Case Study: Residential Solar Energy

Pride in a sustainable home

Robin and Danuta Pfeiffer of Creswell built their home with the "not-so-big- house" philosophy in mind. At each facet of the building process from design to landscaping, they made every effort to make their house a model of sustainable practices. Having a solar domestic hot water heater was a natural choice for them.

The Pfeiffers' home is a model of sustainable practices.

Materials used throughout the house reflect the care and pride that went into the design of this home. The combination of many elements such as extra thick concrete and foam block walls, radiant floor heating system, energy efficient appliances, and the use of tile for their roof means that his house leave will leave a very small environmental footprint over it's lifetime.

Robin and Danuta Pfeiffer are proud of their home.

When the Pfeiffers began their home building in 1997, they did a lot of research. They found that many of the technologies they wanted to use were new and experienced contractors were few. "Europe, in many ways, is leaps and bounds ahead of the US," said Robin. "Fortunately, when it came to the solar water heating system, there were good standards and information available."

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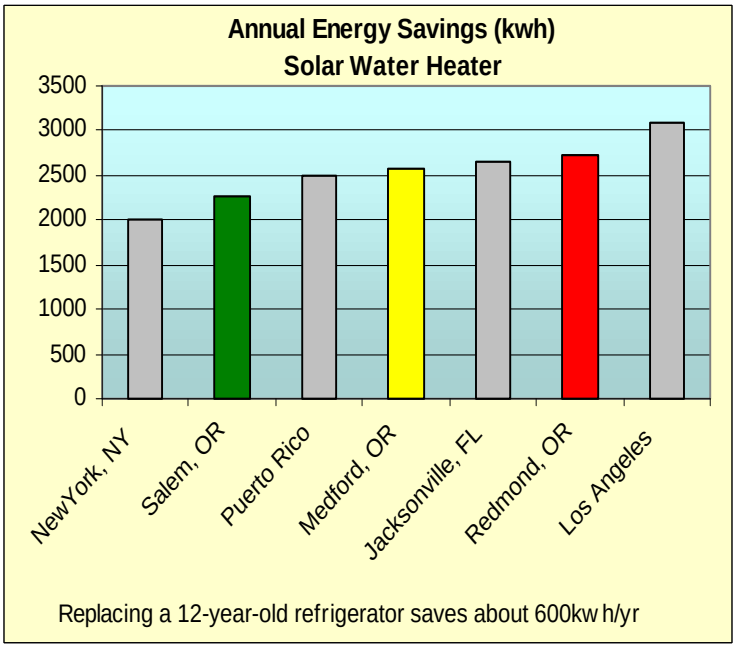
The solar water heater does such an effective job that their conventional water heater does not operate in the summer. Long hot showers and no water heating bills are the direct benefit of the solar water heater during the sunniest four months of the year. The rest of the year, the system reduces the water heating bill by preheating the water before it reaches the conventional water heater.

One of the main concerns about a solar water heating system was that it should look good. Mounted flush to the roof, the Pfeiffers both feel that solar panels added to the beauty of and overall pride in their home.

Solar System Details

System type:	Antifreeze
System size:	Two 4' x 8' panels
Energy Savings:	2,350 kWh per year
Cost:	$4,000
Date of Install:	1998
Pros of type:	Won't freeze
Cons of type:	Antifreeze solution must be replaced every 5 years.



Buying Wisely

Ensure the system will be mounted where it has a fairly unobstructed view of the sky .

Ask the potential contractors for references and how many systems they have installed in the past 2 years.

Ensure the system comes with a one-year warranty that covers all parts and labor.

Ensure the system is sized to meet your needs. Don't oversize the system as it can lead to overheating in some system designs.

Ask to see the system manual before you buy. A good manual includes maintenance and operating instructions, troubleshooting guidelines, parts list.

Ensure the system OG-300 certified by the SRCC (www.solar-rating.org).

Try to have the collector flush mounted on the roof, facing south. It's okay to face east or west if the roof is not steep.

Tax credits for solar

The State of Oregon provides tax credits for homeowners and businesses that invest in renewable energy sources, energy conservation, recycling.

Consumers can receive a tax credit for installing solar electric system or water heating on their home. The tax credit is based on system performance, with a maximum of $1,500.

Businesses can receive a tax credit of up to 35 percent of the cost the system, spread out over five years. Unlike the residential tax credit, an application must be submitted **prior** to beginning the project.