Technology helps reduce energy costs on Indiana farm while protecting environment

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Technology from Emergent Solar Energy, based in the Purdue Research Park, is helping to reduce energy costs on a northern Indiana hog farm. Credit: Purdue University

A Purdue University alumnus is using clean, solar energy to drastically reduce the electric bill for his northern Indiana hog farm with the help of a company based in the Purdue Research Park.

Kraig Resler, an alumnus of Purdue's College of Agriculture, partnered with Emergent Solar Energy to find ways to reduce energy costs, protect the environment, gain energy independence and invest in the long-term benefits of on-farm solar.

"We are always discussing how to make our 7,000-pig operation more cost-efficient and environmentally friendly," Resler said. "We are excited that our completed solar array will have a positive impact on the environment and save us money on electricity for years to come."

The project is one of the state's largest confined animal feeding operation solar arrays. The solar array is rated at 155 kilowatts DC and will produce more than 200,000 kilowatt-hours of energy per year. This will cover approximately 75 percent of the farm's energy demand and reduce energy costs by the same amount. This equates to a reduction of 3,500 tons of carbon emissions over 25 years.

"This was a challenging site," said Chris Rohaly, engineering and operations manager of Green Alternatives Inc., a contractor involved with this project. "Space was limited for the desired system size, and the tie-in to the utility feed required a long trench. But we iterated design until we reached the optimum between the farm's goals and site constraints. This system will produce strong results."

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This project was awarded a Rural Energy for America Program grant by the U.S. Department of Agriculture, which helped reimburse some of the farm's initial investment. The USDA grant and federal tax incentives, along with net-metering, will produce savings that will defray the costs of the project by more than 65 percent overall.

"This is our largest farm solar project to date, and I couldn't be more pleased with the result," said Jeremy Lipinski, managing partner of Emergent. "The project economics and production numbers are quite remarkable, and this will be a great investment for our farm client."

The Reslers are a Boilermaker family. Kraig's son, Tyler, is also an

alumnus of Purdue's College of Agriculture and works on the family farm, which is in Mishawaka, Indiana, just east of South Bend. Kraig's two daughters are undergraduate students at Purdue.

Resler worked with Emergent Solar Energy, headquartered at Purdue Research Foundation's Purdue Research Park of West Lafayette.

Provided by Purdue University