

CASE STUDY: CALDERON 25-YEAR-OLD SYSTEM

Overview

Back in 1984, Paul Calderon of Castro Valley, California, decided to install a solar hot water system to save money on his utility bill, and to do his part to help the environment. In order to make installation easier, he installed it at the same time as he was having the roof to his home redone. He also wanted to install the system before a federal solar hot water tax credit expired the following year in 1985. (This was the first federal tax credit for solar hot water installations, that lasted from 1979 to 1985, created under the Jimmy Carter administration to combat America's first energy crisis in the late 1970's).

As an engineer employed by GE, he studied and researched solar hot water systems from several manufacturers across the country before making a purchase. He chose Heliodyne because, from an engineer's standpoint, it was his opinion that Heliodyne had the best-made collectors, and an excellent packaged system design that was easy to install. That was 25 years ago, and his system is still running smoothly today, with some major cost savings over the years, and only some minor maintenance along the way.

System Component Specifications

Heliodyne cool climate packaged system with:

- 2 GOBI collectors
- Mounting hardware
- Helio-Pak 16 heat-transfer appliance
- Expansion tank
- 3 gallons Glycol (solar heat-transfer fluid)
- 120 gallon storage tank



"We're very pleased with the performance of the solar hot water system we installed 25 years ago. It has paid for itself many times over, and continues to give us not just hot water, but great satisfaction too."

Paul Calderon, homeowner and GE engineer

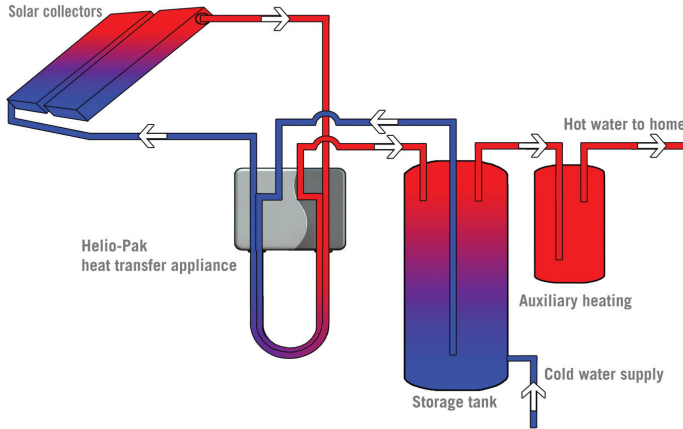
Additionally, the Calderon residence installed a small 25 gallon electric water heater for the rare occasion when backup heating is required. And in the summer months they always disconnect the backup water heater, since the Heliodyne system provides ample hot water for the whole family.



"Plug & Play" system design allows for quick and easy installation, with years of reliable performance.

System Description

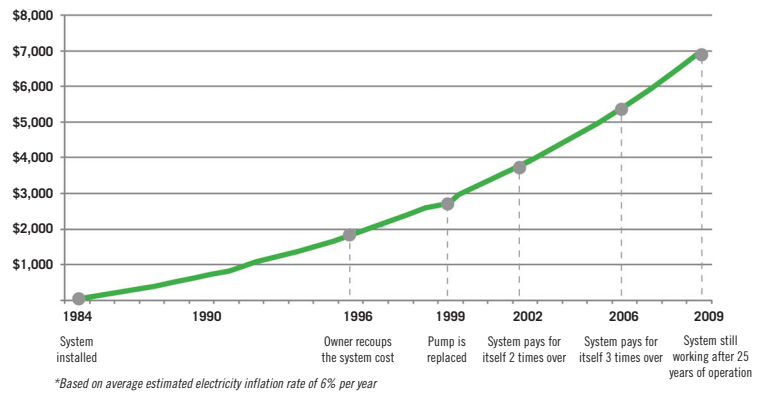
2 sleek Heliodyne GOBI solar collector panels are mounted to the roof for optimum solar exposure. Inside each collector are thin metal tubes filled with a special non-toxic solar fluid. When heated, the solar fluid is circulated from the collectors through a Helio-Pak heat exchanger, which transfers that heat to a 120 gallon solar storage tank filled with water.



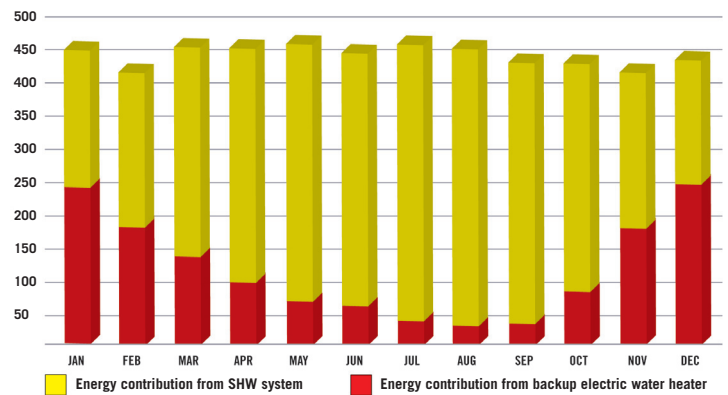
KEY NUMBERS AT A GLANCE

System cost (in 1984)	\$3,800
System cost after tax credits	\$1,800
Current average annual utility savings	\$528
Current annual kWh savings	4,000
Solar Fraction (The amount of energy the solar system contributes to the home's water heating)	75%
Annual System Output	157 therms or 4,590 kWh
Total money saved so far (Based on annual electricity inflation rate of 6%)	\$6,928

Cumulative Money Savings Over 25-Year Period*



Yearly Solar Energy Yield & Auxiliary Energy (kWh)



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