



Solar water heating

Make Mine Solar

Solar thermal group purchasing program

Easy, affordable solar hot water is within your reach!

Program: Make Mine Solar is a community initiative organized by a nonprofit, the MN Renewable Energy Society, to enable individuals and business to affordably install solar thermal systems and take advantage of bulk purchase discounts by purchasing with a group. The program is open to all who wish to participate: homeowners, businesses, multi-family buildings and churches.

Pricing: For a two-panel residential system, installed, after the 30% Federal Tax Credit

VELUX solar hot water system: \$6720

With the following exceptions for the Solar Hot Water System:

- More involved interior pipe runs may cost as much as \$800
- Pipe runs greater than 50 feet will be \$40 for every extra foot. (Systems that fall under this category are typically houses taller than 2 stories or with mechanical rooms on the opposite side of the house from the panels.)
- Garage mounted systems requiring trenching to the house will need to be custom-priced by the installer.
- A structural review of your roof may be required and is NOT included in price - \$500

Solar air heat system: \$4550

With the following exceptions:

- Unusual siding, such as brick or stucco, could add additional costs.

Process: Take the next steps toward your own affordable solar system.

- Visit www.makeminesolar.org
- Read program information
- Sign up for a \$20 virtual site assessment

Please also attend one of our free workshops in either Rochester, Austin, Owatonna, Red Wing or Kiester, or watch the workshop online at www.makeminesolar.org

Commonly asked questions

Is MN sunny enough for solar?

Yes! MN has an average of 4.7 SSH (sunshine hours) per day, which is greater than Germany – the global leader in solar production.

Did you know?

More than half the electricity we use in MN comes from the burning of fossil fuels which contributes to climate change and pollution. Moving towards solar can help lessen our dependence on fossil fuels.

Is your home good for solar?

Solar works best on south-facing roofs, though east or west facing roofs may be suitable. There should be little or no shading from nearby trees, buildings, chimneys or gables.



The Solar Thermal Group Purchase Program project was made possible by a grant from CERTs Southeast and VELUX.

www.makeminesolar.org
612-963-4757

Make Mine Solar

Solar thermal system Q&A



Does solar work in Minnesota?

Minnesota has average solar resources of about 4.5 Kilowatt-hours per square meter per day (kWh/m²/day). A single-panel solar system installed in Minneapolis has a greater energy savings than a system installed in any other US city, except Phoenix.

What is my return on investment (ROI)?

In order to calculate the financial benefits of a solar thermal system, the output of the system must be estimated. Your estimated return on investment will be determined during your site assessment. Additional benefits of going solar include less demand for burning fossil fuels, fewer greenhouse gas emissions, and energy independence.



Do I need to get rid of my current hot water heater?

No, your current hot water heater will work in tandem with the solar thermal system as storage.

Where will the panels be placed?

Solar hot water panels can be mounted on a south-facing roof, on the ground, on a south-facing wall or even as an awning. Your site assessor will help you determine the best placement.

How much hot water will this produce for me?

Solar thermal systems are typically sized to provide close to 100% of hot water demands in the summer, when the sun is strongest. During the winter, less solar heat is generated, and a back-up water heater makes up the difference. Annually, a typical solar thermal system provides between 50%-80% of the total hot water usage.

What are the maintenance costs?

Over the 30+ year lifetime of a solar hot water installation it is estimated that the homeowner will need to replace the water pump after 10-15 years at a cost of \$100-\$300. Additionally, glycol antifreeze must be periodically checked and changed.



Will the solar replace my furnace?

No, the solar air heat system will generate heat during the day and ideally keep your existing furnace from kicking on, but you will need your existing furnace at night.

Where will the panels be placed?

Panels are installed vertically mounted on the south-facing wall of the home.

How much space heat will this produce?

Assuming there is adequate space, systems are sized to offset the home's heat during the day. If this is done and the home is well insulated, solar air heat may be able to offset 25% of your winter heating load.

What are the maintenance costs?

The only component with moving parts is a fan which will most likely last 10-15 years. Fans currently sell for about \$250.



Solar hot water

Solar air heat