



Solar canopy energizes Cincinnati Zoo

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By Mike Boyer, The Cincinnati Enquirer

CINCINNATI — Visitors to the Cincinnati Zoo are marveling at a new sight: Nearly 4 acres of solar panels have been installed over a vast span of the parking lot.



Ernest Coleman, The Cincinnati EnquirerSolar panels installed at the Cincinnati Zoo and Botanical Garden parking lot will generate 20%

of the zoo's electricity.[Enlarge](#)

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Solar panels installed at the Cincinnati Zoo and Botanical Garden parking lot will generate 20% of the zoo's electricity.

Billed as one of the largest public urban solar displays in the country, the \$11 million solar "canopy" will do much more than help control the zoo's utility bills and shelter visitors from the elements when it's turned on in mid-April, developers say.

While it puts solar technology on display, the

project also "will help put Cincinnati on the map as a national leader in the adoption and promotion of clean energy," said developer Steve Melink, Clermont County businessman and renewable energy advocate.

Workers finished installing the last solar panels Friday. The project has already sparked calls from more than a dozen zoos from as far away as California and Oregon interested in the project and how it was put together.

Mark Fisher, the zoo's senior director of facilities, planning and sustainability, said it's creating a buzz from visitors as well. "Some people wonder what the heck it is, and those who have heard about it are surprised at how big it is," he said.

According to Melink, the project consists of 6,400 photovoltaic solar collection panels assembled on more than 100 metal arrays, 15 to 18 feet high. They cover about 800 of the 1,000 parking spaces at the zoo's main entrance. The project is designed to produce 1.56 megawatts of electricity, about 20% of the zoo's annual need and enough to power

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200 homes.

It isn't the largest solar project in Ohio. The Wyandot Solar farm, a utility-sponsored project near Upper Sandusky, covers about 80 acres and is designed to produce more than 10 megawatts of electricity.

Because the zoo's parking canopies are so public, officials say it will dramatically spur interest in solar here.

"The education aspect is worth a lot," says Raju Yenamandra, vice president at [SolarWorld](#), a German-based company that produced the zoo's solar panels at its plant in Hillsboro, Ore. He thought so highly of the zoo project that he accelerated the delivery schedule for the zoo's solar panels, so the project would be ready this spring.

"When you think of the number of people who visit the zoo (about 1.3 million annually), particularly younger kids, the educational aspect will be fantastic," he said.

Solar canopies, which harness the sun's rays for electricity and provide shelter from its harsh rays, have been popular in warmer climates such as Southern California and Arizona. They're gaining in popularity in other parts of the country in the face of rising energy prices and government incentives to make solar technology more affordable.

"We're bidding multiple projects all over the country," said Dana Rudolph, president of ProtekPark Solar, which fabricated and installed the metal structures holding the solar panels. ProtekPark, a sister company of greenhouse constructor Rough Brothers, has been building parking canopies for about 10 years but lately found solar

projects are the fastest-growing part of its business. It recently supplied metal canopies for solar projects at two community colleges in New Jersey.

The Cincinnati Zoo project grew out of a casual meeting between Fisher, Melink and Jeremy Chapman, Melink's business development manager, at a green building conference in Phoenix two years ago.

Fisher, who was looking for opportunities to expand the zoo's growing green profile, said Melink was looking for a signature project to demonstrate its developing solar installation business: "I told them: I have a parking lot."

Melink, which is developing a smaller pre-engineered solar array system for homes and businesses, was intrigued.

"We want to make a difference," he said. "And this was the scale we wanted."

The biggest hurdle was structuring the project's financing.

"It was about 99% financing and 1%

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engineering," Melink said.

The project relies on financing through a combination of federal New Market Tax Credits and federal energy tax credits through PNC Bank. It relies on cash from the tax credits, sales of electricity over the next seven years to the zoo and selling the renewal energy credits generated by the investment to Akron-based [FirstEnergy](#).

Fisher said that initially the parties couldn't make the deal work financially until the non-profit Uptown Consortium and New York City-based National Development Council agreed to contribute New Market Tax Credits allocated to them toward the project.

Fisher said the project allows the zoo to lock in the price for about 20% of its electricity at about 8 cents a kilowatt hour for the next seven years. The agreement gives the zoo the option to buy the system in the eighth year if it chooses.

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