

# Gates Ohio farm could show how crop farming can coexist with solar panels

Mark Williams

The Columbus Dispatch



One of the biggest solar farms proposed in the U.S. wants to test the idea of whether the space between and around thousands of acres of solar panels can be farmed.

If successful, the work at the proposed Oak Run Solar Project in Madison County on land partially owned by Bill Gates could be the start to addressing a longstanding complaint that utility-scale solar farms remove prime farmland from production.

"To me it's all about farming. It's not about solar energy or renewable energy. It's about farming. If I was a farmer and I could grow corn or grow soybeans and produce energy, why wouldn't I do it," said Sarah Moser, director of farm operations and agrivoltaics with Savion, the renewable energy company developing Oak Run.

"It's a smart solution to farming and to renewable energy. They should partner together. It makes sense."

Agrivoltaics is the use of land to produce electricity and to farm at the same time.

## 'Super heavyweight class' project

Kansas City, Missouri-based Savion is seeking approval from state regulators to build an 800-megawatt solar farm and a 300-megawatt energy storage system in Monroe, Somerford and Deercreek townships along State Route 29. The project would be built north of London near Plumwood and cost at least \$1 billion.

Shell New Energies US, a subsidiary of European oil giant Royal Dutch Shell, bought Savion in December 2021 as part of the company's move away from fossil fuels.

The staff of the Ohio Siting Board, the state agency charged with reviewing applications for new power sources, has recommended approval of the project; the board is not bound by that recommendation.

If approved in coming months, construction could start before the end of the year, and the solar farm would come online in chunks beginning potentially as soon as the end of 2025, according to Siting Board documents.

Savion has proposed farming between rows of solar panels on at least 2,000 acres of the 6,050-acre project along with farming all suitable acres inside and outside the fence around the project.



Agrivoltaics is not a new concept. It's been done on a much smaller scale at locations around the world and there are a number of tests taking place in the U.S.

What makes Oak Run different is the size, said Dan French, executive producer of the Solar Farm Summit, which bills itself as North America's agrivoltaics expo.

"There's just nothing at the utility scale like this," he said of Oak Run. "This is going to be super heavyweight class."

Agrivoltaics has potential for Ohio farmers, but there is so much to do to figure out if can work, said Dale Arnold, director of energy utility and local government policy for the Ohio Farm Bureau.

"This is a whole new business venture and you have to look at it seriously along those lines," he said.

Farmers will need to understand the risks and costs before they get involved in agrivoltaics whether it's the need for new equipment and buildings, additional workers, how their relationship would work with the solar company, what kinds of plants can be grown and much more, he said.

"The opportunity is there," he said. "The research still needs to be done."

## How would farming at Oak Run work?

Savion wants to partner with Ohio State University to expand the Molly Caren Agricultural Center in London, a 2,100-acre site that is home to the Farm Science Review each September, into a national training center to teach farmers how to successfully farm around solar panels should Oak Run be approved.

It also wants to work with Tolles Career and Tech Center close to Plain City to establish a program that could help Madison County become a regional hub for training workers in solar power and agrivoltaics.



Savion said it would contract with local residents to farm the property and grazing would be used to maintain any vegetation on the property not being actively farmed.

Oak Run has said it also would work with the county on a vegetation plan for the site that includes planting pollinator-friendly plants as long as it doesn't interfere with farming.

When Oak Run comes to an end decades from now, a committee would determine how the land would be used, whether that's returning the land to the community, selling the land to local farmers or residents, or working with Ohio State on the next advancement in agricultural technology.

## Savion, Ohio State and Between the Row

Two years ago, Savion established a company called Between the Rows to investigate the concept of integrating farming on utility-size solar farms.

It struck a deal with Ohio State University's College of Food, Agricultural and Environmental Sciences to do research at Roanna Farms near Conroy in northwest Ohio.

On a 2-acre test site, the farm has been growing alfalfa, hay and soybeans.

"I think it's been very successful," said Kyle Gehres, who farms the 1,400-acre site and is Moser's husband.

Under the direction of Ohio State, Gehres has been able to grow crops under, around and in the shade of solar panels. He has the smaller equipment necessary to bale between the rows of panels.

"Its definitely opened my eyes," Gehres said. "Change isn't a bad thing."

Off of those results, the U.S. Department of Energy awarded a \$1.8 million grant to Ohio State to conduct tests at the Madison Fields Solar Project, a solar farm close to Oak Run that Savion started building this year that could provide clues as to how the Oak Run project would be handled should it be approved.

The 180-megawatt project in Pike Township will take up about 1,000 acres of a 1,932-acre project area near Rosedale.

There will be a 117-acre research zone within the 1,000 acres. Over four years, Ohio State will investigate the feasibility of growing hay, hay mixes and alfalfa around and under the solar panels and study the effects on soil.

"Obviously, we think there is potential, but there's a lot of questions that we need to answer. That's why the research is critical," said Eric Romich, an Ohio State extension field specialist in energy education.

The demonstration will help determine if farming around the panels is feasible and can produce quality crops while keeping the soil sound, he said.

"These types of projects could be scalable in Ohio," he said. "With that that there's a lot of questions and challenges."

## **Potential for farming comes amid solar surge in Ohio**

Debate over the project has largely fallen along traditional lines based on the more than 500 comments filed with the Siting Board and the more than 50 people who testified at a four-and-a-half hour hearing this month at Jonathan Alder High School in Plain City.

Supporters back renewable energy, property rights and the 1,000 construction jobs that would be created over the four years of construction. Beyond complaints about removing prime farmland from

production, opponents say solar farms spoil the beauty of the countryside and they allege the farms can hurt property values, damage drainage and lead to increased truck traffic.

County administrator Rob Slane asked the Siting Board to reject the project.

"We'll fight this project tooth and nail," he said during the hearing.

The county already has four approved projects and Slane said, "We have reached a point of saturation."

There's been a surge of interest in Ohio in solar farming. Though just a handful of utility-size projects are in operations, there are about 50 solar farms in some stage of development in the state.

At 800 megawatts, Oak Run is more than twice the size of any other project in the state, according to Siting Board records.

Gates' farm, Midwest Farms LLC of Monterey, Louisiana, and other property owners have agreed to provide land for the project, according to Savion.

Moser said the thought in the solar industry has been not to give farmers access to utility-size solar farms where there could be concerns about issues such as liability and insurance.

"The prime purpose of utility scale is to produce power. They're not thinking about the land. They're not thinking about farming the land," she said.

"Traditionally, we haven't allowed farmers access or we haven't done it that way," she said. "But then you come back around (and say), 'I don't know why we do don't that. I don't know why we can't.'"

The initial idea was that native shrubs and grasses could be planted around solar panels to be a draw for birds, butterflies, bees and insects. But then Moser wondered if farmers could do more that could create a new income stream for them.

"Why not row crops?" she said. "Why not hay and alfalfa?"

Moser knows she has plenty of doubters in the agricultural community.

"The hard part is convincing the farmers," she said. "Some of my biggest critics are the farmers."

mawilliams@dispatch.com

@BizMarkWilliams