RENEWABLE ENERGY

Putting the Sun to Work for the Health Care Industry

FACT SHEET

BIOMASS

GEOTHERMAL

HYDROPOWER

SOLAR

WIND

To learn more about Focus on Energy, call 800.762.7077 or visit focusonenergy.com

PHOTO COURTESY HOT WATER PRODUCTS

These solar thermal panels help control water heating costs for this Hammond, WI nursing home facility.

It's no surprise that rising natural gas prices have health care industry managers looking for new ways to control costs. Owners of health care facilities are feeling the pinch as the cost of hot water and space heating skyrockets.

However, sunshine can work for health care facility managers and owners who are interested in an innovative approach to staying competitive. Solar hot water systems collect solar energy and provide heat for many different applications. As fossil fuel prices have risen, solar hot water systems have become cost effective for many health care facilities.

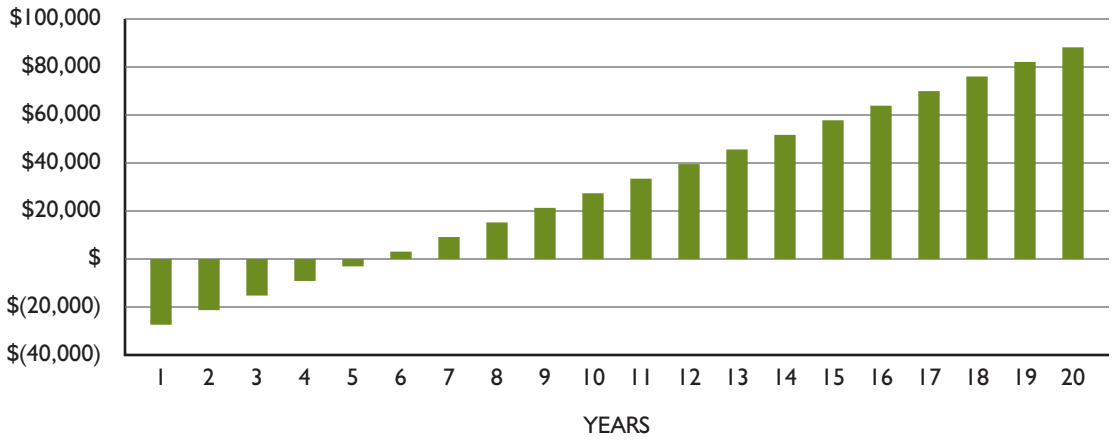
Solar water heating systems have been around for over 100 years. Over the last 25 years, they have been tested and improved and are now reliable, cost effective and durable energy investments. Solar water heating systems can last over 40 years with simple maintenance and are a good match for the health care industry. These systems are most cost effective when hot water needs are constant, as they are in most health care facilities. Solar water heating systems can be used for everyday needs such as laundry, food service, therapy pools, baths and patient rooms.

The Focus on Energy Renewable Energy Program offers business incentives for the installation of many solar hot water systems. It also provides consulting services at no charge and site assessments on a cost share basis. Focus on Energy incentives are based on system output and can cover up to 25 percent of the solar water heating system cost up to certain limits. The federal government also offers a 30 percent tax credit for many solar energy investments, plus accelerated depreciation for approved equipment. These incentives can reduce the cost of solar water heating systems dramatically. (Note: while the Focus on Energy incentives can be applied to swimming pool heating systems, the federal tax credit cannot.)

Commercial solar water heating systems can be sized to provide around 50 percent of the water heating load during the year. During sunny summer days in Wisconsin, the system may provide nearly 100 percent of the water heat required, while the output during extended cloudy periods may drop to as low as 20 percent. In most cases, solar water heating systems are not intended to be the only water heating source for an application. There must always be an additional water heating system to ensure continuous service.

(right) **This is a cumulative cash flow calculation for a typical commercial solar thermal system. The calculation includes system costs, Focus on Energy and Federal Tax incentives, a five year depreciation and fuel savings and shows that payback will begin in about five years.**

CUMULATIVE CASH FLOW



COMBINATION SOLAR WATER AND SPACE HEATING SYSTEM – HAMMOND, WISCONSIN

Darryl Daze and Rick Gomes, Directors of Facilities Management for Extendicare Health Services, Inc., were in the process of upgrading the heating system at their Hammond, Wisconsin facility, the American Heritage Care Center. As part of its mission of service to the community, Extendicare was interested in finding ways to incorporate renewable technologies into its buildings. During the design process they decided to consider how solar thermal energy might work for them as part of an integrated high efficiency heating system. They reasoned that:

- The most cost effective way to incorporate solar water heating technology would be to do it as part of a complete heating system upgrade.
- Calculations showed they would realize significant fuel savings, and cumulative cash flow projections showed a return on investment of less than five years.
- Wisconsin has a goal to get 25 percent of our energy needs from renewable energy by 2025 and Extendicare Health Services wanted to do their part and be among the early adopters of solar water heating at a health care facility.

Financial assistance available from Focus on Energy was key to Extendicare Health Services making the final installation decision. Extendicare worked with Hot Water Products of Milwaukee and Area Mechanical of Fond du Lac on the installation of a solar water and space heating system that augmented a major heating system upgrade.

AMERICAN HERITAGE CARE CENTER, HAMMOND, WI SOLAR SPECIFICATIONS

Size: 960 square foot, roof mounted array
Estimated Annual Energy Production: 2,453 therms

ESTIMATED FUEL SAVINGS OVER 20 YEARS

Assuming a $0.85/therm natural gas rate, 85 percent overall efficiency of fossil fuel boiler and an annual energy inflation rate of eight percent (five year average), over $100,000 will be saved over 20 years. The American Heritage Care Center solar thermal system cost about $56,800 to install, without the incentives. Calculated on a cumulative cash flow basis (see chart above) this investment will pay for itself in energy savings in around five years.

Focus on Energy works with eligible Wisconsin residents and businesses to install cost effective energy efficiency and renewable energy projects. Focus information, resources and financial incentives help to implement projects that otherwise would not get completed, or to complete projects sooner than scheduled. Its efforts help Wisconsin residents and businesses manage rising energy costs, promote in-state economic development, protect our environment and control the state's growing demand for electricity and natural gas. For more information call **800.762.7077** or visit **focusonenergy.com**.

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