



For some farmers, solar projects offer financial stability

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- [Spencer Durham Kokomo Tribune](#)

GREENTOWN — A series of wind turbines dot the southern sky in rural Central Indiana, about an hour north of Indianapolis.

Anthony Downing, a farmer in Howard County, can see them from the farm. On a clear night, their red lights flash in unison.

The turbines are in neighboring Tipton County, a mostly rural county dominated by farmland and seed companies, and come right up to the county line.

There were once plans for wind turbines in Howard County. Downing had a contract for five turbines to be built on his farm land. So did other landowners.

The company, E.ON Climate & Renewables, [nixed a wind farm project in 2014 in eastern Howard County](#) after six years of back-and-forth negotiations with the Howard County Board of Commissioners.

At the time, the company said it was due to market conditions, but Downing remembers the opposition from neighbors and the larger community.

Newspaper articles noted wide-ranging concerns, everything from environmental impact and property values to skepticism about how clean the energy produced by turbines is.

Those voices won out.

“That upset me terribly,” Downing said.

But it wouldn’t be the last opportunity for renewable energy.

In 2019, a representative from Engie swung by the [multi-generational Downing Farms](#).

The company, which has two dozen solar projects in the United States and traces its origins back to the construction of the Suez Canal, was looking for property owners interested in diversifying their land use.

Downing had never considered solar panels until then. He was in.

“I didn’t want to see that get passed by,” Downing said.

Supplemental income

Downing is one of 12 landowners who have leased some of their property for the 1,500-acre Emerald Green Solar farm.

It's a way to lock down some consistent income in a tumultuous economy while also contributing to something bigger — diversified energy production.

“Our costs have gone up so much since COVID,” Downing said. “Those other costs aren't coming down.”

Specifically, farmers have experienced significant price hikes on what are called variable costs. These include fertilizer, seed, pesticides and fuel.

Costs jumped in 2022, fueled mainly by price increases on pesticides and fertilizers.

The main reason was a price hike in natural gas set off by the war in Ukraine.

Russia is a major natural gas exporter and producer of fertilizer. Both fertilizer and pesticides are made with natural gas.

Engie, the company behind the central Indiana solar project, is paying landowners six times more per acre than what one could expect to make leasing land to a farmer. An annual 2% increase is penciled in for the life of the contract. The lease runs for 25 years.

It's good money, stable money, that goes far beyond just a buoy when crop prices are down.

For David Long, it allows him and his wife to save for their grandchildren's college and for mission trips to Jamaica to build houses.

“It just gives us a chance to do some of the little extra things,” he said.

Renewable energy runs in the family. Long's grandfather harnessed the wind and had the first home with electricity in Union Township, where the solar farm is being built.

His dad was an organic farmer who dreamed of solar power.

“David, I want to harvest the sun,” he told his son. “Why aren’t we harvesting the sun? It comes up every day.”

Long sees solar panels and his participation in the project as a way to contribute to the energy of the state. He notes the ever-growing development of suburban Indianapolis and the rise of AI data centers.

Indiana [uses three times more energy than it produces](#). It imports the rest.

“I like electricity, and I think everyone in Howard County does too,” Long said. “We need more energy.”

Complicated economics

Brian King watched his father, a farmer and pastor, struggle to pay the bills.

King decided to lease his dad’s land once it was his. He did this for years, but land payments became difficult.

Then came Engie.

King is leasing about 25 acres of land for solar energy production. The rest is still farmable.

“A lot more stable income each year,” he said. “You don’t have to guess where you’re going to be.”

And that’s just as a landowner. Farmers are under more of a squeeze.

The [variable cost per acre of rotational corn in Indiana](#) has risen significantly since 2021, again, mostly driven by fertilizer and pesticides.

“Chemical inputs are a big, big part of the story,” said Juan Sesmero, a professor of agricultural economics at Purdue University. “That explains most of the cost in cropping.”

Variable cost per acre in 2021 was around \$300. A year later, it was approaching \$500 per acre.

Add in operational costs, expenses like farm machinery payments, labor and cash rents, and farmers are operating at a loss most years.

The years 2021 and 2022 were anomalies as gross revenue exceeded costs for corn farmers in Indiana. Cost outpaced revenue all other years since 2015.

Margins for soybeans have been better in recent years as it costs less to plant them. However, that could change.

President Donald Trump’s trade war with China has resulted in [the country buying fewer soybeans from the U.S.](#) Most soybeans grown in America are exported to China.

China has turned to Brazil for its soybeans, with the South American country has been ramping up its production over the past two years. Chinese companies have built infrastructure in Brazil, like ports, to ensure a steady flow of soybean exports.

Sesmero said Brazil is expected to produce a record number of soybeans this year. That will likely hurt prices and farmers in the states.

China agreed to buy more soybeans from the U.S. in the coming years, but not at the level prior to the second Trump trade war.

Corn, on the other hand, which is used for ethanol, animal feed and food processing, costs more to grow and has a lower return on investment.

“You’re getting hit every way,” Sesmero said. “There is no place to run here.”

Downing and Long intend to keep farming. Annual solar payments are expected to ease some of the market stressors.

Both said if revenue was the same for farming and solar, they’d farm. No doubt about it.

And selling farmland is out of the question.

But what about the ground?

The sound of metal posts driven into the ground pitter through the air most days.

Work began earlier this summer, but it wasn’t without a years-long fight from adjacent property owners.

Property values, the loss of farm ground, environmental impacts and the general change in landscape were some of the concerns voiced by those who will live next to the sprawling project.

Having to look at a solar field along with the loss of farm ground are the two biggest points of conflict concerning the renewable energy projects, according to Dan Brockett of Penn State Extension’s Energy Team.

“Everything else pales in comparison,” he said.

He sees similar pushback in his state.

Between 2017 and 2022, more than 200,000 acres of Pennsylvania farm land were lost to development. But it’s not solar panels and wind turbines that are eating up coveted farm acres. It’s mostly low-density housing, such as single-family homes and subdivisions.

“We’re never going to farm that land again,” Brockett said.

However, with solar, the expectation is that the land will go back to agricultural use at some point. The projects are designed with that in mind.

Engie’s project in central Indiana does not use cement — posts are pounded directly into the ground — the infrastructure is meant to be easily dismantled and removed, and most of it is recyclable, according to Julie Vitek, a spokesperson for the company.

“We designed the project with Howard County to ensure minimal soil disturbance,” she said.

Landowners see it with their own eyes.

King said he’s watched construction crews remove top soil while digging trenches, pile up the dirt and put it back.

“They’ve assured us no topsoil will be taken out,” he said.

As part of Engie’s agreement with the county, the company has set money aside to decommission the project at the end of its life. Other solar agreements ensure a property value guarantee if a neighbor sells their land.

Both farmers and experts believe leaving the farmland sit for more than two decades will have positive effects on soil quality. The ground will also benefit from minimal chemical or pesticide applications.

“Allowing the soil to rest over a long period of time is going to let it replace a lot of nutrients,” Brockett said. “There’s a great possibility the ground is better at end of life than the beginning.”

Engie intends to plant native pollinator-friendly cover crops around the solar panels.

“I think it’s going to be some of the best ground in Howard County,” Downing said.

Some solar projects feature sheep grazing the vegetation planted under the equipment. This is a version of agrivoltaics, the term for using land both for ag and solar production.

Brockett said sheep offer even more soil benefits through their waste.

“It’s actually pretty profitable from what I’ve heard,” Sesmero added.

While the consensus appears to be that letting the land sit will be good for future agricultural use, some questions remain.

Purdue is studying whether a solar farm’s metal structures leech PFAs, potentially harmful chemicals, into the ground. Sesmero said it’s unlikely but research will confirm if there is any risk.

There’s also the matter of economics. Per acre, there’s more money to be made leasing solar. Will that still be the case in 25 years?

Brockett said there’s a possibility re-upping with solar remains more economical than farming. It’ll depend on what changes between now and then and the advancements in technology.

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