aimed primarily at the more mature markets of Canada and Asia. However, given that Iowa currently ranks third in wind energy generation and boasts two new large wind farms, the site location is intended to be strategic in fostering interest for current and future US markets.

For additional Information:

Clipper Windpower Inc.

<http://www.clipperwind.com/>

Iowa Economic Development Board

<http://www.iowalifechanging.com/board.html>

*Editor's Note: The above is a summary of AWEA's Wind Energy Weekly #1139.*

### **OK Emerging Energy Technology Conference**

Mark you calendars! The statewide Oklahoma Emerging Energy Technology Conference, hosted by the Oklahoma Renewable Energy Council and the Oklahoma Department of Commerce, will take place on September 27, 2005 at the National Center for Employee Development (Postal Training Center) in Norman, OK. This 1-day event will focus on ensuring that Oklahoma remains a leader as an energy state by looking at emerging issues and opportunities related to the growing variety of energy resources. This year the conference will highlight a variety of emerging technologies including advances in production techniques as well as delivering energy to market.

The Emerging Energy Technology Conference website can be found at <http://www.ocgi.okstate.edu/conference2005>.

Check the website for updated information to come.

### **EPA Names Top 25 Green Power Purchasers**

The Environmental Protection Agency recently released its current rankings of green power purchasers. Green power purchasers are companies or agencies that have voluntarily bought energy from various renewable resources, including wind power. Renewable energy, or green power, currently accounts for about two percent of America's electricity supply. The voluntary purchases of renewable energy are accelerating development.

The Green Power Partnership is a voluntary program promoting renewable energy procurement as part of institutionalized environmental management policies. Partners in the program pledge to switch to green power for a portion of their power needs in return for technical assistance and recognition from the EPA.

The Green Power Partnership currently includes more than 550 partners, including Fortune 500

companies, state and federal agencies, trade associations, and universities. The U.S. Air Force leads the green power list, purchasing more than 321,000 MWh annually for bases across the country. Below are the top 25 based upon the total amount of green power purchased:

1. U.S. Air Force (numerous locations)
2. Johnson & Johnson (NJ)
3. U.S. Environmental Protection Agency (numerous locations)
4. The World Bank (numerous locations)
5. U.S. General Services Administration - Region 2
6. Whole Foods Market I.P – Austin, TX
7. City of San Diego, CA
8. NJ Consolidated Energy Savings Program
9. WhiteWave Foods Inc
10. Austin Independent School District (TX)
11. Staples Corp
12. University of Pennsylvania (numerous campuses)
13. Montgomery County, MD
14. Advanced Micro Devices - Austin, TX
15. Commonwealth of Pennsylvania
16. FedEx-Kinko's (numerous locations)
17. East Bay Municipal Utility District/Main Wastewater Plant – Oakland, CA
18. BMW Manufacturing Co. - Greer, SC. Facilities
19. City of Santa Monica, CA
20. U.S. Navy - Region South (numerous locations)
21. Harvard University (MA)
22. Round Rock Independent School District (TX)
23. City of Portland, OR
24. Pennsylvania State University (PA)
25. U.S. Department of Energy - Forrestal & Germantown Facilities (PA)

*Editor's Note: The above is a summary of AWEA's Wind Energy Weekly #1139.*

### **"Frontier" Transmission Line Proposed**

The governors of California, Nevada, Utah, and Wyoming have formed a partnership to design and construct a new transmission line dedicated to delivering power from the interior to the West Coast. The planned line has been nicknamed

the "Frontier Line" and is slated for completion within five years.

The partnership was created in response to rapidly growing consumer demand in the West. The agreement creates a multi-state project coordinating committee – the Frontier Line Task Force – which includes various agency representatives from each state. Work has already begun on route planning, permitting, impact assessment, easement and scheduling.

The Frontier Line is an outgrowth of the Rocky Mountain Area Transmission Study (RMATS) which aims to identify economical transmission upgrades for western coal and wind-generated energy. The RMATS study estimated the benefit to member states of up to \$1.7 billion with a benefit to California of up to \$400 million. It is also anticipated that establishment of new transmission lines will spur additional development and trunked projects that are not included in these projection figures.

For additional information:

RMATS website:

<http://psc.state.wy.us/htdocs/subregional/home.htm>

Frontier Line Task Force:

<http://psc.state.wy.us/htdocs/subregional/Frontierline040105.pdf>

*Editor's Note: The above is a summary of AWEA's Wind Energy Weekly #1138.*

### **California Tribe & Superior Energy to Build Wind Project**

The Kumeyaay Nation (Campo Band) of California has contracted with Superior Renewable Energy / Babcock and Brown to finance and construct a 50 MW wind generation site on Nation lands 60 miles east of San Diego. Power will be generated by 25 Gamesa 2 MW wind turbines and will be sold by agreement to San Diego Gas and Electric. This project will represent the largest U.S. wind power project constructed entirely on tribal lands.

In addition to generating needed power for California, the project will provide economic stimulus and employment for the tribe's 350 members as well as neighboring residents.

For additional information:  
Superior Renewable Energy  
<http://www.superiorrenewable.com/home.html>  
Kumeyaay Nation:  
<http://www.campo-kumeyaay.org/>

*Editor's Note: The above is a summary of AWEA's Wind Energy Weekly #1135.*

### **Impressions from AWEA Windpower 2005 Conference in Denver, CO**

*The following is a commentary from Dr. Mark Meo, member of the OWPI team and a professor Science & Public Policy at the University of Oklahoma. Mark recently attended the American Wind Energy Association Windpower 2005 Conference in Denver, CO and below are his observations and thoughts from the conference.*

The Mile-High City was the venue for the American Wind Energy Association's 31<sup>st</sup> annual conference to promote, educate, and catalyze its supporters and sponsors toward greater development and use of wind power in the United States. From Sunday evening on May 15 through Wednesday afternoon (May 18), over 4100 conference attendees were treated to a superb mix of posters, corporate vendors, nationally prominent speakers, and a 3-day series of educational sessions that were broken into four separate tracks: Policy, Business, Technical, and Utility, in order to cover all the issues that needed to be covered.

This largest-ever AWEA conference took place in the state that had just completed a rousing (and successful) campaign to adopt a renewables portfolio standard (RPS) for its utilities, and was convened in a city that made a determined and colorful effort to publicize the event, and entice its citizenry into attending. The conference was held in the cavernous Colorado Convention Center only several blocks from the 16<sup>th</sup> street downtown pedestrian mall and conference hotels. The large number of AWEA conference banners and posters decorating the Convention Center and the shops and businesses along the pedestrian mall was very impressive.

My trip to Denver revealed the emergence of the wind industry as a growing national and international force, and the seriousness with which the energy industry, utilities, and the country's political leaders are treating renewable energy. While I was a bit constrained in the variety of sessions I could attend (the policy track, primarily), the extensive vendor booths and corporate displays communicated boldly the emergence of a major industry that has benefited greatly from the nation's investment in research and development, tax incentives, and preferential use policies.

As part of the Oklahoma Wind Power Initiative team, I was very pleased to see a number of things that reflected well on our state and the people who have been working hard to advance wind power development. On Sunday evening, enticed by AWEA's promise of free liquid refreshments, I was greeted by Tim Hughes (OWPI founder and now with PPM Energy) who had been worn down from several days of preparing for the conference. After speaking briefly with Tim, I came across Kylah McNabb at the opening night poster session, who was describing OWPI's research activities with its tall-tower program. Shortly thereafter, I spied Michael Bergey (of Bergey Windpower and OREC), and then visited the vendor area to take in the corporate scramble for new business opportunities. Later on, I met Troy Simonsen (another OWPI alum) who is working at the University of North Dakota on a federal wind-hydrogen demonstration project, and Greg Adams of OREC. While I didn't attend the AWEA awards dinner, I did note that Western Farmers Electric Cooperative won the Utility Leadership Award for 2005. (Alert readers will know that WFEC purchases wind power from the Blue Canyon wind farm northwest of Lawton).

What a scene the vendor area was. To my satisfaction, GE Wind had a fairly large display, but so did several other turbine vendors. Beyond the videos, turbine blade pins, blue wind caps, and related gifts readily available to attendees, the wind business was in Denver with a seriousness of purpose that was undeniable. As I scanned the list of conference attendees included in my packet, I got the impression that there were more GE people present than I noticed while at their booth. From the listing of AWEA conference attendees available on the website, I noted the following: GE Energy, 110

attendees; Vestas, 67 attendees; Zilkha, 26 attendees; Siemens, 26 attendees; Suzlon, 24 attendees; and Mitsubishi, 20 attendees. When I questioned one of the GE employees about his company's impressive turnout, he told me that every GE worker had a job to do, and that all of them were very busy.

On Monday morning, when the conference began in earnest, the opening session included an unbeatable combination of Colorado's political leaders who spoke glowingly about local wind power projects, state and national energy policy, and our collective future. Present were Denver Mayor John Hickenlooper, Colorado Governor Bill Owens, U.S. Senator Ken Salazar, and U.S. Representative Mark Udall. Unfortunately for conference attendees, it was reported that Assistant Secretary David Garman had been held up by airport security at Washington National and had missed his flight. Despite this, however, the presentations were all first-rate.

Industry leaders spoke at the next session, in which attendees heard from Terry Hudgens, president of PPM Energy, Thomas Carbone, president of Vestas, Mike O'Sullivan, senior vice president of FPL Energy, Anreas Nauen, president of Siemens Wind Power, and Mark Little, vice president of GE Energy. The issues of concern to this group of speakers included the uncertainty of the federal production tax credit (PTC) and state and federal RPSs, rising production costs, transmission bottlenecks and related grid integration issues, and improved wind forecasting techniques.

After the opening session, I opted to attend a strict diet of policy sessions, except for the final Wednesday utility session, which addressed hydrogen, storage, and clean water. This session was very well attended. All of the sessions asked attendees to rate the speakers and the subject matter, as well as make a suggestion or two for future topics. In general, I found that AWEA had organized the policy track in a way that educated people about current issues of concern and provided useful vignettes into the analyses of national and state policy initiatives from speakers who were very knowledgeable about their subject material. Here is a menu of

subjects that were offered: Opportunities and Challenges in the Rocky Mountain Region; US DOE Role in Expanding Wind Energy Markets; Advancing Wind Through State Fund Programs; Green Attribute Market Developments; AWEA Legislative Update; AWEA Roundtable with Editors and Reporters; Transmission Policy in the US and Canada; Offshore Policy and Experience; Wind Energy and Economic Development; and Experience with State Renewable Energy Policies. Since I had elected to attend the policy track with I registered for the conference, I shall be receiving a CD-ROM of the policy presentations. Should anyone have an interest in the substance of the 4 track presentations, they can order them from AWEA. ([www.awea.org](http://www.awea.org))

While each of the sessions had its merits, the one that stood out for me was the offshore wind session, which included a discussion about the controversial Cape Wind project between Cape Cod and Nantucket Island, Long Island Power Authority's offshore project with FPL, and the Danish experience in the United Kingdom. Cape Wind has been a lightning rod of controversy in New England since it proposed developing a 470 MW wind farm within sight of beachgoers off the sandy shores of the cape. Despite repeated legal challenges from landowners whose disapproval stems from the (subjective) erosion of their seascape vistas, the project is expected to persevere.

James Gordon, the head of Cape Wind, pointed out that the majority of Massachusetts residents support the project, particularly in light of the degraded air quality on the Cape from conventional fossil power and the perilous nature of New England's reliance on imported energy. The legal counsel for Cape Wind noted that the current energy bill in Congress is expected to clarify offshore wind farm siting procedures and make them more comparable to offshore oil and gas siting. In contrast to Cape Wind's experience, FPL is more optimistic about its proposed wind farm off the southern coast of Long Island. Both wind farms lie beyond the state territorial 3-mile limit, but are subject to state consistency criteria in the federal Coastal Zone Management Act, and must be observant of navigational and customary (e.g. fishing) uses of the waters. Though Long Island's affected shoreline communities are not actively opposing their offshore wind farm, some political leaders in

Virginia and New Jersey have found them to be unsightly and have sought to place a moratorium on their future development.

Nevertheless, the sense that wind power development was rapidly becoming an orthodox choice for utilities was affirmed in a Tuesday noon session with utility executives from Xcel Energy (Wayne Brunetti), Puget Sound Energy (Eric Markell), MidAmerican Energy (Brent Gale), and Nebraska Public Power (Gary Thompson). Upon followup questioning, Mr. Brunetti affirmed that wind power is likely to remain a staple for Xcel Energy for the foreseeable future. Nebraska, like Texas before it, conducted deliberative polling with its customers to find that the vast majority preferred wind power over other power production systems.

I departed from the policy track for the last session on Wednesday and heard a series of presentations on power storage technologies and wind hydrogen production by electrolysis (splitting water). The latter presentation summarized the results of a multi-agency simulation model, H2A, that calculated the cost of hydrogen production at a co-located wind farm. (Currently about \$3.50 per gallon equivalent). The model, which is expected to become publicly accessible later this year on the National Renewable Energy Laboratory website, did not assume that wind power could be dispatched to an electrolysis plant at an urban filling station, but that grid problems would preclude such an option.

After the presentation, people from Michigan and Ohio, whose states are not especially well-endowed with terrestrial wind resources, pointed out that recent assessments of wind potential on the Great Lakes made wind hydrogen an attractive future option. Of course, objections over aesthetics are likely to be as significant here as well as on Cape Cod or off coastal Virginia.

After this concluding session, I was struck by the fact that the wind industry had now grown out its technological infancy, and was perceived (by some) as an unruly teenager with a tendency to trash his motel room while on vacation. For

its part AWEA's leadership has recognized the growing public opposition to wind farms as a NIMBY (Not In My Back Yard) problem, and announced its intention to lobby more forcefully and effectively for wind farm development, particularly in coastal regions. Based on what I heard in the policy track discussions, the material benefits to local communities from wind farm development have been considerable, and are in fact welcomed by a large number of communities. Despite this favorable record, public education about energy alternatives has become a continuing challenge for AWEA, the utilities, and turbine vendors alike. Public inattention to the nation's energy policy, and the complacency that relatively low gasoline prices has instilled in the public, has created a need for improved public education and outreach about the benefits and costs of different energy production systems. Interestingly, this is the primary goal of the US DOE program, *Wind Powering America*, which held its annual State Summit the day after the AWEA conference ended.

### **Distribution of the WinCharger**

Electronic distribution of The Oklahoma WinCharger is available by signing up to be part of the ListServ mailing list. To sign up to receive your copy of the WinCharger by e-mail, go to the OWPI website at [www.ocgi.okstate.edu/owpi](http://www.ocgi.okstate.edu/owpi), click on the link on the left side that says "Subscribe to the Oklahoma WinCharger," and follow the instructions from there. Receiving your copy of the WinCharger by e-mail allows you to receive the newsletter faster and helps us keep our mailing costs down.

If you have recently moved or changed your e-mail address, please let us know. Address corrections or updates can be sent to Mark Giesken at [chsm1g@yahoo.com](mailto:chsm1g@yahoo.com) or by phone at 405-447-8412. Thanks!

### Calendar of Coming Events

- Jun 8** Meeting of the **Oklahoma Renewable Energy Council**, 10 am to noon, OK Department of Commerce, Gallery 1-2. See [www.ocgi.okstate.edu/orec](http://www.ocgi.okstate.edu/orec) for more information.
- Jul 13** Meeting of the **Oklahoma Renewable Energy Council**, 10 am to noon, OK Department of Commerce, Gallery 1-2. See [www.ocgi.okstate.edu/orec](http://www.ocgi.okstate.edu/orec) for more information.
- Aug 7-9** **OK Association of RC&D Annual Summit**, Catoosa, OK
- Aug 10** Meeting of the **Oklahoma Renewable Energy Council**, 10 am to noon, OK Department of Commerce, Gallery 1-2. See [www.ocgi.okstate.edu/orec](http://www.ocgi.okstate.edu/orec) for more information.
- Sept 27** **Emerging Energy Technologies Conference**. Hosted by the Oklahoma Renewable Energy Council. National Center for Employee Development, Norman, OK. More information coming soon!

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