

Solar Hot Water and Heating with Solar Power Backup



Solar Hot Water System:

- 4 collector EnerWorks solar hot water appliance with 60 gal. storage tank
- 4 Turbonics fan coil units and 50 sq. ft. of radiant wall

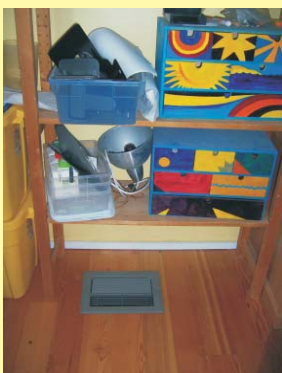
Solar Power Backup System:

- 1 Sharp 123 W panel
- 1 Magnum 1.2 kW inverter/charger
- 2 - 220 AH, 6V batteries



The owners of this passive solar home, built in the seventies, wanted to incorporate solar hot water heating in their already efficient house. In floor heating was not practical, so Suncatcher Solar installed four fan coil units and a radiant wall.

The fan coil units distribute the heat to a studio, utility room and north facing office and bathroom. Fan coil units are small radiators with a built-in fan. They can be mounted on a wall as shown in the photo on the left or under the floor with a floor mounted radiator cover, as shown in the photo on the bottom left. A 50 square foot section of radiant wall on the north side of the living room provides comfortable auxiliary heat for this area.



The heat is collected through the four solar thermal collectors on the roof, shown in the photo above. The hot water is stored in a 60 gallon storage tank with an EnerWorks appliance to control the operation of the system.

A PV panel mounted beside the solar hot water collectors supplies backup power to run the circulation pumps for the heating system during a power outage. The backup system can also run a some extra appliances such a fridge, lights and a TV.

