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GREEN ENERGY



Don Shrubshell / Tribune

Scott Christianson has installed 24 3-foot-by-5-foot solar panels on the roof of his home at 300 S. Garth Ave. to cut his electric bills. Solar technology is increasingly being used to provide commercial and residential power.

Solar's popularity grows

Programs lower cost of systems.

BY ASHLEY JOST

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Less than one month after a Columbia couple installed the city's largest residential solar electric system, a local business has put in the city's largest commercial system.

Columbia Safety Industrial Supply, a local store that is part of the national GME Supply chain, started the installation process in late October and finished one month later. The decision to pursue solar power is twofold: to pursue what store owner Beau Aero calls a "responsible" role in energy consumption, along with taking advantage of the financial incentives.

The reason Columbia Safety's system is so large — 35 kilowatts — is because the purpose of the 40-panel system is to make the building a net-zero electric operation, meaning ultimately, the

building should produce as much energy as it takes in.

EnergyLink, a Columbia-based company, designed and installed the system.

Including parts and installation, the out-of-pocket cost to Columbia Safety is just below \$200,000, but after local rebates and the federal tax credit are applied, the end cost is \$104,000.

The federal tax credit is something homeowners and business owners can apply for when they file their 2013 taxes. Those who are eligible receive a 30 percent return on the amount spent on the project. The tax credit, which expires in 2017, is based on the final cost after all other rebates are applied.

Energy and financial factors were motivators for local homeowners Ava Fajen and Scott Christianson.

Tom O'Connor, owner of H2O'C Engineering and a Tribune columnist, was the engineer for the project, which included designing, filing paperwork with the city

and helping to bring in the products necessary for the system.

During the design phase, O'Connor said the initial idea was to install 12 panels. After discussing all options with Christianson and Fajen, O'Connor said the homeowners decided to cover the roof with 24 panels, creating the 5.64-kilowatt system.

The systems run on credits, so when a credit of power is used by the building, the owners have to pay for it. However, the building is also generating electricity, credits, that go back to the larger grid, earning the owners credits that can apply to the power they use. Systems bring in the most credits during the summer and less during the fall and winter months.

Fajen and Christianson are already seeing results since they flipped the switch on their new system Oct. 22. Christianson said their last electric bill showed a one-third decrease in energy use from the typical amount, and he expects it to only go down from there. The goal, like Columbia

Safety, is for the house to become net zero.

The out-of-pocket cost was about \$12,300, according to a spreadsheet provided by Christianson. The utility rebate from the city came to \$2,820, and projections for the federal tax credit are a similar amount, making the final cost just more than \$6,600.

"We've always been interested in sustainable energy sources in general," Christianson said. "Investments in the house to make it more energy efficient is a good pay off for us because we plan to live in for at least 20 years."

O'Connor said the work done on Christianson and Fajen's home is drawing more interest from homeowners in Mid-Missouri about possible benefits.

"It's kind of the tip of the iceberg or the leading edge of the wave here," O'Connor said. "Everything has kind of hit that tipping point where the finance of it really, really works and it's a solid investment."