Living the Green Dream

CHALLENGE

Attain LEED certification by developing a home powered by PV energy

SOLUTION

Depoly Enphase microinverters for the solar system alongside geothermal heating and recycled rooftop materials

RESULT

Complete first LEED Platinum home in West Virginia

Enphase System generates 100% of the home's energy consumption

"Onsite clean energy is the foundation for any LEED project, and for that we relied on Enphase."

—Charles Pickering
CEO
Pickering Associates

From the recycled plastic material on the roof down to the concrete garage flooring, everything in this LEED Platinum-certified home was built with conservation in mind.

Making the Dream a Reality

Charles Pickering, founder and CEO of architectural and engineering firm Pickering Associates, hoped to take a big step toward his vision of becoming LEED certified. Gaining certification, though, was no small feat. First, you must develop a project that meets LEED criteria. Taking a look at the empty space on his property, Charles found the perfect location for his new home and soon began designing the first LEED Platinum home in West Virginia.

The project took nearly six months to design with the help of a few Pickering Associates architects, and roughly a year to construct. As the project developed

The Frank Lloyd Wright-inspired "Prairie Theme" home incorporates innovative construction techniques and an intelligent PV system with precision monitoring capabilities.

from a conceptual idea to a fully scaled net-zero energy home, Pickering's residence consists of a geothermal heating pump, insulated walls and floors, a living green roof, and an EV charging station, in addition to a 11kW photovoltaic (PV) array powered by Enphase microinverters.

According to the Home Energy Rating System (HERS) Index, which measures a home's energy performance, Pickering's house received a rating of .43. This means that his home's entire energy consumption is 43 percent of an average home built to 2008 standards.

Enphase Shines for Homeowner

Every aspect of the house was carefully designed with optimized energy efficiency in mind, and its rooftop solar array was no exception. Pickering was first attracted to Enphase microinverters for the simplicity of the system and the reliability of the technology.

"I especially liked the cabling of the M215 microinverter, as well as the at-a-glance monitoring website," said Pickering. "With Enphase, you can expect your system to produce energy even during low-light conditions. That's where Enphase really stands out in my mind, by lengthening the solar day."

Consisting of Schott Poly 230W modules and M215 microinverters, the PV array delivers enough power to the LEED-certified home to accommodate the family's energy needs for the long-term, with Enphase's 25-year limited warranty providing total peace of mind.

Pickering's energy consumption is made up of three main culprits: the air conditioning system, the hot water heater, and refrigeration. Generating 100 percent of the electricity the home requires, Pickering's Enphase System now saves the Pickerings over $3,700 in yearly electrical costs.

INSTALLATION SUMMARY

Client **Charles Pickering**
Location **Williamstown, WV**
Installer **Pickering Associates**
System Size **11kW**
Microinverters **Enphase M215**
Modules **Schott Poly 230W**

About Enphase Energy

The Enphase System revolutionizes solar power generation with industry-leading technology innovation. Enphase's proven microinverter technology maximizes production of each module, which works together with advanced communications hardware and an intelligent software platform to deliver a reliable, high-performance solar array.

To learn more about the benefits of the Enphase System, visit **enphase.com.**

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