

Building Up



Building your business on energy efficiency

A message from ...

the Power of One® Energy Conservation Team

Days are getting shorter, but fall is an excellent time to install photovoltaic (PV) panels on homes and small businesses to harvest sunlight and produce electricity. Solar electric systems perform quite well in winter climates when temperatures are cold, humidity is low and light is reflected off of snow. In fact, northern Minnesota's solar resources are comparable to those of Houston, Texas.

Minnesota Power has dedicated resources to educate customers about renewable energy and help them make effective choices. We would like you to meet Renewable Program Lead Paul Helstrom (phelstrom@mnpower.com, 218-355-3227) and Renewable Program Analyst Katie Gascoigne (kgascoigne@mnpower.com, 218-355-3236). They are eager to share information and resources with construction professionals to ensure quality installations of PV systems that meet expectations and are the right fit for residential and small commercial customers.

This issue of Building Up looks at small-scale solar electric systems for homes and businesses. Encourage your customers to use Minnesota Power's Pyramid of Conservation and other online tools at www.mnpower.com/EnergyConservation to make energy-efficiency improvements before investing in renewable energy. This will optimize their return on investment—while building your business on energy efficiency.

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Sunlight Packs Powerful Potential

High above the hustle and bustle of downtown Duluth, atop the Government Services Building, is a sea of gleaming photovoltaic (PV) panels. The arrays reflect more than a simple desire to generate power for the building from the sun. They are part of a joint research project led by Minnesota Power, St. Louis County and the University of Minnesota Duluth's Natural Resources Research Institute to test and track the performance of multiple PV systems.

Three different systems are being tested, including two manufactured in Minnesota. The NRRI is monitoring energy output and recording data to determine how well each system performs. The project will be both a qualitative and quantitative study of the impacts that renewable energy systems like solar PV can have in a community. Among the questions the project hopes to answer: What are the environmental and economic impacts locally? How well do solar PV systems perform in a northern Minnesota climate?

“Choosing to install a solar energy system is a big decision, and we want to be there to support our customers as an unbiased resource,” said Katie Gascoigne, renewable program analyst, Minnesota Power. “We have a lot of different tools available to help customers make informed decisions about their energy use and investments.”

As prices drop and onsite renewable energy becomes a more viable option

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Katie Gascoigne
Renewable Program Analyst

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for homes and businesses, Minnesota Power hopes to engage construction professionals in ways that ensure quality installations and satisfied consumers. This may include contractor training and installer certification.

“Building contractors are on the front lines, and people look to them for advice about energy efficiency and renewable energy,” said Paul Helstrom, renewable program lead, Minnesota Power. “We want to help build their skills and competencies so people have positive experiences with solar energy that reflect well on the technology and on contractors.”

The new Renewable Programs team works hand in hand with Minnesota Power’s Conservation Improvement Program (CIP). Before customers receive renewable energy rebates through Minnesota Power, they must get a Home Energy Analysis or Commercial Energy Analysis to identify and prioritize energy-efficiency improvements.

“There are many low- or no-cost ways to reduce energy consumption before you invest in renewable energy,” said Gascoigne. “Contractors can recommend that their customers start



Katie Gascoigne and Paul Helstrom check output of PV panels on the Government Services Center

with those and work their way up the Pyramid of Conservation (www.mnpower.com/OneHome).”

“Minnesota Power has a long-standing history of encouraging the adoption of renewable energy options such as solar PV systems,” said Tina Koecher, manager-customer solutions, Minnesota Power. “As solar becomes a growing part of our energy landscape, we’re here to help customers understand the technology and their options so they can make informed choices about what is the right fit for them. That may include investing in solar.”

Tips for Solar-Ready Construction

The future looks bright for solar PV in Minnesota Power’s service area. You can help by building homes and businesses that are solar ready and by recognizing opportunities to integrate solar energy into existing buildings.

- Orient projects with south-facing facades when possible.
- Pitch roofs at around 45 degrees for optimal azimuth angle.
- Construct roofs capable of handling the load of PV arrays.
- Incorporate conduits for PV cables and wires into walls.
- Be aware of shading that could inhibit the performance of solar PV panels.

Even if your customers are not ready to invest in solar today, your professional insights can save them money down the road.

Featured Incentives

Educate your customers about Minnesota Power’s conservation and renewable energy incentives and build your business on energy efficiency.

SolarSense

If you are considering a solar electric system to produce renewable energy for your home or business, Minnesota Power can help you maximize your investment. Stay tuned for information on 2015 program details.

Made in Minnesota

The Minnesota Department of Commerce’s Made in Minnesota Solar Incentive Program accepts applications annually between January 1 and February 28 each year through 2023. For more information, visit the Minnesota Department of Commerce website at www.mn.gov/commerce or call 1-800-657-3710.

Air Source Heat Pump (ASHP) Rebates (through Dec. 31, 2014)

- \$300 Rebate on ENERGY STAR® qualified, furnace integrated ASHP with proper installation
- \$600 Combo Rebate on properly installed ENERGY STAR® qualified ASHP with electronically commutated motor (ECM) for new forced air furnaces
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- \$500 Rebate on new mini-split ductless ASHP systems for homes with electricity as the primary heating source

Visit www.mnpower.com/foundmoney for complete information on rebates and other energy-saving tools to help your customers make effective energy choices and build your business on energy efficiency.