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EcoConsumer

Even with our clouds, solar water heaters are a viable option

By Tom Watson

Special to The Seattle Times

Think of it as your revenge on those endless gloomy Northwest winter days.

You can put the sun to work for you, to help the environment and reduce your energy bill. It's no joke — Washington state has become a hotbed for solar energy. And the best way to start is to jump into hot water.

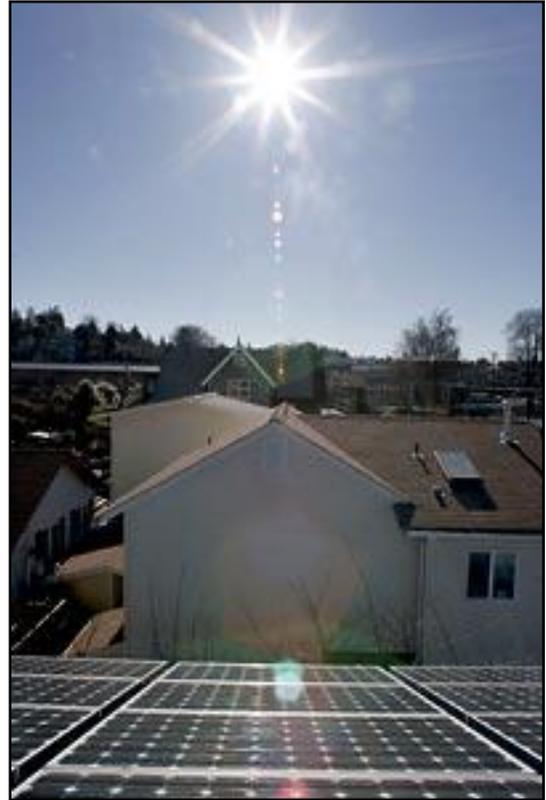
For the average Western Washington homeowner, a solar water-heating system has the fastest payback of any solar technology. By greatly reducing the costs of water heating, a solar hot-water system can pay for itself in eight years, says Larry Owens, president of the nonprofit Shoreline Solar Project.

It may not be Southern California, but our climate works surprisingly well for solar. [Findsolar.com](http://findsolar.com) gives Western Washington a "good" rating for the sun available for home solar-energy projects.

Solar hot-water systems make financial sense for several reasons: relatively low cost, new tax credits, improved technology, an increasing number of solar contractors and equipment dealers, and the rising costs of electricity and natural gas.

Installing a solar water-heating system may cost \$2,500 to \$6,000. The fewer people in your home — and the more you conserve, to reduce hot-water use — the lower the cost.

Taxpayers can receive the new federal tax credits for residential solar hot-water systems and other



THOMAS JAMES HURST / THE SEATTLE TIMES
Bob Allen and Lyle Rudensey installed solar collector tubes and panels on their Seattle rooftop in late 2004.

solar equipment placed in service in 2006 or 2007. The allowable credit is 30 percent of the qualified solar-system expenditure, up to a maximum tax-credit limit of \$2,000. To qualify, your solar water-heating system must produce 50 percent or more of the hot water needed by the residence, and be certified by the Solar Rating and Certification Corp.

Information

Consumer's guide to solar hot water heaters — U.S. Department of Energy:

www.eere.energy.gov/consumer/your_home/water_heating/index.cfm

FindSolar (estimate savings, find contractors): www.findsolar.com

Northwest Solar Center : www.northwestsolarcenter.org

Shoreline Solar Project : www.shorelinesolar.org

Solar Rating and Certification Corp. : www.solar-rating.org

Solar Washington : www.solarwashington.org

Meanwhile, the Legislature is considering House Bill 2799, which would exempt solar water-heating systems from state and local retail sales tax. If it passes, the exemption likely would go into effect this summer.

Homeowners Bob Allen and Lyle Rudensey had a solar hot-water system installed in their Seattle home in late 2004.

"It's a hedge against future energy cost increases," says Allen, "plus it increased the value of the house." And, with the 50-gallon solar hot-water tank, plus the existing 50-gallon tank as backup, they now have twice as much hot water at one time.

Homeowners can choose from active solar hot-water systems, with pumps or valves, or passive systems, with no moving parts. Some are "open loop," in which the home's water is directly heated, while others are "closed loop," in which another fluid is heated and an exchanger passes the heat to the house's water supply.

Many solar advocates favor the "evacuated tube" type of solar collectors for water-heating systems. These systems use parallel glass tubes to heat water to high temperatures. These work well in areas with cloudy winters, although they are generally more expensive.

Solar collectors are usually installed on the roof. Some Northwest homes are so shaded that solar isn't a good option. But even if the spot for your collector is not in full sun all day, you might get enough sun to fuel a water-heating system.

Some ambitious homeowners tackle solar hot-water-system installations themselves, but Owens says that since it involves sophisticated plumbing and cutting a hole in your roof, it's definitely "not for the faint of heart." To find an experienced contractor, use www.findsolar.com, or explore local solar Web sites.

Besides hot-water systems, other solar technologies, such as photovoltaic systems for electricity, work

well in the Northwest. The federal tax credits have also made those systems more financially attractive, and a pair of renewable energy laws passed in Washington state last year should eventually help even more. But for now, the payback is much longer for photovoltaic and most other solar technologies than for hot-water systems.

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