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Breezing Towards the Future

BP is harnessing the wind, an energy resource that is clean and affordable.

Bob Lukefahr, president of the Power Americas division at BP Alternative Energy, is a believer. "Wind energy works. Within a decade, more of America's electricity will come from wind than from oil and petroleum products," he says. "We definitely believe that." He's in good company. Even though wind is now a bit player in the overall power-production picture, providing less than 1% of the electricity consumed in the U.S., its contribution to the power grid is growing steadily and fast. According to the American Wind Energy Association, output from domestic wind energy installations now exceeds 10,000 megawatts (MW), enough to power 2.5 million homes.

The U.S. Department of Energy is a fan, seeing wind as "the world's fastest-growing energy technology." Patricia Stanton, director of renewable energy markets for Westborough, Mass.-based Conservation Services Group (CSG), a national energy services company, puts it bluntly: "Wind is definitely for real." Frank Stern, managing consultant with PA Consulting Group's Global Energy Practice, agrees. Wind is becoming increasingly accepted by utilities, which are no longer viewing it as an alternative resource, he says. "The industry added almost 2,500 megawatts of wind capacity in 2005," adds Stern. "This year it appears likely it will surpass that record."

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In an era where every MW counts, wind is anything but hot air. Helping to fuel interest and growth in this new technology, states are increasingly demanding that a portion of the electricity generated within their borders be based on clean sources. "Texas is one such state. California is another," says BP's Lukefahr, who anticipates that more states will climb on the low-carbon bandwagon to combat global warming. "Wind is domestic, clean, and affordable. It is one of America's most abundant natural resources."

BP, for its part, is backing its enthusiasm with capital investment. "The company already ranks as one of the nation's largest wind developers," says Lukefahr, with options to develop 8,500 megawatts of wind power in its portfolio. In July of this year, BP announced plans for a joint venture with Clipper Windpower, a California-based wind turbine manufacturer with major projects in South Dakota, Texas, and other states. BP followed this move in August with word that it had acquired Greenlight Energy, a Virginia-based wind developer with 39 projects across the country. "We are looking for early-stage development opportunities where BP can bring its proven skills at developing large projects," says Lukefahr, explaining BP's acquisitions philosophy.

Wind has a significant challenge: Many of the best places to site wind farms are far removed from the major population centers with large loads. For example, the Dakotas, home to some of the planet's windiest acres, are located far from major metro areas that crave power. But it's just that disconnect—the distance between wind and consumers—where BP sees its skills shining. "What we as a company excel at is finding, developing, and bringing new resources to market," says Lukefahr. "Petroleum and wind are both about identifying the most attractive acreage, developing the resource, and delivering it to the people who need it."

Looking ahead, the projects on the horizon—multi-gigawatt wind farms involving hundreds of miles of transmission cabling—mirror the scale of the petroleum projects BP operates in the North Sea, the Gulf of Mexico, and Alaska. "Many of the traditional small developers would have a hard time building and managing projects at this scale," says Lukefahr. "BP's experience in developing major engineering projects will be beneficial in working with industry participants in addressing transmission." —Robert McGarvey