

Steps for Selecting a Solar Installer

1. Contact the Utah Solar Energy Association (UtSEA) at www.utsolar.org.
2. Locate a company that has experience installing solar hot water systems. Call the Utah State Energy Program at 801-538-5413 or visit their website for a list of installers.
3. Determine if your system qualifies for the state tax credit by visiting the Utah State Energy Program at geology.utah.gov/sep/incentives/index.htm.
4. Your system must be certified by the Solar Rating Certification Corporation to claim the federal tax credit (www.solar-rating.org).

Questions to ask the Installer:

- * How many years they have been in business?
- * How many systems have they installed?
- * What certifications do they hold? Ask for a copy.
- * Ask for proof of insurance.
- * Ask for references.

Park City Home Solar Hot Water System

"I am truly proud to be using the radiance of the SUN to heat the water our family uses while reducing our energy footprint. When I shower, I smile and thank the sun! With combined state and federal tax credits paying for more than half of my solar hot water system, coupled with the savings on utility bills, I expect to recover costs in about 6 years. After that it's pure savings!"

- Greg Libecci,
solar homeowner



More Solar Information

Utah State Energy Program

geology.utah.gov/sep/renewable_energy/solar/index.htm

US DOE Energy Efficiency and Renewable Energy

www.eere.energy.gov/solar/solar_heating.html

FindSolar: a resource on solar technology and professionals

www.findsolar.com

National Renewable Energy Laboratory

www.nrel.gov/solar

Utah Clean Energy

www.utahcleanenergy.org

Solar Rating and Certification Corporation

www.solar-rating.org

Solar Investment Calculators:

www.infinitepower.org/calc_water.htm



State Energy Program



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Thanks to the members of the **Utah Solar Working Group** for their contributions to this brochure.

Solar Hot Water



Renewable
Clean
Reliable
Efficient

Solar Hot Water System in Park City
(photo credit: Greg Libecci)

Solar Hot Water in Utah

Solar Energy Makes Sense

Every minute the sun showers the earth with enough energy to power our entire planet for a year.*

* Unlike finite fossil fuels, solar power offers an inexhaustible energy resource.

* Solar Hot Water (SHW) systems do not produce dangerous air pollutants or carbon dioxide.

* The typical SHW system can provide low-maintenance and reliable hot water or space heating for 25 to 40 years.

* Three hundred plus days a year of sunlight, substantial state and federal incentive programs make solar energy an attractive option for Utahns.



Solar Hot Water System, Utah
(photo credit: Evirotherm)

About Solar Hot Water Systems

SHW systems absorb solar radiation through a “collector” to heat water or other fluids that can be used for space heating, bathing and most typical household appliances. They are simple, easy to install, and connect to your existing plumbing.

Water heating accounts for the third largest energy expense in your home. By heating your water with a SHW heater, you can reduce dependence on fossil fuels, save money and improve the environment. A SHW heater could especially help save money if your home uses natural gas to heat water, because of the rising cost of fuels.

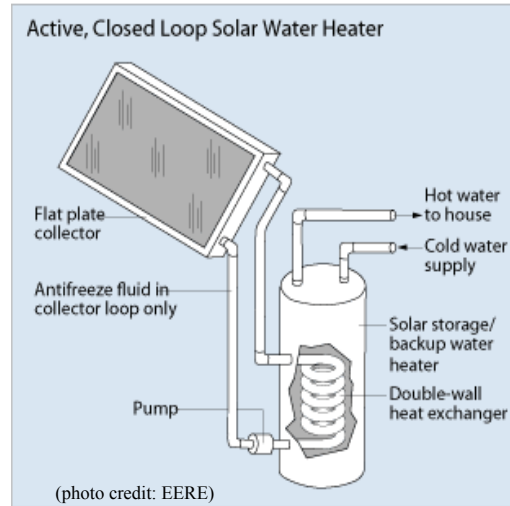
Factors to Consider for Solar Hot Water Systems:

- * Location that is un-shaded and south facing
- * Water usage for bathing, laundry & appliances
- * Efficiency of your current water system

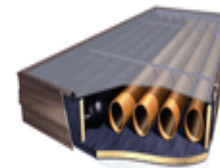
* Solar Electric Power Association (SEPA)

Solar Hot Water Systems at Work

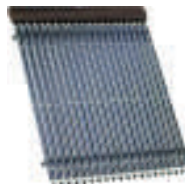
There are 2 SHW system types: *Active* systems, which use circulating pumps and *Passive* systems, which rely on gravity to move the fluid through the system. For Utah’s climate, where freezing temperatures are likely, *Active* systems are more appropriate.



There are 2 types of collectors. The *Flat Plate* collector is a rectangular box with a transparent cover, with small tubes running throughout, which carry the working fluid.



Flat Plate Collector



Evacuated Tube Collector

The other type is the *Evacuated Tube* collector, which consists of a series of glass vacuum tubes, with an inner tube through which the working fluid flows. *Evacuated Tube* collectors are often more expensive, but more efficient.

Should I Keep My Old Water Heater?

The U.S. Department of Energy suggests keeping your existing hot water heater as a backup for times of prolonged cloudy weather or unexpected increase in demand.

Take Advantage of Incentives

Individuals and businesses in Utah that install renewable energy systems may claim state and federal tax credits. For more information visit: geology.utah.gov/sep/incentives/index.htm.

State Renewable Energy Tax Credits

- * Residential systems are eligible for the Utah Renewable Energy Tax Credit equal to 25% of the costs (not to exceed \$2,000 per residence).
- * Commercial renewable energy systems are eligible for a state tax credit equal to 10% of the costs (not to exceed \$50,000).

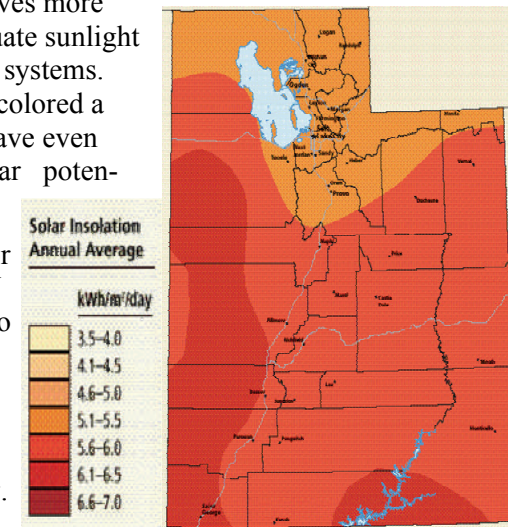
Federal Renewable Energy Tax Credits

- * Residential systems are eligible for a federal tax credit equal to 30% of the costs (not to exceed \$2,000).
- * Commercial systems are eligible for a federal tax credit equal to 30% of the costs (no maximum).

Utah’s Solar Resource is exceptional, as all of

Utah receives more than adequate sunlight for SHW systems. The areas colored a dark red have even greater solar potential.

The site for your SHW system also must be free from shading to operate effectively.



(map credit: Western Resource Advocates)