

ATTACHMENT B



Consequences of Wind Development Aren't Always in Landowners' Control

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Agricultural Aviation, May/June 2010

At this time three years ago Blue Earth Aviation in Blue Earth, Minn., was busy providing aerial application services to a 2,000-acre tract of farmland owned by a longtime farming customer. That changed after the farming family signed a lease agreement with a wind energy developer and several wind turbines went up on their property.

The wind developer erected 15 wind turbines on the farmers' property, far fewer than the 50 turbines they had originally hoped for, but more than enough to prevent Blue Earth Aviation from safely accessing their land to perform aerial application treatments.

"Just those 15 turbines were enough to basically [eliminate] the 2,000 acres of farmland that we used to be able to fly on," Tim Steier, Blue Earth's owner and operator, said. "That's a wind farm that we absolutely will not fly in anymore. It is totally off limits."

Steier added, "Oddly enough, these brothers didn't realize that there was going to be fields that I could never treat again."

It's not just growers who allow wind turbines on their land that could lose the option—and advantages—of aerial application. Their neighbors could be adversely affected as well.

"Sometimes it may be a farm that's in the middle of four or five turbines that completely surround it and there's just no safe way to go back and get at that farm that's in the center, even though it doesn't have a turbine on it," Steier said. "It's totally surrounded by turbines, so there's no safe way to approach it anymore."

Even in cases when aerial applicators decide a field located in or around wind turbines is safe to access, they typically will charge more because they have to carry lighter loads and the field takes longer to spray because of the time it takes to maneuver around the wind turbines.

A Deeper Problem

The loss of aerial application services isn't the only negative consequence that wind turbines can have on farmers' productivity. A deeper problem exists, literally. Steier has had conversations with friends and former customers who have lamented a major consideration they overlooked before signing their lease agreement: the impact of wind turbine construction and maintenance on their farm drainage systems.

"Farm drainage will make a farm a top producer or a poor producer," said Steier, who owns 400 acres of farmland in southern Minnesota with his wife Barbara.

Many soils in the Upper Midwest and other regions in the U.S. have poor natural internal drainage. Minnesota, for example, has large areas of poorly drained soils, according to a report authored by Lowell Busman and Gary Sands, two University of Minnesota Extension Service representatives. In a subsurface drainage system, pipes are strategically placed in a field to remove water from isolated wet areas or installed in a pattern to drain an entire field.

"One of the major thoughts that they completely had forgotten about," Steier said, "is what the effect of this construction"—including underground fiber optic cables, access roads to connect the wind turbines and soil compaction from the weight of the cranes—"how those were all going to affect their farm drainage systems that they've spent years and years perfecting."

That's not to say wind companies won't repair damage caused by wind turbine construction, but what the developer is contractually obligated to cover may not match the amount of repairs the landowner needs to fix the farm drainage system.

"The farmers that we are familiar with thought that the wind developers were going to do a 100 percent job of taking care of repairing any farm drainage issues that were disturbed," Steier said. "The problem is their contracts weren't clear enough on those farm drainage repair issues."

Due to stipulations in their lease agreements, namely, gag orders, it is difficult to find farmers willing to go on the record about disruption to their farm drainage systems or other issues associated with wind energy development. However, Bill Noeske, chairman of the board for Peak Wind Development LLC, made a telling statement at a January 15, 2009, Stutsman County (N.D.) Planning and Zoning Commission meeting about wind turbine siting.

"After seeing the project get built to the north of us, even myself, I personally would just as soon not have any turbines on my land and just be part of a pool [of landowners that share revenues from a wind energy project] because they raise such havoc with your land that they don't like to tell you about," Noeske said. "I think they destroy your land myself—unless you have local control."

Noeske, a grain farmer and partner in a family seed business, partnered with a group of local landowners in Barnes County, N.D., to form Peak Wind LLC in 2007. Peak Wind represents more than 80 farmers and other landowners that pooled about 30,000 acres of land together in an effort to capitalize on wind energy development and retain as much local control as possible. RES Americas and Peak Wind are jointly developing a proposed community based commercial-scale wind energy project in Barnes County known as the Glacier Ridge Wind Project.

The bottom line: “You’ve got to protect yourself,” Noeske said.

The Incredible Hulking Presence Next Door

While a majority of the public favors domestic wind energy development, such enthusiasm dampens for many residents situated near wind turbines once they realize the profound effect wind turbines can have on their quality of life. Complaints about noise and “shadow flicker” are well documented. (According to Wind Engineers Inc., shadow flicker refers to alternating changes in light intensity due to the moving blade shadows cast on the ground and objects, including windows at residences.) One physician has even gone so far as to classify it as “wind turbine syndrome” with symptoms that include sleep disturbance, ear pressure, vertigo, nausea, blurred vision, panic attacks and memory problems. Wind energy advocates contend there is scant evidence for “wind turbine syndrome.”

Whether it’s a syndrome or merely a nuisance, the hulking presence of 400-foot wind turbines is sure to affect people who live near them in ways both real and perceived.

“We’re hearing it every day from our neighbors to the north that got built on, even the ones that are in that project,” Peak Wind’s Noeske said. “They were told that noise wasn’t going to be a problem. I’ve heard from two farmers now that they’re surprised how on a clear morning they can hear them whooshing in the yard. ... So the noise is an issue. All these things are issues.”

Stuck in the Middle

For neighboring farmers and other residents, the pain associated with being situated near a group of wind turbines usually comes without any of the gain.

Bill Durdan has farmed northeast of Grand Ridge, Ill., for 43 years. He lives and works on 200 acres of farmland, where he grows corn and soybeans. Invenergy, the largest independent wind energy developer in the U.S., has installed hundreds of wind turbines in his area.

During the first phase, 66 turbines went up east of Durdan’s property. Initially, the closest turbine was about two and half miles away. Invenergy installed three more turbines within a half-mile east of his farm and plans to put in more. Eventually, Durdan’s access to aerial application will be seriously hampered.

“On three sides I would have one, two, three, four, five, six, seven, eight all at a U-shape around my farm that would all be within a quarter mile around my farm,” Durdan said.

Durdan asked Invenergy to eliminate two turbines that would be the closest, directly across from his house. Although he has received verbal assurances, at press time, Durdan has yet to receive the written

commitment he has asked for from Invenenergy pledging to eliminate the two turbines in front of his house. A project developer told him the company was in ongoing negotiations with the owner of the land where the turbines will be sited.

When pests or disease threaten a crop, time is critical. Four years ago, Durdan's crop consultant discovered aphids in his field. It was six weeks before harvest. "There was no way you'd go through it with a ground machine because you'd destroy the beans, so we had to get an airplane," Durdan said. "We discovered the problem in the afternoon and he had an airplane there at seven o'clock the next morning, and naturally it averted a disaster."

Once all eight turbines appear on three sides of his farmland, Durdan knows time won't be on his side. He heard two aerial applicators explain how wind turbines will alter the way they render services at a meeting.

"They said, 'It's just common sense that if there's an outbreak, we're going to spray the areas where there are no turbines first. That's where we can do the most acres. That's where we make our money. And then when we get them done, we're going to come to the farms that have turbines around them and they will be assessed according to how dangerous the job is.' You can't blame a guy for saying that," Durdan said. "He can't just give his life up for a turbine."

If he's able to rely on aerial application at all, he knows it could soon come at a premium. "When I'm surrounded by these turbines, there's going to be a surcharge. I don't blame the guy running the airplane. But who [is] going to pay this surcharge?" Durdan said. "I don't mind [charging a surcharge to] the guy that's got the turbines. He's getting paid for those turbines."

"I'm a non-participant, and I just want to be able to farm my farm," he said.

Durdan has spoken with the La Salle County (Ill.) Zoning Board two or three times and with individual members on the zoning board. "There are four or five of them who'll agree with me. And they've said, 'We know something's got to be done for the non-participant.' But I've had no luck with the county board at all."

"I said to them, 'I'm not trying to run the turbines out,' " Durdan recalled. "One county board member said, 'We've got to have energy in this country.' I agree with that. But I said, 'Yes, but I am three miles as the crow flies from a nuclear power plant. Every Tuesday of the month, the sirens go [off] at ten o'clock. If they go any other time my wife and I are supposed to get in our car and drive west.' I said, 'Two years ago two pipelines went right down through the middle of my farm—a 40-inch and a 12-inch pipeline.' If you know what that consists of, it was a ... mess, and now I'm surrounded by turbines. I said, 'I think my wife and I our doing our share for energy.' "

It's an issue that hits close to home for Durdan, who launched into an animated discourse about shortsighted politicians, naïve constituents, absentee landowners and how wind energy development is altering the agricultural landscape.

“It seems like in this county they can do exactly what they want,” he lamented. “They’ve got the unions behind them, they’ve got all the newspapers behind them, they have all the city officials from the various townships behind them—how do you fight them?”

“A lot of the farmers, they give me sympathy, but as long as it doesn’t affect them where they can’t spray or they’re going to have to pay a surcharge, then they get excited about it, but there’s so many farmers—they’re not many farmers anymore. It’s the same with the landowners. The majority of landowners that are putting these turbines up, they’re not even from around here! They’re from Aurora, they’re from Chicago. They’re businessman, they’re insurance tycoons, they’re doctors, they’re lawyers that are buying this farm ground, and they don’t [care] about the farm ground, they don’t [care] about the tile, they don’t [care] about anything. All they’re interested in is that bottom line. You got me started.”

“I know I’m getting carried away here a little bit, but you know, it’s a sore subject,” Durdan said. “It’s frustrating to see what’s happening. I’m just an old farmer that just likes to keep the farm the way it was, the way it should be, and I would have no grudge at all if this was poor land. But this is some of the best land in the world! And they’re putting these turbines in and they’re burying that cable, threading in any direction 48 inches through the farm ground and paying people to go through them, destroying tile and everything else. It’s just ridiculous.”

More Education Needed

Steier believes aerial applicators need to do more to educate row-crop farmers about the overall effect that wind turbine construction can have on farmland and growers’ ability to maximize productivity—even if it is an unpopular sentiment. “It’s one thing to put them into the open rangeland of the west, I don’t see any problems there,” he said. “But when we start talking about putting them in the row-crop farming land of the Midwest that we spent so much money as a society getting that farmland in shape to be farmed with farm drainage systems and rural drainage systems—to see what’s happening now to those areas, that’s totally a mistake that that’s ever been allowed to happen. Too many groups have never heard the whole story about the negative side of this.”

Aerial applicators can assist their customers by encouraging them to think seriously about the potential upsides and downsides to wind power development. Ultimately, the decision to allow wind turbines on farmland rests with the properties’ owners, and rightfully so. That control can prove to be fleeting, however. Once they sign a 30- or 40-year lease agreement with a wind developer, the decision-making pendulum swings decidedly in the wind developers’ favor.

It’s a long-term decision and, like marriage, the landowner is committed to it for better or worse.

“These things aren’t like parking something on your property that you can drive away tomorrow,” Steier said. “When they pour 100 yards of cement in a pile in the middle of a field and put that million and a half dollar, two million dollar turbine up there, it’s going to be there for a long time.”

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