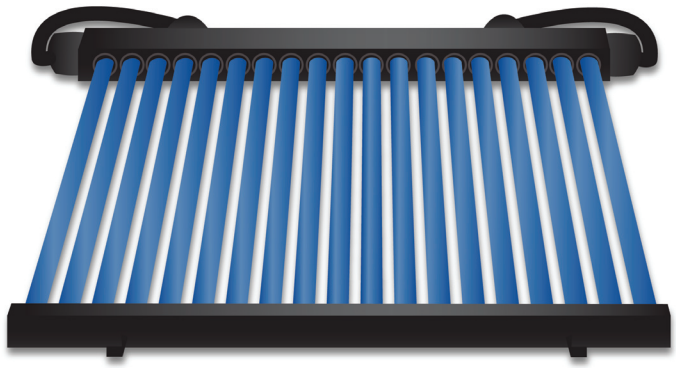
PATH TOP 10

Solar Water Heating—Solar Power for Your Shower

WHAT IT IS: Harnessing the energy of the sun to heat water is hardly a new practice. But more than ever, it is an environmentally sound way to reduce water bills.

Solar energy can meet part or all of a home's domestic hot water needs. Geographic location, system design, collector orientation, and collector size will determine how much energy can be provided for domestic hot water heating.

There are two main types of solar water systems: passive and forced circulation. Within each type, there are several configurations. A passive water heater consists of a water tank integrated into or located above a solar collector. In an integrated collector storage system, also called batch water heater, the water is heated and stored inside the collector. These systems are suitable only for warm climates where there is no risk of freezing. In a passive system, storage is separate from the collector. As water in the collector warms, water flows by natural convection through the collector to the storage tank. A forced circulation system requires a pump to move water from the storage tank to the collector. Most solar water heaters in the United States are the forced circulation type.



WHY IT'S A PATH FAVORITE:

- Energy Efficiency: Solar water systems can heat roughly 100 gallons of water a day, enough for four 10-minute showers. Depending on the size of the unit and the climate, they'll save roughly $50 to $400 a year in utility costs.
- Alternative Energy: These systems use a natural, sustainable resource rather than oil to heat water.
- Green Resource: Solar water heaters save energy that would otherwise be needed to heat a home's water supply.

INITIAL COST:

An active, flat plate solar collector system costs about $2,500 to $3,500 installed and produces about 80 to 100 gallons of hot water per day. A passive system costs about $1,000 to $2,000 installed, but has a lower capacity.

OPERATIONAL COST:

Solar water heaters can significantly reduce energy costs depending on the climate and system.

U.S. CODE ACCEPTANCE:

Check local building codes to determine codes related to the installation of solar water heaters. *The Solar Ratings and Certification Corporation* runs a certification program for solar water heating systems.

INSTALLATION:

An experienced contractor should install solar water heating systems. Usually, a roof penetration is required.

WARRANTY:

Warranties range from 3 to 10 years, depending on the manufacturer.

BENEFITS FOR HOMEOWNERS:

- Solar water heaters save energy, thus reducing utility bills by 50-80%.
- Because they replace electricity or fossil fuels, they are a more environmentally sound method of heating water.