# WINDLETTER

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## Strengthening Ties Across the Border

*As CanWEA gears up for its annual conference, the U.S. wind industry is noticing that Canada's geographic proximity and vast wind resources present attractive opportunities. Here's a brief look at the industry landscape across the border.*

By Drew McKibben

Canada's wind energy market has expanded six-fold over the last five years and shows no signs of slowing down, generating plenty of opportunity for companies on both sides of the border looking to expand their project portfolios and production facilities.

The country currently has 1,856 MW of installed wind capacity, and expects to be close to 2,500 MW by the end of this year and 4,000 MW by the end of 2009. Longer-term targets and policy frameworks in all 10 provinces should result in a minimum of 12,000 MW of wind capacity by 2016.

"That is still only really scratching the surface of what's possible in Canada, but nonetheless reflects a significant shift from where people would have thought the market was going as recently as three or four years ago," says CanWEA Robert Hornung, president of the Canadian Wind Energy Association (CanWEA).

The potential has started to attract international players to Canada, including some of the largest in the U.S. market. "We have seen American developers coming in and purchasing existing projects, like an FPL; winning contracts in request for proposal (RFP) processes, like Invenergy; or purchasing a stake in a developer," says Hornung. "For American project developers who still have to wrestle with the uncertainty associated with the PTC, Canada represents a potential hedge that can help them move forward with a full plate of development opportunities regardless of what happens in the U.S."

**Different market, different rules**

For those companies that do look north, there are some important differences in how the two markets operate. Alberta, with Canada's only deregulated electricity market, is really the only jurisdiction where project developers can negotiate bilateral contracts with customers or build merchant plants. Most other provinces utilize a competitive RFP approach where the winners take all and the rest remain in limbo until the next chance to bid.

"It is a different way of doing business, but there is no reason American companies cannot succeed in these processes," says Hornung. "[RFP processes] are very much driven by the search for the lowest-cost projects. If American companies have done their groundwork in

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Canada and have access to turbines and favorable financing terms, they certainly have an opportunity to succeed."

In the end, though, the decision about whether to build in Canada will often come down to the relative profitability of projects in the two countries. RFP processes can add cost and risk to projects, says Hornung. While the future of federal incentives for wind energy are uncertain in both countries at this time, it is true that Canada's incentive of Cdn. $0.01/kWh paid directly to producers regardless of their nationality under the ecoEnergy for Renewable Power Program, is less than half the U.S. $0.021/kWh production tax credit.

On the other hand, says Hornung, one area where Canada is ahead of the U.S. is in the pricing of carbon. "We already have carbon taxes in place in two jurisdictions, and wind energy projects can already create and sell greenhouse gas emission offsets in Alberta to help emitters meet regulated targets to reduce greenhouse gas emissions," he says. "A similar offset system tied to federal regulations on greenhouse gas emissions should be in place nationally in 2009. Such systems provide an additional revenue source for wind energy projects that are not yet available in the U.S. and will add to the relative cost-competitiveness of wind farms in Canada vis-à-vis the U.S."

**Manufacturing opportunities**

U.S. manufacturing and service companies will also find significant opportunities north of the border, says Hornung, with Canada now looking at average installations of more than 1,000 MW a year over the next eight years. "This represents a 20% addition to the U.S. market that companies could service, or could partner with Canadian companies to service, or could invest in facilities in Canada to service, as DMI Industries has done with respect to tower manufacturing," says Hornung.

Canada, he admits, has fallen behind the U.S. in attracting the growing list of manufacturers looking to establish production facilities in North America, but it is clear that Canadian companies have the necessary skill sets to contribute to this market. "Governments in Canada do not yet recognize that they will have to compete for such investment," says Hornung, "and this is in part a product of the fact that Canadian governments have not yet fully recognized or understood the scale of the economic opportunity that is associated with wind energy."

CanWEA hopes to change that when it launches a *Wind Vision for Canada* at its upcoming annual conference, taking place October 19-22 in Vancouver, British Columbia. The acceptance of wind by governments, utilities, and system operators across the country has been an evolutionary process, says Hornung, moving from being viewed as a marginal generation source to a technology that every province sees as one worth pursuing. "But we haven't yet taken the step of thinking big about it," says Hornung. "We're a little bit behind the United States in that regard. In the U.S. within the last year we've seen some very serious public discussion with respect to how far the country really could go with wind energy. You see that in the U.S. Department of Energy study looking at 20% by 2030, you see that in Al Gore calling for 100% renewable electricity within a decade, you see it in T. Boone Pickens calling for establishment of a wind corridor to help free up natural gas resources.

"We have not gotten to the point where we're having that discussion yet in Canada. However, I can say with a high degree of confidence that we are going to, and CanWEA has taken it upon itself to help stimulate and lead that discussion through development of the wind vision."

**Market ties**

CanWEA is hoping the vision document will help set the Canadian industry on a path of sustainable growth that continues beyond the current plans of utilities and governments to acquire new wind generation. One area of

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## Canada (cont.)

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potential expansion lies in wind energy exports to the U.S., a process that has already started, with Suez Energy's West Cape Wind Project on Prince Edward Island selling electricity and renewable energy credits into markets in the U.S. Northeast. "There is no doubt there are going to be some parts of the U.S. that are going to be challenged to meet their renewable energy targets and that may be able to be served from Canada," says Hornung. The building of transmission will be a key, but that too has already started, with plans now underway for a merchant tie line between Alberta and Montana that has already sold all of its long-term capacity rights to wind developers with projects in that U.S. state. In that case, it will be Canada receiving the wind imports.

Whatever direction the electricity and the investment flow, Hornung is confident of continued close ties between the two markets. "CanWEA has seen a significant growth in interest in the Canadian market from the U.S., not just with companies winning contracts or setting up facilities, but also in terms of who we have joining CanWEA as members and who we have participating in the trade show at our conference," he says. "American participation is growing steadily and significantly, which I think is a reflection of the size of the Canadian opportunity and the easy access American companies have to those opportunities relative to any other country in the world."

CanWEA's Annual Conference and Trade Show in Vancouver, October 19-22, will host more than 2,000 delegates and more than 200 exhibitors. For more information about CanWEA and this event, please visit www.canwea.ca .

*Drew McKibben is a writer based in Calgary, Alberta.*

### UPCOMING AWEA EVENTS

**AWEA Wind Power Finance & Investment Workshop**
October 6 – 7, 2008
New York City, NY

**AWEA Wind Power Health & Safety Seminar**
October 29-30
Denver, CO

**AWEA Wind Energy Fall Symposium 2008**
November 19 – 21, 2008
Palm Desert, CA

**AWEA Utilities and Wind Power Seminar**
November 19, 2008
Palm Desert, CA

**AWEA Wind Power Supply Chain Workshop**
December 8 – 9, 2008
Cleveland, OH

**WINDPOWER 2009 Conference & Exhibition**
May 4 – 7, 2009
Chicago, IL

For more information visit www.awea.org/events .

# Small Wind Column

## Questions Any Small Wind Turbine Manufacturer Should Be Willing and Able to Answer About Their Products

by Mick Sagrillo

With the advent of state public benefit programs funding renewable energy projects, there has been an explosion of new wind turbine manufacturers bringing an ever-expanding number of small wind turbines to the marketplace. You almost need a roster to keep score.

With so many choices out there, how do you know which turbine will be right for you? My first advice is not to base your decision the way most people decide things: promises and price. When it comes to wind technology, these invariably turn out to be poor screening tools. Such an approach is akin to shopping for a dentist based on who quotes the lowest bid: you go first!

**Equipped with questions**

So how do you compare one product to another? My suggestion is to begin by interviewing wind turbine manufacturers or their sales representatives to assure yourself that what they are offering is more than a half-baked idea. Some of the questions that I think any manufacturer or rep should answer, regardless of the turbine design or blade orientation, include the following, with comments in italics:

- How long have you or your company been in business? *Expect some exaggeration on this answer that will likely include how long the company has been* thinking *about offering a wind turbine as well as designing and testing the early prototypes.*
- How long has this turbine model been in production? That is, *not in the prototype or beta stage, but as a production model available for sale to ordinary consumers.*
- How long was the prototype tested? Who did this testing? How many beta versions were sent to the field for feedback?
- How many production models have been sold to ordinary consumers? Better yet, how many production models have been sold per year over the sales life of the turbine? *Expect numbers to increase with time.*
- How many of the turbines you sold are still running? *Don't laugh. One manufacturer continuously brags about the thousands of turbines they have sold. I own nine of them, all of which are broken and safely packed away in their boxes. So, thousands less nine for that model.*
- How frequently has this model turbine seen design change or upgrades? What are those changes or upgrades? When were the changes or upgrades incorporated? Were existing owners offered an opportunity for an upgrade with the changes? At what cost?
- If the model has never been updated, why not?
- Does the wind turbine meet the proposed American Wind Energy Association Small Wind Turbine Performance and Safety Standard? *AWEA has been working on a performance and safety standard for a number of years; with the initiative approaching completion, hopefully the standard will be adopted sometime in 2009 and used by the Small Wind Certification Council (SWCC) to certify small wind turbine equipment.* (*The SWCC is composed of a wide array of stakeholders, including industry members, installers, government officials, and public benefits program representatives.)*
- Who developed the power curve for the wind turbine (i.e., the curve on a graph indicating how large the electrical power output will be for the turbine at different wind speeds)? Has it been validated by an independent testing agency or reviewer?
- What is the annual energy output for the turbine in average wind speeds of eight to 14 miles per hour? How was this information developed? Has this ever been validated or verified by an independent testing or reviewing agency from real life installations? Or by a customer with a wind speed datalogger and kilowatt-hour meter? How and where?
- Do you offer a performance guarantee for turbine output? *While such performance guarantees are a standard with wind farm equipment, this is a relatively new concept for small wind. Don't expect an affirmative answer on this one, but*

## Small Wind Column (Cont.)

*you never know.*

- How does one shut the turbine down in the event of high winds, leaving on vacation for a week or so, or to do maintenance? Is the shut down mechanism reliable at any wind speed? Do you have guidelines for how to shut the turbine down in high winds?
- What maximum wind speed is the turbine designed for? What about the tower? Has this been certified by either an on-staff engineer or outside engineering firm?
- Has the turbine ever gone through a reliability test? By whom? What was the duration of that test? What were the results?
- What is the sound profile for the wind turbine at various wind speeds and distances from the tower? Who performed the acoustic test?
- How long is the warranty period for the turbine? What does the warranty cover? What is excluded?
- Is an extended warranty available?
- What rate of warranty work have you needed to do on this turbine? *Do not expect an answer to this question, as the response will likely be that this is proprietary information. Regardless, it is worth asking simply for the reaction you might get.*
- What problems in the field have you seen or heard of? How have you dealt with them? Have you issued any recalls or updates as a result of these problems? Who does the work to remedy the problem? Who pays for this work?

Can you recommend any installers in my area who can install this wind turbine? *Preferably there will be more than one installer who can do the work so that you have some choices. In addition, an installer who also works with other manufacturers' equipment is preferable, not because you are shopping for a different turbine, but because this gives the installer the advantage of having a well-rounded "education."*

**A reputable industry**

While such an interview is not meant as a grand inquisition, it should give you a fairly good idea about how well thought-out the manufacturer's products and wind business really are. If the bulk of the questions cannot be or are not answered, then the person being questioned has spoken volumes about his or her wind turbines and company. Only the gullible or foolish buy a product that will make them "run faster and jump higher," in spite of receiving no validation of such claims.

I have been working with small wind turbines for over 28 years, and I am still amazed at the number of "manufacturers" who will not or cannot give reasonable answers to many of the above questions. These questions are obviously biased towards the consumer but are not meant to be antagonistic towards the manufacturer or purveyor of wind equipment. We need everybody to play together to have a successful small wind industry. And to have a successful industry, we need an honest and reputable one. If some of these questions ultimately result in the demise of a half-baked product or idea, we are really all better off.

*Mick Sagrillo, Sagrillo Power & Light, is a small wind consultant and educator, and serves as the Wind Energy Specialist for Focus on Energy, Wisconsin's renewable energy program.* *Research for this article was funded in part through Wisconsin's Focus on Energy Program.*



*Editor's note: The opinions expressed in this column are the author's and may not reflect those of AWEA's staff or board.*

## Wind Energy News Recap

**U.S. Now Tops in Wind Power Production**

U.S. wind farms now generate more electricity than those in any other nation in the world and are on track to expand by over 45% this year, AWEA said in its second quarter market report. While Germany still has more generating capacity installed (about 23,000 MW), the U.S. is producing more electricity from wind because of its much stronger winds, making it the world leader in wind electricity generation. Shortly after the release of the quarterly report, total U.S. installed wind power capacity surpassed 20,000 MW. The industry installed 1,194 MW in the second quarter, down from 1,532 MW during the first. This brings the year's new capacity to 2,725 MW, more than was installed in any year except 2007.

AWEA also reports a strong increase in domestic investment in wind turbine and wind turbine component manufacturing facilities over the past year and a half. At least 42 facilities have been announced, opened, or expanded over that period of time. Those facilities are expected to create over 9,000 jobs when they are at full capacity. The report is available on the AWEA Web site at www.awea.org/publications/reports/2Q08.pdf .

**Clipper U.S.-Built Wind Turbines Headed for EDF Projects in Mexico**

Wind turbines will be built in the U.S. and shipped across the border in connection with Clipper Windpower Plc's recently signed long-term agreement with Eléctrica del Valle de Mexico, for the supply of Clipper's Liberty 2.5-MW turbines to projects in Mexico. The turbines will go to wind projects of EDF Energies Nouvelles (EDF EN), parent company of Eléctrica del Valle de Mexico. The first 27 turbines will be installed in an EDF EN project currently under development and slated for completion in the summer of 2009. Sited within the Istmo region in the state of Oaxaca, one of Mexico's windiest areas, the project will be the first in Mexico to utilize multi-megawatt wind turbines. The contract for the first 67.5 MW will supply renewable power to establishments owned by subsidiaries of Wal-Mart de Mexico, S.A.B. de C.V., beginning in 2009. The wind turbines will be built at Clipper's 330,000 square-foot manufacturing facility in Cedar Rapids, Iowa. EDF EN is the parent company of U.S. developer enXco.

**Two More for Colorado: Vestas to Establish Nacelle, Blade Plants**

Vestas announced more plans to further expand its American manufacturing presence, stating it will establish new blade and nacelle assembly factories in Brighton, Colo., with both to be producing units in 2010. The nacelle factory will be Vestas's first in the U.S. (located at the top of the tower, the nacelle is the turbine's housing that contains vital components such as the gearbox, generator and transformer). The new blade plant will supplement the existing blade facility in Windsor, Colo. Once fully operational in the first half of 2010, the blade factory will bring 650 new jobs to Brighton. The nacelle factory, which is expected to reach full capacity in mid-2010, will create an additional 700 jobs.

**AEP, Duke Transmission JV in Indiana Would Link 3,000 MW of Wind**

Duke Energy and American Electric Power (AEP) formed a 50-50 wholly-owned joint venture to build and operate 240 miles of extra-high-voltage, 765-kV Indiana transmission lines and related facilities that would connect more than 3,000 MW of wind energy planned for the region. The project, called Pioneer Transmission, LLC, would link Duke Energy's Greentown Station (near Kokomo, Ind.) with AEP's Rockport Station (east of Evansville, Ind.). As is often the case with new transmission that benefits wind, the project will also strengthen the overall system, improving reliability and efficiency of both the Midwest Independent System Operator (MISO) and PJM Interconnection, LLC, the region's two transmission operators. High-voltage lines are viewed as both a key to smart wind power development as well as modernizing the nation's fragmented and outdated transmission grid, which is generally considered inefficient by today's standards. The in-service date for the project will be determined by the MISO and PJM planning processes, with the earliest possible completion in the 2014 or 2015 timeframe. An extensive public outreach effort will be conducted in 2009 and 2010 before the final path for the transmission line is selected, the companies said.

**Wisconsin Governor's Task Force Calls for Aggressive Renewables Standards, Other Reforms**

A final report issued by Wisconsin Governor Jim Doyle's (D) task force on global warming recommends that the state institute a more ambitious renewable electricity standard (RES), reform the wind farm siting process, address transmis-

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## Wind Energy News Recap (cont.)

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sion issues to foster wind power growth, and take various other measures. The report recommends that Wisconsin's RES, which currently calls for 10% of electricity to come from renewables by 2015, require the state to achieve that target two years earlier. Longer-term benchmarks include 20% renewables by 2020 and 25% by 2025. Of the renewable resources used to meet those targets, at least 6% by 2020 and 10% by 2025 would have to be Wisconsin-based. To enable electric providers to meet a more aggressive RES, the revised RES would streamline the regulatory approval and siting process, encourage proposals that encompass multiple projects, provide additional resources for the WPSC to process applications, encourage larger electric providers to partner on projects with smaller electric providers, and remove existing siting and equipment transportation barriers. The task force also calls for the state to initiate a study group to evaluate changes to the statewide and regional electric transmission system that would facilitate increased electric generation by clean energy sources.

**KCP&L Calls on Wind to Mitigate Risk Associated with Carbon Regulation, Natural Gas Prices**
Citing uncertainties looming over the energy industry, Kansas City Power & Light (KCP&L) stated in its integrated resource plan that it wants to add 400 MW of wind power capacity during a four-year period even though it does not expect to need new capacity. The two primary uncertainties cited in the plan, which was filed with the Missouri Public Service Commission, are potential restrictions on greenhouse gas emissions and the price and availability of natural gas. KCP&L noted that such uncertainties could "have the potential to force retirement of a portion of existing generation as well as drive development and implementation of new generating technologies, new environmental controls, and new end-use efficiency technologies."

Under the plan, the utility would add 400 MW of wind between 2012 and 2015.
According to the document, "KCP&L's preferred plan includes resources to mitigate [carbon dioxide] risks . . . ." The integrated resource plan also calls for demand-side management and energy efficiency programs.

**Thanks to Wind Developers, Wyoming-Colorado Intertie 70% Subscribed**
Wind developers led the way in securing capacity on the Wyoming-Colorado Intertie (WCI) Project in an open-season auction that sponsors deemed a success, saying the project will continue to move forward. The open season for capacity on the transmission line, which will connect the Front Range of Colorado with the wind-rich high plains of eastern Wyoming, resulted in 585 MW of capacity purchase commitments. Those commitments came from GreenHunter Wind Company, LLC, and Duke Energy Ohio, Inc., two wind developers with wind farms under development near Chugwater, Wyo. Project sponsors had offered up to 850 MW of transmission capacity in a public auction.

The significance of a major transmission line being supported exclusively by wind thus far was immediately noted by members of the wind energy industry. "The successful open-season auction by the Wyoming-Colorado Intertie Project is significant proof of wind power's growing status as a mainstream source of electricity in the western United States," AWEA Policy Director Rob Gramlich said in a statement. "With wind developers subscribing for nearly 70% of the transmission offered, this announcement is proof that transmission can be financed based largely on wind. This effort to proactively plan transmission to access low-cost wind resources with federal and state government cooperation is a model for other areas." Project sponsors said they are optimistic that the remaining 265 MW of capacity will be sold. Following completion of siting, permitting, and construction, the line is expected to begin operation by mid-2013.

## Project Recap

**Ridgeline Energy Gets Approval for 450-MW Idaho Wind Farm**
Ridgeline Energy received county approval for its proposed 450-MW wind farm in Bingham County, Idaho. The special-use permit, approved by the Bingham County Planning and Zoning Commission, gives Ridgeline the OK to move forward with the Goshen South wind farm and deploy the facility's 150 turbines on leased land in the county. The wind farm will use only about 200 of the 20,212 acres in the project area, thereby helping to preserve existing uses of the land. The project will rely primarily on improving existing public and farm roads to meet the wind farm's needs for road access.

**Invenergy, L.A. Utility Enter 15-Year Wind Power Purchase Agreement**
The Los Angeles Department of Water and Power (LADWP) board of commissioners approved a 15-year power purchase agreement with Invenergy, LLC, for 72 MW of wind power coming from Invenergy's Willow Creek project in Oregon. The wind farm, which is currently being constructed in Gilliam and Morrow counties, Ore., has an expected completion date of Dec. 31. Under the agreement, LADWP will receive approximately 200,000 MWh of renewable energy per year from the facility. The project's power will be received at Bonneville Power Authority's (BPA) Boardman/Alkali Line and then transmitted to Sylmar in northern Los Angeles through the Pacific DC Intertie, which is jointly owned by LADWP and BPA.

The agreement provides enough clean, renewable energy for approximately 54,000 Los Angeles households each year, according to LADWP, and will bring the city another step closer to achieving its goal of 20% renewable power by 2010 and 35% by 2020. The 15-year agreement with Invenergy subsidiary Willow Creek Energy, LLC, will represent 0.8% of the renewable electricity standard goals established by Mayor Antonio Villaraigosa and the LADWP board of commissioners. Renewable energy currently accounts for about 8% of LADWP's power mix.

**In First-Time Wind Purchase, Northern Indiana Public Service Buys from Iberdrola**
Northern Indiana Public Service Co. (NIPSCO) will be adding 100 MW of wind power to its generating capacity under power purchase agreements with two Iberdrola subsidiaries, marking the utility's first wind purchase. An agreement for 50.4 MW with Buffalo Ridge I, LLC, provides wind power generated in Brookings County, S.D. for 15 years, while an agreement with Barton Windpower, LLC, for another 50 MW will supply NIPSCO with wind power from facilities in Worth County, Iowa, over a 20-year term. Purchases of wind energy are expected to commence in the first quarter of 2009. Barton Windpower also recently entered an agreement with Wisconsin Public Power, Inc., to supply 30 MW of capacity from its Barton I project in Worth County (see story below).

**Wisconsin Public Power Buys 30 MW of Wind from Iberdrola Project in Iowa**
Wisconsin Public Power, Inc., (WPPI) executed a power purchase agreement with an Iberdrola Renewables affiliate for the purchase of 30 MW of wind energy from the Barton I project in Worth County, Iowa. The Barton I project is currently under construction and is expected to enter commercial operation in December. Under the proposed power purchase agreement, which WPPI signed with Iberdrola affiliate Barton Windpower, LLC, WPPI anticipates acquiring approximately 100,650 MWh annually. The facility will include 40 turbines with a total capacity of 80 MW.

**Four turbines added at Puget Sound Energy project**
Puget Sound Energy (PSE) added four new wind turbines to its Hopkins Ridge Wind Facility, bringing the total number of turbines at the Columbia County, Wash., wind farm to 87. Hopkins Ridge began operation in November 2005 with 150 MW of capacity. With the four new 1.8-MW turbines fully operational as of August 6, total capacity at the facility rises to 157 MW. Overall, Hopkins Ridge has generated more than 1 million MWh in less than three years of commercial operation. The facility employs five full-time PSE staff, with additional personnel from vendors and suppliers also regularly on site. Along with creating jobs in the community, Hopkins Ridge has expanded the local tax base, paying more than $1.7 million in total local and county taxes since entering operation. Production royalties to

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## Project Recap

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landowners with wind turbines located on their property have also benefitted the area's economy.

**Acciona Milestone: Developer-Turbine Maker's U.S. Wind Farm Goes Online**
Acciona Energy's 180-MW Tatanka Wind Farm in the Dakotas went online July 25, the company announced. The facility is located in Dickey and McIntosh counties, N.D., and McPherson County, S.D. Powering the facility are Acciona's 1.5-MW turbines, the first to be deployed in the U.S. for the turbine manufacturer-developer. The project is also the company's first U.S. wind farm that it developed and now owns and operates. Construction of the $381 million project, the largest in the Dakotas, began in April 2007. Financing was secured through equity partnerships with GE Energy Financial Services and Wachovia Investment Holdings, LLC. The transaction is GEFS's first wind equity investment in the Dakotas. The Tatanka Wind Farm is composed of 120 wind turbines, 59 in South Dakota and 61 in North Dakota. The electricity generated at the plant is sold into the Midwest Independent System Operator system.

**AEP's Appalachian Power, Invenergy Enter 20-Year Wind PPA**
With its parent company continuing to push toward its 1,000-MW wind goal, AEP subsidiary Appalachian Power Co. signed a long-term power purchase agreement for electricity coming from the first phase of Invenergy Wind, LLC's Beech Ridge Energy facility currently under development in Greenbrier County, W.Va. Through the 20-year agreement, Appalachian Power will purchase all of the output, expected to be between 100 MW and 147 MW, from the first phase of the planned 186-MW project. The wind farm is scheduled to be online by March 31, 2010. The new agreement is part of AEP's voluntary plans, announced in 2007, to add 1,000 MW of new wind energy by 2011 as a component of the company's comprehensive strategy to address its greenhouse gas emissions.

"The agreement with Beech Ridge Energy brings our long-term renewable-energy purchase commitments up to 422 MW in the year since we established our 1,000-MW goal," Morris said. "We have additional requests for proposals out for up to 600 MW of renewable energy, so we are well on the way to meeting that goal."

**Otter Tail Power Buys 49.5-MW Portion of Luverne Wind Facility in North Dakota**
Utility Otter Tail Power entered into an agreement with locally owned developer M-Power, LLC, to purchase a 49.5-MW portion of the Luverne Wind Farm under development in east central North Dakota. M-Power is currently requesting site and transmission route approval from the North Dakota Public Service Commission for the full 157.5-MW project.

**Just Weeks After Oregon Project's Approval, SCE Buys Up All 909 MW**
Southern California Edison (SCE) signed a 20-year contract with Caithness Energy affiliate DCE for up to 909 MW of wind power from the Caithness Shepherd's Flat wind farm to be located in Gilliam and Morrow counties, Ore. The contract signing comes three weeks after the Oregon Energy Facility Siting Council (EFSC) granted final approval for the 909-MW wind farm. While several large-scale projects are under development, the Caithness project would be the U.S.'s largest if completed first. The largest operating facility currently is FPL Energy's 735-MW Horse Hollow project in Texas. The Shepherd's Flat wind farm involves the installation of 303 wind turbines between 2011 and 2012. Shepherd's Flat is expected to generate 2 billion kWh per year of renewable energy, which is more than one-tenth of SCE's overall renewable portfolio, SCE said.

**PG&E, Iberdrola Subsidiary Enter Contract for Oregon Wind Energy**
Pacific Gas and Electric Co. (PG&E) announced August 21 it has entered into a long-term agreement with an Iberdrola Renewables subsidiary to purchase 90 MW of renewable wind energy from the Klondike wind facility in Sherman County, Ore. Deliveries under the agreement, which PG&E entered into with Klondike Wind Power III, LLC, are ex-

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## Project Recap

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pected to begin in December. The project will generate approximately 260 million kWh of renewable energy annually, the equivalent to the amount of energy needed to serve approximately 38,000 residential homes on an annual basis, according to PG&E. This is the second major wind project that PG&E has signed in 2008, bringing the utility's total amount of renewable wind energy under contract or delivered to more than 1,250 MW.

**Siemens to Supply 44 2.3-MW Wind Turbines to Competitive Power Ventures**
Siemens entered a contract to supply 44 of its 2.3-MW wind turbines for Competitve Power Ventures' (CPV's) 101-MW Keenan wind farm in Woodward County, Okla. The contract consists of delivery, installation, and commissioning of the turbines. The wind farm is scheduled to be in commercial operation in 2009. Including this latest contract, Siemens has received six U.S. wind turbine orders totaling more than 1,500 MW this fiscal year.

**Horizon Wind Energy Contracts Oregon Wind Farm Power to Snohomish PUD**
Horizon Wind Energy, LLC, announced August 28 it has entered into a long-term power purchase agreement with Snohomish County (Wash.) Public Utility District (PUD) to provide the utility with wind energy from the Wheat Field Wind Farm in Gilliam County, Ore. Located near the city of Arlington, Ore., on approximately 8,300 acres of cultivated wheat fields that overlook the banks of the Columbia River Gorge, the 96.6-MW wind facility will deliver enough clean electricity to power approximately 29,000 average Washington homes, according to developer-owner-operator Horizon, a subsidiary of EDP Renovaveis. The PPA comprises all of the power coming from the project, which features 46 Suzlon S88 2.1-MW turbines.

The project, which Horizon said offers significant economic benefits to the local community including property tax revenues, is currently under construction and is expected to start producing power for Snohomish customers next spring.

Subscription rate for the *Windletter*: complimentary to AWEA advocate and business members or $65 per year. To join AWEA, go to www.AWEA.org/members . Send address changes to membership@AWEA.org .

The Windletter is published monthly, 12 times per year.

## News from AWEA

### WINDPOWER 2009 EXHIBIT SALES NOW OPEN AND ABSTRACT SUBMISSION DUE DATE APPROACHING

WINDPOWER 2009 Conference and Exhibition, taking place May 4th - 7th, 2009, at McCormick Place Convention Center in Chicago, Illinois, is the largest annual wind conference and exhibition in the world featuring over 13,000 attendees and over 776 exhibitors.

With leading companies from all facets of the wind energy industry exhibiting, WINDPOWER 2009 is ***THE*** place to launch a new product or service, reinforce your existing brand name in the industry, network with leading industry decision makers, and generate numerous high quality sales leads. Exhibitor reservations are currently being accepted – book now to ensure a prime location!

AWEA is now also accepting abstracts for the WINDPOWER 2009. Don't forget to draft your abstract now and submit it to us by Wednesday, October 1, 2008 so it can be considered by the WINDPOWER 2009 Program Committee. Click here to make your online submission.

For updated WINDPOWER 2009 information, go to www.windpowerexpo.org. For information on exhibiting contact us at exhibition@awea.org or (202) 383-2502.

### AWEA WIND POWER FINANCE & INVESTMENT WORKSHOP OCTOBER 6 - 7, NEW YORK CITY, NY

As an industry professional, it is important for you to have the investment and financial information needed to take full advantage of the growing wind energy market. Recognized as the premier financing workshop in the industry, the American Wind Energy Association (AWEA) Wind Power Finance & Investment Workshop, will address the wind industry's ever-changing economic blueprint, and new financial and strategic opportunities.

Join over 300 leading project developers, lenders, investors and financial innovators for a workshop designed to benefit both industry veterans and newcomers alike. This is an event you cannot afford to miss at a critical point in the growth of the wind industry and this volatile time in our market's history.

Act quickly and reserve your spot today!.

To register for the workshop, get hotel reservation information, and detailed program and speaker updates visit: http://www.awea.org/events/finance08/ . For additional questions, please email conference@awea.org or call (202) 383-2512.

*(Continued on page 12)*

## News from AWEA (cont.)

*(Continued from page 11)*

**AWEA WIND POWER HEALTH & SAFETY WORKSHOP**
**OCTOBER 29 - 30, DENVER, CO**
**Register by October 7 to save!**

Help ensure a safe working environment for all who visit or work at a wind project . This workshop will focus on safety issues that are most pertinent to the wind industry and provide innovative and effective strategies to ensure worker safety. Additionally, the program aims to help foster continued communication aimed at providing a safe work environment given the unique combination of new equipment, power generation and elevated working conditions.

To register for the workshop, get hotel reservation information, and detailed program and speaker updates visit: http://www.awea.org/events/safety08/.

**AWEA WIND ENERGY FALL SYMPOSIUM**
**NOVEMBER 19 – 21, PALM DESERT, CA**
**Register by October 8 to save!**

Join over 600 wind energy professionals *Accelerating Wind Industry Growth Towards 20%* at this must-attend event for the most current information in wind and quality networking opportunities. The AWEA Wind Energy Fall Symposium provides the perfect opportunity to speak one-on-one with your prospective customers, current clients, and industry colleagues in a casual resort setting conducive for business.

The symposium's unique educational and training program includes two pre-conference seminars on Wednesday, November 19 – Fundamentals of Wind Energy, offering a comprehensive tutorial on the fundamentals of utility-scale wind energy for those new to the industry, and Utilities and Wind Power, focusing on critical issues facing electric utilities as they integrate more wind power into their systems.

For more program information and to register online, visit http://www.awea.org/events/symposium08/.

# New Business Members

## Corporate 2

**MAKE Consulting**
117 N. Jefferson Street
Suite 400
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Contact: Morten Keller
mbk@make-consulting.com
www.make-consulting.com

## Corporate 1

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|---|---|---|
| **Akin Gump Strauss Hauer & Feld LLP**<br>1333 New Hampshire Ave., NW<br>Washington, DC 20036<br>Cntct: Gregory S. Grigorian<br>ggrigorian@akingump.com<br>www.akingump.com | **COT-PURITECH**<br>3713 Progress Street<br>Canton, OH 44705<br>Contact: Traci McConnell<br>tmcconnell@cot-puritech.com<br>www.cot-puritech.com | **Faith Technologies Inc.**<br>11086 Strangline Road<br>Lenexa, KS 66215<br>Contact: Jim Berard<br>jim.berard@faith-technologies.com<br>www.faith-technologies.com |
| **Harness Nature**<br>14403 Dellwood Drive<br>Urbandale, IA 50323<br>Contact: Steve Bartels<br>Steve@harnessnature.com<br>www.harnessnature.com | **J.H. Findorff & Son Inc.**<br>300 S. Bedford Street<br>Madison, WI 53703<br>Contact: Tom Sweeney<br>tsweeney@findorff.com<br>www.findorff.com | **JT Energy Development, LLC**<br>203 E. Main Street, Suite 206<br>Riverton, WY 82501<br>Contact: Jean Judson<br>jjudson@jtenergy.com<br>www.jtenergy.com |
| **Kenny Construction Company**<br>2215 Sanders Road<br>Northbrook, IL 60062<br>Contact: John E. Kenny, III<br>jkenny3@kennyconstruction.com<br>www.kennyconstruction.com | **Northwind Solutions**<br>1001 Burns Street East<br>Unit 2<br>Whitby, ON L1N 6A6<br>CANADA<br>Contact: Greg Duke<br>gduke@northwindsolutions.com<br>www.northwindsolutions.com | **Sage Oil Vac, Inc.**<br>PO Box 51680<br>Amarillo, TX 79159<br>Contact: Kim Sage<br>kimbosage@sageoilvac.com<br>www.sageoilvac.com |
| **Windterra System Inc.**<br>1000 8th Avenue, SW<br>Suite 550<br>Calgary, AB T2P 3M7<br>CANADA<br>Contact: Scott Wagner<br>scottw@windterra.com<br>www.windterra.com | | |

## Associate

| | | |
|---|---|---|
| **3U Technologies, LLC**<br>11681 Leonidas Horton Road<br>Conroe, TX 77304<br>Contact: Dr. Donald Welch<br>dwelch@3utechnologies.com<br>www.3utech.com | **Alpine Ocean Seismic Survey, Inc.**<br>70 Oak Street<br>Norwood, NJ 07648<br>Contact: Robert Mecarini<br>rob@alpineocean.com<br>www.alpineocean.com | **American Railcar Industries**<br>100 Clark Street<br>Saint Charles, MO 63301<br>Contact: James Doty<br>jdoty@americanrailcar.com<br>www.americanrailcar.com |
| **Bartlett Bearing Co., Inc.**<br>10901 Decatur Road<br>Philadelphia, PA 19154<br>Contact: Victor McDevitt<br>vic@bartlettbearing.com<br>www.bartlettbearing.com | **Continental Wind Power, Inc.**<br>402 E. Gutierrez Street<br>Suite 170<br>Santa Barbara, CA 93101<br>Contact: Jim Winsayer<br>jimwinsayer@continentalwindpower.com<br>www.continentalwindpower.com | **EnergyCo LLC**<br>225 E. John Carpenter<br>Suite 1500<br>Irving, TX 75062<br>Contact: Concho Minick<br>concho.minick@energycollc.com<br>www.energycollc.com |
| **Farnsworth Group Inc.**<br>200 W. College Avenue<br>Suite 301<br>Normal, IL 61761<br>Contact: Aaron Quick<br>aquick@f-w.com<br>www.f-w.com | **GERES Research Inc.**<br>1064B Helman Drive, Suite 2545<br>Gardnerville, NV 89410<br>Contact: Mieger William<br>wm@geres.us<br>www.geres.us | **GIMSA Structural Manufacturing, S.A. De C.V.**<br>Presidente Carranza 150-G<br>25680 FRONTERA Coahuila MEXICO<br>Contact: Juan Emanual Garcia<br>jgarcia@gstm.com.mx<br>www.gstm.com.mx |
| **Northeast Wind Power**<br>PO Box 289<br>Washington Depot, CT 06794<br>Contact: Wilfred Santos<br>newindpower@yahoo.com | **PCL Construction Inc.**<br>1711 W. Greetree Drive<br>Suite 201<br>Tempe, AZ 85284<br>Contact: Michael McKinney<br>mamckinney@pcl.com<br>www.pcl.com | **Precision Filtration Products**<br>PO Box 218<br>Pennsburg, PA 18073<br>Contact: Paul Unger<br>paul@precisionfiltration.com<br>www.precisionfiltration.com |
| **Sko-Die, Inc.**<br>8050 Austin Avenue<br>Morton Grove, IL 60053<br>Contact: John Roberts<br>john.roberts@skodie.com<br>www.skodie.com | **Stork Materials Technology**<br>662 Cromwell Avenue<br>Saint Paul, MN 55114<br>Contact: Ari McKee-Sexton<br>ari.mckee@stork.com<br>www.storksmt.com | **WennSoft**<br>5355 S. Moorland Road<br>New Berlin, WI 53151<br>Contact: Nancy Pozgay<br>npozgay@wennsoft.com<br>www.wennsoft.com |

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**American Wind Energy Association**

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**The AMERICAN WIND ENERGY ASSOCIATION is the national association of companies and individuals dedicated to advancing the use of clean, renewable wind energy.**

**Our mission is to promote wind power growth through communication, education, and advocacy.**