

The Columbus Dispatch

SUNDAY.

Oktoberfest brings out beer lovers / B1

7 TD passes lead OSU past UNLV / D1



Local remodeler's own kitchen in NARI show / E1

\$2.50 | SUNDAY, SEPTEMBER 24, 2017

DISPATCH.COM

WIND TURBINES

Different spins



Jeremy Chenoweth, left, and Benjamin Werkowski, managers with EDP Renewables, work hundreds of feet in the air, atop one of the wind turbines that the company operates in Paulding County in the northwestern corner of Ohio. [DORAL CHENOWETH III/DISPATCH PHOTOS]

'Green' groups love the clean energy; some neighbors tired of noise, view

By Dan Gearino | The Columbus Dispatch

From the ground, the narrow aluminum ladder might as well extend to infinity. Actual height: 290 feet.

A Dispatch videographer straps on a protective harness, hard hat and safety glasses, joined by two employees of the farm's operator, EDP Renewables. They are about to climb inside one of 55 wind turbines at Timber Road II wind farm in Paulding County.

The first steps are easy, even with 10 pounds of

SEE WIND, A9



The Timber Road II Wind Farm in northwestern Ohio is part of the Buckeye State's clean-energy economy that has gone from zero to more than \$1 billion worth of spending in the past 10 years.

On the web: To see what it's like to travel up a 290-foot ladder to get to the top of a wind turbine, go to Dispatch.com/videos

FALL SALE!
Bonus Preview Savings Now thru Tuesday!

Today 12-7
(Special extended hours!)
Mon-Tue 10-9
BUNDLE-UP!
and save!

bedroomsfirst
the bedroom superstore.

INSIDE: Coupons worth up to \$267.62

Coupon values vary by delivery zone.



90/65
Forecast | B10



59¢

WITH CARD
Powerade or
Powerade Zero
Select Varieties,
32 fl oz

OHIO SCHOOLS

New report cards show persistent poverty gap

By Jim Siegel
The Columbus Dispatch

Even as Ohio students have improved their performance on state tests, bad news regarding a poverty-related achievement gap is splattered across the latest state report cards.

The number of economically disadvantaged students who scored proficient in third-grade reading was 31 percentage points below

SEE GAP, A14

THE VIETNAM WAR
Good works help heal vets' inner wounds

By Holly Zachariah
The Columbus Dispatch

From the couch in the living room of his Gahanna apartment — cozy but cramped because it is as much a personal war museum and military shrine as it is a home — Charlie "PJ" Coulter leans over and pulls a small, black photo album onto his lap.

SEE WOUNDS, A7



7 80939 00001 1

BRICE ROAD
2675 BRICE ROAD
TUTTLE CROSSING
5770 BRITTON PKWY
POLARIS
8701 LYRA DR
bedroomsfirst.com

WIND

Continued from A1

cameras and other gear.

Just resist the urge to look up, or down.

As the climbers ascend, their only rest is on three metal platforms, which are spaced out within the tower to break up the journey and catch any falling objects.

"The first thing that really hits you (is) the size in general, the gravity of just how much machinery goes into putting these things together," said Jeremy Chenoweth, an EDP operations manager whose territory includes all of Ohio, and who made the climb.

Wind farms are a big, and growing, business in Ohio. They're a part of the state's clean-energy economy that has gone from near zero to more than \$1 billion worth of spending in the past 10 years, with the potential to grow four-fold if every announced project is built.

But some neighbors view the turbines as an affront, spoiling the landscape with noise, the flicker of shadows from turbine blades and blinking red lights.

This is the gut-level underpinning of a Statehouse battle over rules on where turbines can be placed, a debate that will determine how much building will be allowed to occur.

On one side are the wind-energy industry, environmentalists and companies that want to increase the supply of clean power. On the other are some of the neighboring residents, along with a patchwork of conservative-leaning groups.

The state's wind farms are all in northwestern Ohio, but regulators have approved others just outside of the Columbus metro area, with projects planned for Crawford, Champaign, Hardin and Logan counties, and still more in the pre-development stage.

So the debate about wind energy could be coming to your neighborhood, even if you live nowhere near northwestern Ohio.

Top of the world

Inside the wind tower, the climb takes about an hour, and the final steps are a strain. Muscles ache.



EDP Renewables Operations Manager Jeremy Chenoweth climbs out of the electric-generating nacelle of a wind turbine, a schoolbus-size room that holds a generator and the control equipment. The clear plastic hatch on the ceiling takes employees outside. [DORAL CHENOWETH III/DISPATCH PHOTOS]



A metal platform gives climbers a rest from the 290-foot climb up a ladder to get to the top of a wind turbine on the Timber Road II Wind Farm.

Clothes are soaked with sweat.

But there is a reward. At the very top is a schoolbus-size room that holds a generator and control equipment.

On the ceiling is a clear plastic hatch that one of the EDP guys pops open.

Then, blue sky.

The three climbers step onto the roof for a gob-smacking view. The safety harness remains in place. It's safe to stand.

Fort Wayne, Indiana, is visible, 22 miles to the west. And, if you stop to focus, you see the tiny rectangles of houses, on farms and along rural highways.

The turbine is turned off whenever somebody is working in it, so there is no electricity being generated. When active, the carbon-fiber blades slice

through the air at speeds that can reach 185 mph at the tips. The top room and its contents weigh a crushing 70-plus tons, and send electricity down the tower through a series of high-voltage lines. The lines then go underground to connect with substations, and then meet up with interstate powerlines that feed into the country's power grid.

Only from a distance, which is how most people see wind farms, does this giant machine look like a pinwheel.

Not many jobs

All 255 of the wind-farm turbines operating in Ohio have been built along a stretch of Paulding and Van Wert counties, where the land is flat and the winds are some of the most brisk. If you include

WIND BY THE NUMBERS

906,000 megawatt-hours

The amount of electricity generated by Ohio wind farms from January to June of this year. A typical house uses slightly less than 1 megawatt-hour per month.

28.6 percent

The increase in Ohio wind power this year, compared with the same period last year.

1.6 percent

Wind power's share of all of the electricity generated by utilities in Ohio

23

Ohio's ranking in the country for wind generation, measured in megawatt-hours. The top five states: Texas, Oklahoma, Iowa, Kansas and California

61

The number of Ohio manufacturing plants that make components for the wind-energy industry

SOURCES: EIA.GOV, THE AMERICAN WIND ENERGY ASSOCIATION, DISPATCH RESEARCH

turbines at homes and businesses, the statewide total is 302, according to the American Wind Energy Association, a trade group.

A typical turbine in northwest Ohio is 1.5 to 2 megawatts; the Timber Road II wind farm has a total of 99 megawatts. For some perspective, a 2 megawatt turbine in moderate wind generates enough electricity in a year to provide for the needs

of more than 500 houses, based on estimates cited by EDP.

When a wind farm is developed, there is a flurry of spending for parts and construction services. After that, the costs are minimal. The fuel – wind – is free, and the developer needs only a few people to do ongoing work.

One of those jobs

SEE WIND, A10

WIND

Continued from A9

belongs to Benjamin Werkowski, 28, local operations manager for EDP. He's the first person up the ladder.

"I used to drive a dump truck, right out of high school, because I didn't know what I wanted to do," he said. "And then I was hauling stone and dirt at the first wind farm they put in Indiana, and it just sparked my interest, and I went from there."

He lives in Van Wert, one of 23 full-time EDP workers who live in the area.

This small employment footprint means that there are no throngs of wind-industry workers to advocate for their business the way there would be for a power plant that runs on coal or nuclear and might employ hundreds of people. And, EDP's headquarters is nowhere near, with a base in Spain and a main U.S. office in Houston.

EDP primarily interacts with its Ohio neighbors financially — lease payments to landowners, taxes to local governments, and charitable giving — and visibly, given the near-constant sight of the turbines.

This creates a dynamic that some people see as a conflict between the haves and have-nots, with some residents surrounded by turbines but receiving little or no money.

A constant presence

"It's just very annoying, very unpleasant," said Brenda DeLong, 61, interviewed on her front porch.

She lives on a lot that has been in her family for generations and was once part of her parents' farm. Now, she has a view of Blue Creek Wind Farm, the state's largest, along with parts of the Timber Road farms.

Near dusk on a Thursday, she begins to count the turbines. After a walk around the house, she is finished with 114, 115, 116.

"And that's about all I see," she said.

In other words, she can see nearly half of all the turbines on all of Ohio's wind farms without leaving her 1-acre property.

She is a retired fourth-grade teacher and now



From her front porch in a rural area north of Van Wert, Brenda DeLong can see more than 100 wind turbines. She says the noise from them, a lot like a plane flying overhead, is constant, as are the flashing red lights atop the windmills. [DORAL CHENOWETH III/DISPATCH PHOTOS]



Wind turbines are controversial. On one side are the wind-energy industry, environmentalists and companies that want to increase the supply of clean power. On the other are some of the neighboring residents, along with conservative-leaning groups.

spends most of her time volunteering for 4-H, the Red Cross and her church. She has three children and three grandchildren.

From her porch, she hears a near-constant sound, like a plane flying overhead, from the turbines. On some mornings and evenings, when the sun is behind the turbines, she sees a flicker of

shadows on the walls of her house.

She feels like an essential part of her life — the outdoors around her home — has been taken away from her.

Rex McDowell, 69, a neighbor of DeLong's, describes the area as the "Red Light District." By way of explanation, he walks to the backyard,

where each of the turbines has a red light that goes on for a moment, then off, and then on again. The lights act in unison. Together, they are bright enough to cast a red glow for miles.

The lights are there to help prevent collisions with aircraft and are required by federal aviation rules.

DeLong is part of a local group of opponents of wind energy, called Citizens for Clear Skies. One of the organizers is Jeremy Kitson, 41, who lives in a nearby township and is a high school teacher.

"I love how (wind-energy supporters) think we're getting paid off by the Koch brothers," Kitson said, referring to the politically active family behind the Kansas-based conglomerate Koch Industries. "Citizens for Clear Skies is just a lot of regular folks kicking in 25 bucks at a time."

At state and local hearings dealing with wind energy, he is often in the audience and ready to speak, a familiar face for officials.

While he seems to relish the debate, DeLong is much more hesitant. But that hasn't prevented her from making her views known. She even made a trip to Columbus in June to testify before an Ohio Senate panel about wind-energy regulations.

"Many who are pro-wind will never live near a turbine," she told lawmakers.

SEE WIND, A12

WIND

Continued from A10

Boost for schools

A few miles north and east of DeLong's house is Wayne Trace High School, a rural school consolidated from three communities. Here, wind energy is a godsend, providing 11 percent of local tax revenue in the K-12 budget.

On a recent afternoon, one of the middle-school football teams practices on a field just west of the complex that houses the high school, middle school and district offices. The nearest wind farm is barely visible to the south.

"We just don't have a lot of people seeking out the district for large industry," said Ben Winans, the district's superintendent. "The wind industry is one thing we can have."

His district received \$706,923 in taxes from wind turbines in the 2016-17 budget year. The wind money has allowed the district to increase staffing without raising taxes. The new hiring includes several reading specialists who work with students struggling to read at their grade level.

Winans grew up in the area and is an alumnus of the district he now runs. Though the wind turbines are barely visible from the school, he knows what it is like to be right next to them. His house, where he lives with his wife and children, has several turbines close enough to cast shadows on his walls.

He doesn't mind.

"I've got one (turbine) on each end of my property," he said. "I really don't notice it anymore."

Growing conflict?

Most wind-energy development has been in sparsely populated areas. But as demand grows, developers are moving closer to major cities.

The 255 active turbines in Ohio could be joined by 620 turbines at wind farms that regulators have approved, some of which are already under construction. In addition, there are at least a half-dozen other projects that are awaiting state approval, or are in a pre-application stage, based on filings and interviews with industry officials. The new wind farms represent more than \$4 billion in spending.



Ben Winans, superintendent of Wayne Trace schools, says wind turbine taxes brought in more than \$700,000 in the past school year, allowing the district to hire more staff. He said the turbines don't bother him. "I've got one on each end of my property. I really don't notice it anymore." [DORAL CHENOWETH III/DISPATCH]

With this pace of growth, researchers expect to see an increase in people who don't like the turbines.

"It's important to remember that this kind of opposition to any kind of infrastructure development is normal," said Joseph Rand, a scholar who specializes in energy policy at Lawrence Berkeley National Laboratory in California.

He has taken a close look at how communities respond to renewable energy. Surveys show that a large majority of Americans support wind energy. At the same time, "people are inherently protective of place, of their landscape," he said.

There are stereotypes at play. Wind supporters say the critics are uninformed or even delusional. Opponents say that wind supporters are motivated by money.

"Rarely do you see a nuanced perspective that has a fair story from both sides," Rand said.

In his work, he hopes to determine the underlying motivations and find out how developers and communities can better respond.

State and local

One way to protect residents' interests is through state and local regulations. Opponents of wind farms give the impression that the projects essentially receive a rubber stamp, with little consideration of the effects on residents and little skepticism of developers' assertions. Also, local governments have a limited role in the process.

And yet, public records show an exhaustive and expensive review. For example, Blue Creek Wind Farm was approved by the Ohio Power Siting Board, with a multiyear review before the project went online in 2012. The board has broad authority on any utility-scale wind farm.

The board's docket has 4,460 pages for Blue Creek, not counting two related cases, with extensive testing to estimate levels of noise, shadow flicker and other ramifications. The developer is a company that has since changed its name to Avangrid Renewables and has U.S. headquarters in Portland, Oregon.

According to filings, the developer projected that 39 houses would have shadow flicker of at least 30 hours per year. There is no legal standard for acceptable flicker, but 30 hours is often the guideline used by regulators.

Most of the residents of those houses have signed on to the project by either leasing property for the turbines, or by signing so-called "good neighbor" agreements.

With leases, property owners are signing a long-term contract to allow their land to be used to build a turbine and access roads. The payments vary, but are often in the range of \$10,000 per turbine per year. The wind trade group says that annual lease payments in Ohio add up to more than \$1 million, but less than \$5 million.

Another type of contract is a neighbor agreement,

which is for people who are near wind farms but have no turbines on their land. The residents are saying they will not object to the project in exchange for annual payments that are often in the \$1,000 range. Winans' family, for example, has such an agreement that pays \$1,000 per year.

Avangrid gave special attention to the fewer than 10 households that did not sign any agreement and had more than 30 hours of flicker. In some cases, the company agreed to reduce the effects by shutting off certain turbines at certain times.

DeLong's property is one of the majority that experience fewer than 30 hours. She does not recall any contact with the developer about flicker, noise or anything else.

"Nobody came to my door," she said. It was an inauspicious start to what has been a bad relationship.

Paul Copleman, an Avangrid spokesman, had this response:

"This is a project that has roughly 250 participating landowners and that reflects a lot of effort to talk to a lot of people in the community, at kitchen tables and in living rooms and in public meetings," he said. "We think the onus is on us to develop responsibly and talk to people about the benefits we feel the project delivers to everybody in the community."

Ongoing fight

The competing interests collide in an ongoing debate about how much distance

should be required between the turbines and nearby property lines.

In 2014, Ohio Senate Republican leaders expanded the required distance by making a last-minute amendment to an unrelated budget bill. The provision was largely in response to citizen concerns about wind farms.

Wind-industry advocates warned that the result would be a virtual halt in development. However, projects that already were approved could go forward using the old rules, which has accounted for nearly all construction since then.

Supporters of wind energy, a mix of Republicans and Democrats, have repeatedly tried and failed to pass rules that are more wind-friendly and warned that investment might soon shift to other states. The current proposal is Senate Bill 188, sponsored by Sen. Cliff Hite, R-Findlay, whose district includes most of the wind farms. The bill would allow construction of wind turbines within about 600 feet of property lines, which is down from about 1,300 feet under the 2014 amendment.

Hite is confident the bill can pass the Senate. His problem is in the House, where Majority Leader Bill Seitz, R-Cincinnati, is one of the most outspoken critics of wind energy.

"If wind farms cannot be developed without borrowing or stealing their neighbors' nonresidential property in order to satisfy the setback, health and safety requirements, then perhaps they should not be developed at all," Seitz said in a 2016 letter.

For DeLong and her friends, Hite has become the face of the pro-wind crowd. She notes that there is no wind farm near his home.

"If he lived near them, it would be different," she said.

Hite had this response: "I would put one in my backyard if I could."

People will disagree about whether that would be a pleasant view. Meanwhile, the opposite view, from the top of the turbine, is breathtaking.

Dispatch photographer and videographer Doral Chenoweth III contributed to this story.

*dgearino@dispatch.com
@dangearino*