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Solar Sisters: A religious community goes green in Trotwood



LOCAL | 16 hours ago

By Emily Kronenberger, Staff Writer

The Sisters of the Precious Blood are seeking the city of Trotwood’s approval to add two solar fields on their property to power their Salem Heights building on Salem Avenue.

It’s the only facility the Sisters run in the area that is not on solar or geothermal power.

The Sisters started their solar power and geothermal HVAC upgrades in 2017 after Sister Patty Kremer saw panels going up at the University of Dayton’s building that NCR used to own on South Patterson Boulevard, and others at Mount Saint Joseph University.

Kremer was interested in how solar and geothermal energy worked and began to investigate what it would take for the Sisters of the Precious Blood facilities to go green.

The Sisters changed the HVAC systems to make sure they were compatible with geothermal HVAC and added solar panels to the roof of the main offices.

A geothermal system is the most efficient way to heat and cool a building, according to the U.S. Environmental Protection Agency.

The heat pumps use the ground as a heat exchanger via a closed-loop water circuit. During the cold winter months, the geothermal HVAC system takes heat out of the ground and transfers it into the building. And during the hot months, the system removes heat from the building and transfers it back into the ground.

“Since the ground maintains a constant temperature of 55 to 70 degrees Fahrenheit depending on your location, a geothermal HVAC system can save 25 to 50 percent on HVAC costs compared to conventional systems using air source condensing units for cooling and fossil fuels for heating,” said Seth Parker, vice president and general manager of Melink Solar and Geo.

The Sisters added a garage to their farm house on Denlinger Road to include solar panels on the roof, and Orchard House on Turner Road added panels to its roof.

The Salem Heights building roof would not be able to hold solar arrays, which is why the Sisters seek to have the two small solar fields. That building is a retirement center for about 45 laywomen.

The solar arrays will supply about 60 percent of the energy for the building.

The solar panels must face south because in the northern hemisphere, most sunlight comes from the south.

The Sisters have hired Melink for the past projects and for this project.

Melink is based in Milford, Ohio, and can be credited for the solar projects at UD and for the Sisters of Charity at Mount Saint Joseph University.

The Sisters’ project has to be approved by the city of Trotwood, which is set to vote on Oct. 7.

The main reason the Sisters decided on solar energy is the environment.

“Our climate change is a crisis,” Kremer said. “It is probably the largest crisis we are facing.”

Climate change brings social problems and issues like the migration of people and abnormal weather events, like the Miami Valley saw during the Memorial Day tornadoes, according to Colleen Kammer, director of peace, justice and ecology for the Sisters of the Precious Blood.

“I think the earth is fighting back,” Kremer said.

The Sisters have seen the savings since upgrading to geothermal and solar power. The main office, during the summer, pays at most the supplier fees and taxes to Dayton Power and Light.

Orchard House and the Farm House have seen credits to the accounts.

Kremer said that at time the panels generate more electricity than what the Sisters use.

The cost to install geothermal heating and air varies depending on the size of the building and the age of current HVAC system, Parker said.

The cost of the solar arrays varies on the size and how many you are installing. The arrays the Sisters will get will probably be 3 feet by 6.5 feet.

All of which will be paid for out of the Sisters of the Precious Blood investments.

“We need leaders in the religious orders to explain the reality of social issues,” Kammer said.

“The original ... reason for doing this was the environment to reduce our carbon footprint,” Kremer said. “And hopefully we encourage others to do the same.”

For more information on the Sisters of the Precious Blood, contact Kremer at 937-837-3302. Visit Melink’s website or contact Parker at 513-965-7348 for more information on solar and geothermal power.