

Renewable energy: profits in the wind

With the prices of traditional energy sources skyrocketing, renewable energy has become a hot topic. But what's really going on beyond the media hype? And, more importantly, what opportunities exist for electrical distributors?

The electrical manufacturers we spoke with agree on one thing: the most lucrative renewable energy opportunities for electrical distributors are in wind power.

"Wind power is a fast-growing market, especially in the western U.S.," said Madhav Apte, Panduit's global industry solutions energy manager. "The installed capacity of wind-generated power has doubled in the past two years. Going forward, the industry is forecasted to have double-digit growth not only in the U.S., but across the world."

"We are just starting to see the tip of the iceberg with renewable

Government and state support is further propelling the wind energy market, which is estimated to grow between 10 and 20 percent for the next several years. Currently, electricity generated from wind is estimated at 48 billion kWh, just over one percent of the U.S. electricity supply. Lawson points out that the Department of Energy has set a goal for wind power to provide up to 20 percent of the nation's total electricity needs by 2030. Plus, approximately two-thirds of U.S. states have passed energy laws where a percentage must come from renewable energy sources in the future, said Paul Brandt, director of channel marketing for ILSCO.

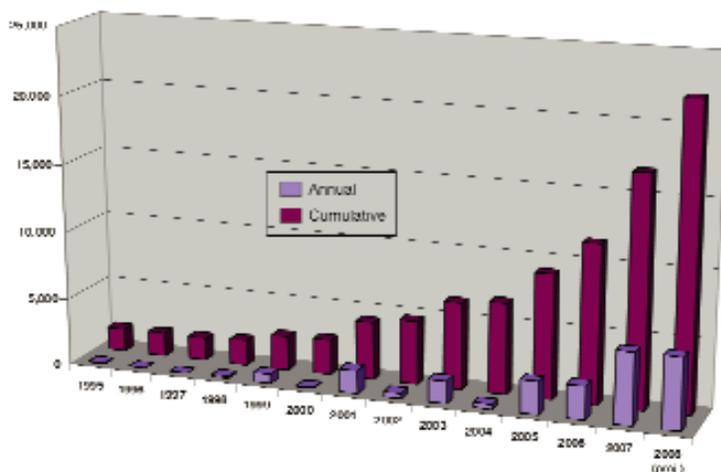
What about solar?

Although solar power still holds promise, the industry is growing much more slowly than wind power.

"Solar is not as rich as wind," said Brandt. "The PV process is more expensive than wind, and it takes a lot of cells to generate much energy. Plus, solar panels generate DC so they must be converted to AC, which also creates efficiency issues."

The biggest component is the photovoltaic (PV) cell, and most of them are shipped complete from Europe, Brandt said. Therefore, solar farms require fewer electrical products during installation, although some opportunity exists for cable, control panels, connectors, and grounding products.

U.S. Wind Power Capacity, Annual and Cumulative (MW)



In fact, the U.S. wind power industry shattered records in 2007 with 45 percent growth and more than 5,200 megawatts installed, according to the American Wind Energy Association. That new capacity will generate 16 billion kilowatt-hours (kWh) of electricity in 2008—equivalent to powering more than 1.5 million homes.

energy," said Craig Lawson, renewable energy business development manager for FCI Products. "As it continues to ramp up, wind will be the focus. Wind is environmentally friendly, and as an energy source, it uses infinite resources instead of finite resources like oil and coal."



In addition to expense, solar is more limited geographically than wind.

“Solar power is more regional; it’s more effective in sunny states like California or Arizona,” said Tim Collins, director of national specifications at Thomas & Betts.

As a result, electrical manufacturers envision less opportunity in the solar market and suggest that electrical distributors focus on wind power.

Market landscape

“One of the beauties of wind power is that it presents a multitude of opportunities for core electrical products, including connectors, transformers, and grounding components,” said Lawson.

“The construction of a wind farm requires the same types of electrical products as any commercial or industrial construction site,” said Paul Kim, marketing director for 3M’s electrical division. “It requires cables, transformers, switchgear, accessories, tape, connectors, and zip ties. Basically, all the core products that a typical electrical distributor carries can be sold into the wind farm market.”

Likewise, electrical contractors are engaged in all aspects of wind farm construction.

“The ramp-up of this industry has allowed electrical contractors to expand their horizons,” said Lawson. “Some contractors focus on turbine installations, while others focus on the substation, collection system, or

even the entire project. It depends on the scope of the project. Some wind farm projects have more than one electrical contractor doing the work.”

As a result, electrical contractors are actively pursuing the wind energy market.

“When we were at the Wind Show, several electrical contractors had booths to solicit business,” said Andy Zwit, market development manager for ILSCO. “Some firms are specializing in the market, but there’s so much work in renewable energy projects that other contractors are getting involved. This is such a high-profile growth industry right now that if distributors don’t have customers in it now, they soon will.”

From the manufacturing side, six companies dominate the wind turbine market with 80 percent market share, said Apte. GE is the leader in the U.S. market; other power players include Vestas, Suzlon, Siemens, Gamesa, and Enercon. The growth of the wind market has led to several new factories being built in the United States to manufacture blades and turbines. In 2007, six new plants opened and eight more were announced.

However, many traditional electrical products are also used in wind farm construction, presenting growth opportunities for many electrical manufacturers.

Opportunities for distributors

Two opportunities exist for distributors, said Collins: selling to electrical contractors involved in the installation of wind farms and selling to OEM companies building wind turbine components.

Although selling to electrical contractors and OEMs is familiar territory for electrical distributors, manufacturers advise that this market take a different approach.

“IMARK members will need to do more than just work with their regular electrical contractor cohorts, because not every contractor will have a forte in this area,” said Bob Calhoun, vice president distributor marketing for Thomas & Betts. “The wind power market involves the whole supply chain; it’s broader than the relationship with the contractor.”

“It will take a concerted effort,” said Brandt. “Distributors are probably going to need to hire a specialist to go out, look at the market, and find out exactly where the wind farms are going to be installed. Plus, distributors will need to get involved with government groups so they will be able to call on all the right people.”

Education is another important component to success.

“You have to do your homework on the wind-specific segment and learn about the companies within your area that are doing the work,” said Lawson. “Do the background

analysis and know the requirements of these companies, because they have different needs than, for example, contractors that are doing commercial building projects.”

Apte agrees. “Understand what is happening in this market. Understand the supply chain pressures, and provide solutions and ways to add value to the customer. Since the industry is so new, there’s not one process at this point.”

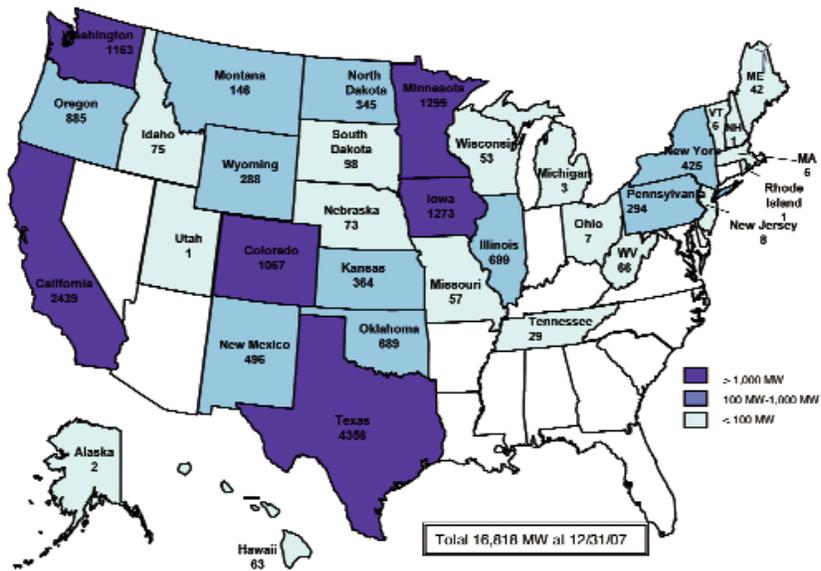
Manufacturers also suggest that distributors develop relationships with niche groups and partner with their manufacturers.

“Identify the players in the region and start building relationships with the various wind councils and other groups on the national, regional, state, and local levels,” said Zwit. “Join these groups and get involved in wind power workshops.”

“We suggest that distributors partner with manufacturers who have products specified by OEMs and contractors,” said Calhoun. “We have dedicated people who focus on this market and can help distributors know what questions need to be asked and who’s going to be involved.”

Distributors can also work with manufacturers to provide training as a value-added service to their contractor customers, said Kim. “We’ve noticed that many contractors on these wind farms have had limited experience with these kinds of higher-voltage products, so on-site training is very critical. We offer wind farm-focused training classes for contractors at our facility in Austin.”

Megawatts of Installed Utility-Scale Wind Power as of December 31, 2007



The full annual report is available on the AWEA website at www.awea.org/Market Report Jan08.pdf and a state-by-state listing of existing and proposed wind energy projects is available at www.awea.org/projects.

Barriers exist

Although the wind power market is growing quickly, some issues still cloud its future. Not every state is suited to the industry, so it’s a better fit for some distributors geographically.

“Since this market is a function of wind, there’s more opportunity on the West Coast, Texas, upper Midwest, North Dakota, South Dakota, and mid South,” said Collins.

In fact, according to the American Wind Energy Association, the top five states for wind energy potential are North Dakota, Texas, Kansas, South Dakota, and Montana. However, the states with the most cumulative installed wind power capacity are Texas, California, Minnesota, Iowa, and Washington.

In addition, supply chain pressures have caused some slowdown in the construction of wind farms. According to Apte, turbines aren’t being

produced fast enough to meet demand, which may cause some projects to wait for as long as three years for a new turbine.

Getting involved in the wind power market will also require some investment by distributors.

“It can be very expensive to participate in wind industry meetings,” said Lawson. “So if a distributor is focused on renewable energy, then the investment makes sense; otherwise it probably does not. A distributor’s level of commitment will dictate its level of participation.”

Another concern regarding the growth of wind power is the potential impact that environmentalists’ concerns may have on the industry. Lawson weighs in with his perspective: wind power holds more promise for the environment than danger.

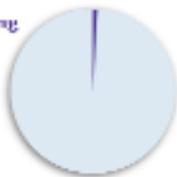
“I don’t see environmental concerns as being as big an issue as it is made out to be,” he said. “It’s an

educational issue more than anything. Take a look at all other options of generating power. Wind power is safer and more environmentally friendly than any other. Wind power solves problems with generating clean, sustainable energy, and it's creating an industry that's putting people to work."

Kim agrees. "I don't think environmental concerns are a big issue. Frankly, the wind power market has so much momentum that, regardless of the environmental concerns or government tax credits, I don't see it slowing down."

Total Electricity Generating Capacity Installed In 2002

Wind power capacity: 1% of total



Total Electricity Generating Capacity Installed In 2007

Wind power capacity: 10% of total



Double-digit growth

With oil prices continuing to skyrocket, renewable energy—specifically wind power—is expected to continue growing at a record double-digit pace. Electrical manufacturers have high hopes for this emerging market. In fact, some number it as a top priority for their companies.

"We see wind power as the single largest growth potential for ILSCO over the next five years. Growth in

this marketplace is phenomenal," said Zwit.

"It will be an extremely bright future without a doubt as the wind market continues to gain traction," said Lawson. "It's one of the top two or three focuses for FCI Burndy."

As manufacturers plan their futures in wind power, they suggest distributors prepare for the groundswell of work that this market could bring.

"The wind power market is definitely something that this industry needs to continue focusing on and monitoring at this point," said Apte. "Distributors are in a good position to take action in this market."

Lawson agrees. "We're excited about working with our IMARK partners to target this market in years to come."

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Resources

For distributors interested in getting involved in the wind power market, many resources exist to educate and connect. For statistics and industry trends, visit American Wind Energy Association at www.AWEA.org, the National Renewable Energy Laboratory at www.NREL.gov, North American Wind Power at www.NAwindpower.com, and the Global Wind Energy Council at www.gwec.net.

