

Posted on Mon, Nov. 30, 2009

## First steps to renewable energy can be tough, but stylish

By STEVE EVERLY  
The Kansas City Star

Looking like paddle wheels from an old-time riverboat and sitting atop an 83-foot steel pole, the aluminum contraption hovering near Interstate 435 and Roe Avenue in Overland Park could be modern sculpture.

That's what Chuck Seel, a spokesman for Iowa's state utilities board, first thought it was when he drove by recently. But he eventually realized it was a wind turbine, unlike any he had seen before. In fact, its manufacturer says it's the first of its kind to be installed in North America.

"Seel said. "I was driving by and wondered, 'What the (heck) is that?'"

The turbine is owned by the A.L. Huber company, known as a builder of churches, office buildings and retail centers. The company also is no stranger to art, having installed such Christo projects as Wrapped Walk Ways back in the 1970s in Loose Park in Kansas City.

Its newfangled wind turbine is part of the company's foray into renewable energy. Huber also plans to install solar panels to help power the company's headquarters and is completing an energy center to show anyone interested how it all works. A Web site also will be available to provide such information as how much renewable energy is being provided by the company's wind turbine and solar cells.



Shane Keyser  
Seungbae Lee (left), CEO of AeroNet, talked over preparations to install the AES Windjet 5 turbine outside A.L. Huber headquarters in Overland Park recently.

"Renewable energy is certainly entering the radar screen," said August L. Huber III, the third generation of the family that has overseen the company.

The country's drive toward green energy will be powered by many large-scale projects, such as the dozens of whirling turbines bunched on wind farms in western Kansas.

But smaller solar and wind energy installations serving individual businesses or even homes are expected to play a part as well.

Huber and other companies know there are challenges to overcome. Especially in this economy, it can be tough to sell business owners on the relatively high initial costs of renewable power. Set against the relatively cheap coal-fired electricity in the Midwest, some renewables can take more than 20 years to pay off in lower fuel costs, although some tax incentives are whittling that number down.

On another front, the Builders' Association in Kansas City, which serves commercial builders, is seeing more interest in constructing new buildings with more energy efficiency features. Don Greenwell, the group's executive director, said builders and labor groups are doing more training and have applied for grants for more education about meeting the criteria for LEED certification, the popular rating system for green buildings.

Another effort that has attracted scores of businesses is the Greater Kansas City Chamber of Commerce's Climate Protection Partnership. So far, 171 businesses have signed on, pledging to reduce their carbon footprints. But in part because of the recession, most of them are making lower-cost moves, such as reducing travel and installing more efficient light bulbs.



The unusual wind turbine outside A.L. Huber's headquarters building in Overland Park is the first of its kind in North America, its builder says.

"More of the low-hanging fruit," said Jamie Green, the chamber's director of government relations.

Wind and solar equipment potentially costing tens of thousands of dollars isn't that kind of fruit. But the cost of such equipment is expected to decline, while those cheap electricity prices could be heading up, especially if a carbon tax that would push up the cost of coal is instituted.

Greenwell of the builders' group thinks the renewable industry is on the verge — perhaps within five years — of sharply lower costs for wind turbines and solar panels. And that will spur more interest in businesses following Huber's lead in owning their own clean-generating equipment.

"It's more than just a fad," he said.

The Huber company, more than a century old, is spending more than \$250,000 on its renewable project. Some of that is going for upgrades to the exterior of its headquarters, including sunscreens, and work on the energy center to help educate the public. The wind turbine and associated costs account for about a third of that budget, and Huber expects it to take more than 20 years to recover those expenses. The headquarters also will have a recharging station for electric cars.

Before its move into renewable energy, Huber was known for its involvement in such building projects as

the transformation of the Longview Farm show horse arena into an elementary school, the Church of the Nativity in Leawood and the SmokeHouse BBQ restaurant in the Zona Rosa shopping center in Kansas City. It also built a 70,000-square-foot expansion for Phelps Technologies, a maker of computer parts.

Like many longtime builders, executives at Huber can remember decades ago when some clients would balk at even installing insulation in their building — such was the interest in reducing the "first costs" of construction. That changed with rising energy prices, and improvements and

efficiencies became common, such as innovations in how warm and cool air are moved through buildings.

So why did the construction company decide to push beyond standard efficiency efforts and move into renewable energy at its own headquarters? In part because as it encouraged customers to make energy-conscious steps, the company figured it was time to put up or shut up.

“I think it’s important to walk the walk and live in a sustainable way,” said Phil Thomas, president of A.L. Huber.

Enter the Kansas City engineering firm Burns & McDonnell, which had worked with Huber on other projects. David Langford, an associate vice president of the firm, said they work with a lot of clients interested in sustainability projects.

One part of the process was connecting the Huber company with AeroNet, a South Korean company that has a partnership with AES Wind in San Francisco. One of its offerings is the new design for wind turbines now found at Huber’s headquarters.

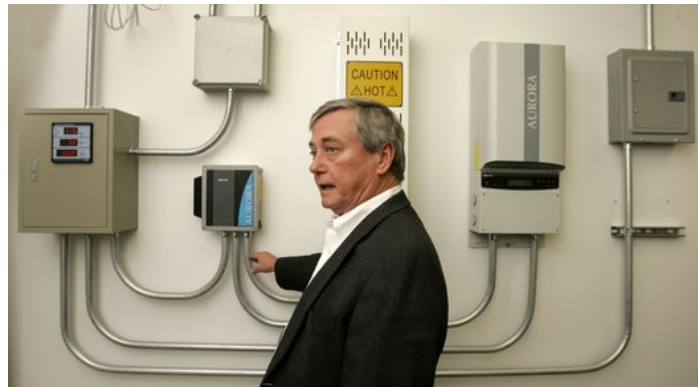
Traditional propeller-style turbines work well in areas such as southwest Kansas that have strong winds. But wind is typically fickle in urban areas, and Kansas City is no exception.

The AES Windjet 5 turbine, with rotors that look like paddle wheels, is designed to produce power at slower wind speeds — starting at 6 miles per hour. That also makes it quieter and less likely to kill birds or throw off ice that forms in the winter.

Such features helped make it easier to get it approved by Overland Park officials, although they did frown on the original plan to paint the pole orange. The color was dropped, and the pole is plain metal.

In the next few months, Huber also will install 24 electricity-generating solar panels on the south side of its offices. The project includes equipment to convert the renewable power into current that will meet two-thirds of the 14,000-square-foot space’s electricity needs.

That means Kansas City Power & Light will need to provide the other third. There was a time when that would have been a problem, because utilities were reluctant to get involved in such shared-power situations.



A.L. Huber CEO August Huber III recently showed how the company’s new wind turbine supplies power to its headquarters building.

But new state laws have helped make such partnerships easier. In Missouri, customers who at times generate more renewable power than they need can sell it to KCP&L, and that will be possible in Kansas next year.

Huber officials said KCP&L was very helpful in getting the renewable project set up.

Katie McDonald, a KCP&L spokeswoman, said, “We feel we’re partners with our customers.”

But the question remains: When will it make economic sense for others to generate their own power?

Hans Nettelblad is an associate principal at BNIM, a Kansas city firm that’s a leader in sustainable designs. He said using solar equipment to heat water, rather than generate electricity, currently has the best paybacks.

But solar panels that generate electricity have dropped sharply in price in the past year, reducing the time it takes to recover an investment in them.

There are businesses and organizations installing electricity-generating solar panels like the ones Huber will have. And others are putting in the wiring and other infrastructure that solar electricity needs, so that solar panels could easily be added in a few years.

Nettelblad said the Huber project, by resolving any problems in getting smaller-scale wind and solar installations up and running, would help smooth the way for others.

As for education, the Huber turbine has been up and running for a few weeks and is already creating some buzz. Bill Ashley, chief executive officer of Allied National, a third-party insurance provider, gets frequent questions about it. A neighbor of Huber's, he's in the former Applebee's headquarters, and practically everyone who knows he works there has called to ask about the wind turbine.

The turbine has spurred his interest about someday having one to help power his office building. He's planning to follow how Huber's turbine fares.

"Corporate citizens need to be willing to spend to have an effect," he said.

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#### **The A.L. Huber turbine**

- It's aluminum and weighs 6 1/2 tons. Its 83-foot-tall support pole is steel.
- It can generate electricity with winds of just 6 mph. Average wind speeds at its site are 10 mph daytime and 5.25 mph at night.
- Its 16-square-foot base is concrete, 42 inches deep.
- Its 5-kilowatt capacity is enough to power 80 60-watt lightbulbs.

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#### **Small wind turbines**

- The U.S. market for small wind turbines — those with capacities of 100 kilowatts or less — grew 78 percent in 2008.
- That growth amounted to an additional 17.3 megawatts of electric generating capacity.
- The industry projects that the country's 80 megawatts of small-wind-turbine generating capacity could grow to 1,700 megawatts by the end of 2013.
- Much of this growth could be spurred by an eight-year, 30 percent federal investment tax credit enacted in 2008 and augmented in February 2009.

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#### **Renewable resources**

Accompanying this story at [KansasCity.com/Business](http://KansasCity.com/Business) are links to:

- More information on the A.L. Huber project and video of its wind-turbine raising.
- How to join the Chamber of Commerce of Greater Kansas City's Climate Protection Partnership, and a carbon footprint calculator for your business.
- Information on federal and state tax credits and incentives for conservation and renewable energy generation.
- Popular Mechanics' "10 Most Brilliant Products of 2009," which included a small wind generator and easier-to-install solar panels that include much of the wiring and electricity conversion technology needed for home use.

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**Source: American Wind Energy Association**

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