

# About 300 households to get power under new solar and battery project

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A new era of solar power production is entering Northeast Nebraska.

Burt County Public Power District, in partnership with Bluestem Energy Solutions, has completed a project that features a 1.4 megawatt of alternating current solar array and a 6 megawatt hour Tesla Megapack battery storage system across two sites. The solar-plus-storage project is one of the first installations in the Midwest to feature Tesla Megapack.

The project is also the first solar and utility-scale battery storage system to be built in tandem in Nebraska. It began operating this summer.

Mitch Hyde of Norfolk, director of operations at Bluestem Energy Solutions, said the project in tandem means the solar project and battery storage system were built at the same time.

“There is another battery storage project in Nebraska, but it was actually a solar field and they added battery a year or two later,” Hyde said.

Bluestem is a Nebraska company that develops, owns and operates smaller local energy generation projects across the state.

Norfolk Mayor Josh Moenning started doing development work for Bluestem earlier this year. He said solar represents another clean, renewable energy for Nebraska.

“The other point is these farmers building wind and solar (projects) are getting compensated pretty well for their land uses,” Moenning said. “It’s the equivalent of a part-time job in some cases, but you don’t have to show up for it. And there’s no input costs.”

Solar energy is still relatively new in Northeast Nebraska, but it is growing. Earlier this year, the Madison County Board of Commissioners approved two commercial projects for SunVest Solar of Geneva, Illinois.

One is south of Norfolk, and the other is north of Battle Creek. The company is selling the power generated to the Elkhorn Rural Public Power District.

The City of Norfolk also continues planning for its pilot solar project — to be located near the city's well fields — with the Nebraska Public Power District.

Hyde, who had 10 years of experience working in the industry before joining Bluestem, said this latest project in Burt and Dodge counties is providing power to 300 households for the Burt County Public Power District. It is tied to a Tesla battery energy storage system.



Hyde, who is a graduate of Lutheran High Northeast, said one of the advantages of the battery system is that it makes solar power a dispatchable resource.

“So you can guarantee energy being available out of that battery whenever you need it,” Hyde said.

That includes during peak energy usage, which is what Burt County Public Power District is proposing. That also provides a savings for the rate payers because the power is local when needed, he said.

Hyde said the battery system represents the latest technology on the market.

The Tesla Megapack is a utility-scale lithium-ion battery storage product manufactured at the Gigafactory in Sparks, Nevada.

The new battery system uses a liquid cooling system to get to each individual cell. The old system relied on an HVAC system that sometimes didn't reach each cell.

The life expectancy of the battery is 20 years. The solar facility is expected to last 30 years, so the battery may be replaced at that time or the project could continue as a solar operation only.

"This project is an important step, not only for Bluestem and Burt County Public Power, but for Nebraska in general," said Will Crane, director of Project Management at Bluestem. "As more renewables come online, battery energy storage systems will play a key role in the continued deployment of renewable energy while providing increased reliability and cost savings."

The solar fields will be sown with native grasses and flowers, which will provide a pollinator-friendly habitat.

Yale's Center for Business and the Environment has published research showing that pollinator-friendly solar can boost nearby crop yields, reduce soil erosion, and increase the recharging of groundwater.

Both solar fields in this project are 6.6 acres. The one in Dodge County is 6 miles south and 2 miles east of Snyder. The other one is 6 miles north of Tekamah near Highway 77.

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## Q&A on renewable energy

Q: With wind energy, there sometimes are people who are against projects because they don't like the look of the turbines. Do you find that with solar?

A: It's new and a lot of times people don't know what to expect. They will ask, "Is it loud?" "Will I be able to see it?" "How many people will be around?" Once they see it and see how they operate, it is a non-issue.

Q: Bluestem is a Nebraska-based company, correct?

A: Yes, it has produced wind and solar projects, and now it will be solar plus battery. It has a dozen projects around the state at places like Platte County, Cuming County and Keya Paha County in Northeast and North Central Nebraska. The company has contracts with public power districts and city utilities all across the state. It has its headquarters in Omaha and just opened an office in Norfolk. Mitch Hyde works out of the Norfolk office.

Q: How big can renewable energy become in Nebraska, especially with all our wind and sunshine?

A: In general, renewable energy in our part of the state has a lot of economic development potential. We are developing it. It creates jobs, and we have a hook in with Northeast Community College with the training program. And with projects like these, the money is staying here. And farmers are getting paid. It also represents new tax revenues.

We also know not all the land is best used for growing crops. This is just another opportunity for farmers to generate revenue from the land.

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Responses provided by Mitch Hyde, director of operations at Bluestem Energy Solutions, and Josh Moenning, Norfolk's mayor who also helps promote wind and other renewable energies.