

First-of-its-kind municipal solar and storage project under construction in Minster, Ohio

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The benefits of municipal solar and energy storage are being combined in a unique project now under construction in Minster, Ohio. The project, a joined 4.2 megawatt (MW) solar plant and 7 MW storage facility, has the potential to improve the municipality's energy stability, sustainability and cost savings.

The project was developed by American Renewable Energy and Power and is owned by Half Moon Ventures. S&C Electric Company, a global provider of equipment and services for electric power systems, is supplying and building the energy storage facility.

Alone, the solar component of the Minster project is one of the largest solar projects in the state. However, the storage component makes the project unique. The energy storage facility will participate in PJM's frequency regulation market, providing regulation and stability more effectively than traditional power plants. (For more insight on PJM's frequency regulation market and energy storage projects in Ohio, read "[Ohio selected for two energy storage projects.](#)")

According to S&C Electric, the Village of Minster will benefit from the storage facility in other ways as well:

The system will help Minster better manage energy demand during peak periods and provide reliable back-up power, while deferring the acquisition of costly reactive power compensation equipment. The system will also be tied to [the] adjacent 4.2-MW solar plant, allowing Minster to further reduce their peak demand charges in the middle of the day. Once complete, the solar + storage system will be the largest U.S. facility of its kind connected through a municipal utility [emphasis added].¹

The project is being built in conjunction with the Village of Minster's municipal utility. The village has entered into a purchase power agreement (PPA) to purchase the electricity generated by the project. By entering into a PPA, the Village of Minster is able to take advantage of the benefits of solar power while minimizing up-front expenditures and outsourcing operation and maintenance costs. (For an overview of PPAs, including an overview of PPA financing and early critical considerations for a political subdivisions before entering into a PPA, read "[The ABCs of PPAs.](#)")

For Minster, the electricity from the solar array will be included in the village's electric portfolio, and this behind-the-meter resource will allow the village to reduce the amount of electricity purchased on the open market during periods of high electric usage.²

There are a number of potential benefits to a municipal utility that adds solar to its profile. A primary benefit of municipal solar projects is the ability for a municipality to reduce energy costs and obtain a predictable electricity rate. Electricity rates are volatile and unpredictable, as demonstrated by the 2014 "Polar Vortex" and the 2015 "Siberian Express." Adding solar to a power portfolio can act as a hedge against market volatility, because the cost of fuel is not variable, unlike conventional fuels. A municipal solar project can also enable environmentally-conscious communities to achieve sustainability goals.

¹S&C Electric Company, "S&C to Build One of the Largest Energy Storage Systems in Ohio" (September 15, 2015).

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