



harvesting the wind

STORY BY JENNIFER STREISAND PHOTOS BY ED LAUSCH PHOTOGRAPHY (UNLESS NOTED OTHERWISE)

Communities feel ripple effects of alternative energy.

Wind turbines in Greater Lafayette are not only creating a viable source of renewable energy, but are empowering communities economically and adding diversity to the landscape.

Landowners in Benton and White counties lease their land to energy companies to create what we know as a wind farm. These land-lease arrangements are enabling counties to generate much needed revenue in addition to providing consistent payments to the landowners.

“Now we are harvesting wind versus just harvesting corn and soybeans,” says Larry Yerk, a landowner in White County. He and his wife, Jan, lease their land to Horizon Wind Energy as part of the Meadow Lake Wind Farm. Horizon, which is based in Texas, began talking with landowners in 2006. By the end of 2010, the company plans to complete the fourth phase of the project, and that will bring the total project to 500.85 megawatts of power with 303 turbines. ➤

Jon Thompson and family have 10 turbines operating on their family farm corporation, Prairie View Farms, Inc. in Brookston, as part of the Meadow Lake project. He anticipates more turbines when future phases of the project get under way.

“Without a doubt, it has been very beneficial for the landowner from a financial gain aspect,” he says. “Even people who own property within the project but do not have turbines are offered a neighbor agreement that has its own set of financial terms.”

Walter Kelley, who owns land in Prairie Township and Round Grove Township in White County, has six wind turbines on his property as part of the Meadow Lake project, and he plans to get more.

Besides the economic benefits, another advantage of leasing the land for turbines is that it prevents housing developments from being built on the property, Kelley says.

“Once you’ve got the turbines, there are not going to be any housing developments. That’s fine with me because I would rather farm it; I don’t want to farm around houses.” Ideally, Kelley would like the land to be open country, but practicality necessitates the wind turbine land-lease for the revenue.

“It’s a bad business decision if you don’t sign up,” he adds.

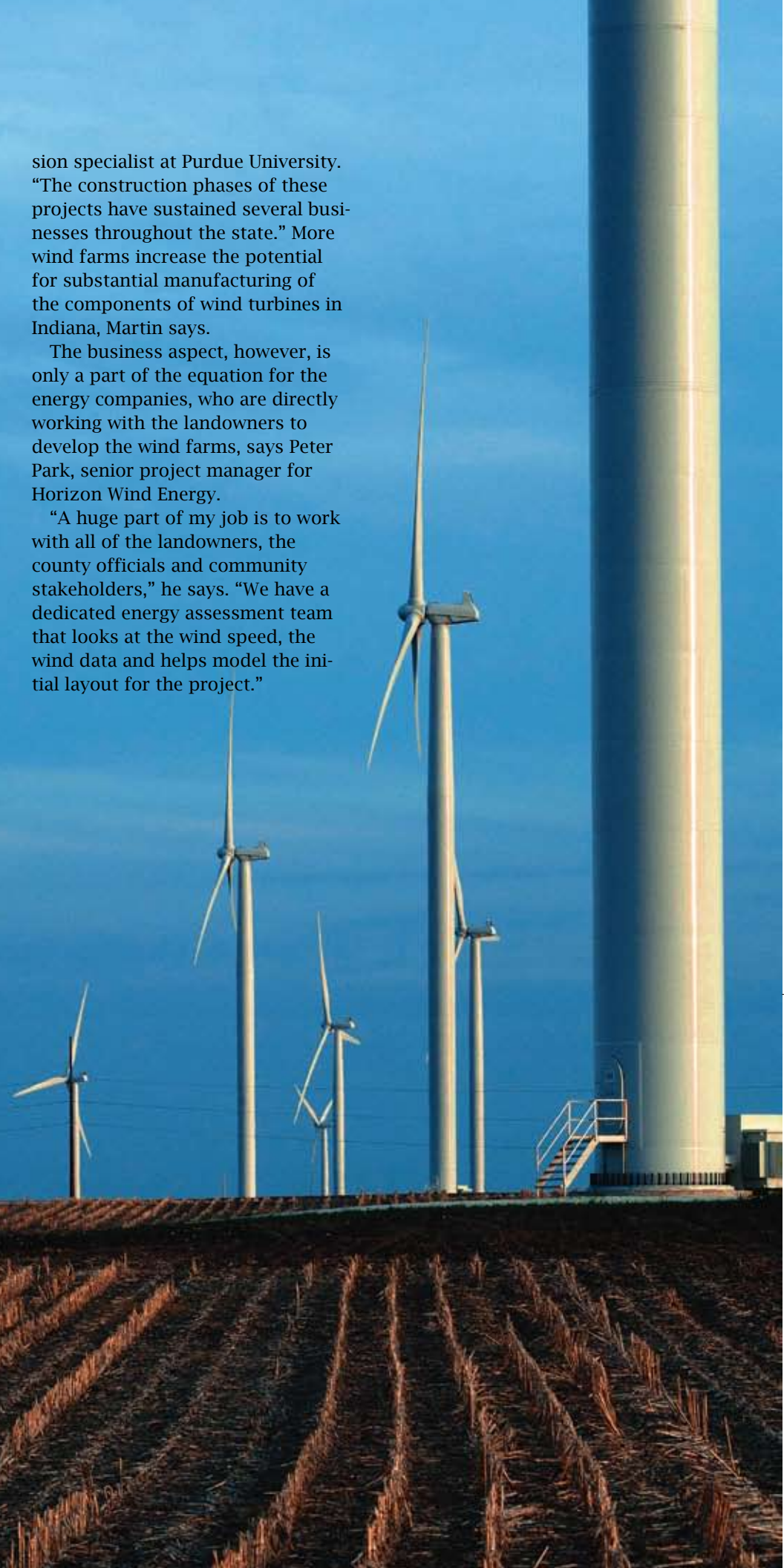
Adding turbines to the landscape also adds jobs.

“Wind energy is a definite rural economic development opportunity when we are in a time when jobs are certainly needed,” says Chad Martin, renewable energy exten-

sion specialist at Purdue University. “The construction phases of these projects have sustained several businesses throughout the state.” More wind farms increase the potential for substantial manufacturing of the components of wind turbines in Indiana, Martin says.

The business aspect, however, is only a part of the equation for the energy companies, who are directly working with the landowners to develop the wind farms, says Peter Park, senior project manager for Horizon Wind Energy.

“A huge part of my job is to work with all of the landowners, the county officials and community stakeholders,” he says. “We have a dedicated energy assessment team that looks at the wind speed, the wind data and helps model the initial layout for the project.”



The relationship between the landowners and the energy company is critical to the success of the wind farm, he notes.

“We view our landowners and our community fundamentally as partners,” he says. “We’re long-term neighbors in the community.”

The landowners participating in the projects review the details of what is on their land.

“In that regard, it’s a highly landowner sensitive partnership,” Park adds. “We are working together to build a wind farm in the community that would provide tax revenue for the county, income for the farmers and landowners, and more energy independence for our state and our country.”

The tax revenue that the land-lease arrangements generate helps sustain governmental organizations and institutions such as local school corporations that need the money. So the wind has a ripple effect because it improves the quality of life for everyone in the communities where the farms are located.

All of the wind farms in Benton County run under a similar arrangement to the Meadow Lake Wind Farm in White County; they are land-leased, says Jimmy Bricker, an extension educator at Purdue. As of May 2010, four wind farms occupy the land in Benton County: the Benton County Wind Farm; the Fowler Ridge Wind Farm—phases one and three; the Fowler Ridge Wind Farm phase two; and the Hoosier Wind Farm. The different phases of the Fowler Ridge Wind Farm are considered separate projects, explains Bricker. In Benton County, 400 landowners have signed ➤



Work being done on a wind turbine at the Benton County Wind Farm
(Photo by Tom Campbell, Purdue University)



Installation of a wind turbine near Mintonye Elementary School
(Photo provided by Eric Cotton, ECI Wind and Solar)

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leases, and their participation will generate more than \$2 million a year in revenue for all of them.

The land-lease model of building a wind farm is appealing to energy companies because a wind farm can be considered a power plant, and like other power plants, it has a finite life, notes Park. Therefore, at some point in the distant future, the wind turbines will come down, so it makes more sense to lease the land, rather than to buy.

“Our lease is a 30-year lease, potentially 50 years with a possible extension of the lease life,” Park says. “Any power plant has a useful life, including wind farms, including coal plants, so it’s not something that goes into perpetuity.”

The words, location, location, location, have new meaning when it comes to wind energy. As it turns out, Greater Lafayette has prime real estate for this kind of renewable energy.

Benton County wind farms
(Photos by Tom Campbell, Purdue University)



“Benton County has the best sustainable wind speed in Indiana,” Bricker says. “It is eight meters per second at 100 meters in the air. As that wind channel comes across, it comes over to White County at 7.5 meters per second, then takes a dip through Tippecanoe and into the eastern side of Clinton County and western side of Tipton County at about seven meters per second, so it is good all the way through.”

The land and the wind were compelling factors for Horizon when coming to this area, Park notes.

“We knew that this was a very windy part of the state. It’s got amazing physical characteristics for a wind project,” he says.

Urban development may be one reason why no wind farms have emerged in Tippecanoe County as of May 2010, but there is anticipation that wind farms will emerge as wind energy becomes more prevalent. In July, the Tippecanoe County Area Plan Commission addressed citizen concerns about requirements for installing wind turbines. An amendment to the county’s wind energy ordinance must be approved by several governing bodies before wind energy can begin to take shape in Tippecanoe County.

In the meantime, students at Mintonye Elementary School in the Tippecanoe School Corp. are learning first-hand about wind energy from a small wind turbine that is installed on the school’s property and generates electricity for the school.

The turbine was installed in May 2009 by ECI Wind and Solar LLC, based in Fairmount, Ind. TSC decided Mintonye was the best location for the turbine because of the windy conditions at the school. The turbine has exceeded expectations for generating power in its first year of operation, says Sequoyah Bible, energy manager at TSC.

“I think we have been ahead of the curve with a lot of energy policies and energy concerns, particularly for our school corporation,” he says. In 2008, a solar panel was installed on the roof of Harrison High School. As of spring 2010, the energy projects have saved the corporation more than \$15.4 million, he adds.

Mintonye teachers use the wind turbine often in math and science instruction, says Brian Hall, a fifth-grade teacher who coordinates the wind turbine program at the school.

“We do a lot of different things,”



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says Hall. "We build it starting from the kindergarten level, and they can go out and see the turbine." Students in the higher grades collect and calculate data.

Both the school community and the community at large can keep tabs on the renewable projects as they are happening in the "Greening TSC" section of the corporation's Web site: www.tscschools.net.

"It has provided leadership for us; it has given our community a good idea of what alternative energy is about and our students a chance to have access to live data, and to incorporate that into their curriculum," says Bible.

While large scale commercial wind farms generate revenue for communities, many smaller scale projects like the one at Mintonye, also can generate revenue for communities if there are enough of them, explains Eric Cotton, partner at ECI Wind and Solar. Smaller scale projects can generate a whole new industry because skilled technicians are needed for the installation, and these technicians would be called upon the same way a local contractor or plumber would be called upon.

"There are literally hundreds of thousands of structures that can support renewable energy systems and contribute to the state's energy needs," he says. "These systems need to be installed by pros that know the technology." ❄



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