

# CAPTURING THE SUN'S ENERGY TO CREATE HOT WATER

Most child care centers use a large amount of hot water each day, and Gundersen's Child Care Center is no exception. The dishwasher is often running to sterilize dishes, bottles, utensils and toys, and the staff does six to eight loads of laundry a day.

Gundersen Health System is using a renewable energy source to heat the water used at its Child Care Center. Traditional hot water heaters are one of the largest energy users in a typical residential home. Rather than relying solely on a traditional hot water heater to heat the water, the Child Care Center is relying on the sun. In 2010, Gundersen completed the installation of a solar hot water heater at the Center.

Here's how it works. Black panels were installed on the roof of the child care center. A glycol/water mix runs through coils in the panels, and the sun heats up the fluid. That fluid passes through a heat exchanger, which heats up the cold incoming water from the City. Then, the hot water is ready to use in the building. If the solar-heated water isn't quite hot enough, a traditional hot water heater activates and heats the water

further before it is sent to dishwashers, washing machines, sinks, etc.

As a unique feature, a computer installed in the Child Care Center monitors how much energy is being harnessed from the sun.

With the installation of the solar hot water heater, about 85 percent of the Child Care Center's hot water needs have been offset.

The solar hot water heater is just one of the renewable energy solutions Gundersen is using to reduce energy demand and improve efficiency through their Envision® program.

Gundersen Health System is headquartered in La Crosse, Wis., with hospitals and clinics in Wisconsin, Minnesota and Iowa. For more information call (855) 669-1653 (toll free), email [envision@gundersenhealth.org](mailto:envision@gundersenhealth.org) or go to [gundersenenvision.org](http://gundersenenvision.org).

Solar hot water heaters have practical uses in residential homes. Traditional hot water heaters are one of the largest energy users in a typical home. Solar hot water heaters can significantly lower either electricity or gas costs for homeowners. There are many incentives available for homeowners to help them reduce energy consumption using equipment like solar hot water heaters.



Gundersen installed solar panels on the roof of its Child Care Center as part of a solar hot water heater project. Fluid runs through the panels, gets heated by the sun and passes through a heat exchanger where the cold incoming water from the City heats up. The hot water is then ready for use in the building.

