Residential Solar Electric Project Case Study

Site Information

Site Name: Fong Residence

Site Address: The Woodlands TX

Solar System Description

Renewable Energy System:
5.25 KW DC Solar Electric System
with Battery Back-up

Installer: Alternative Power Solutions

Date Installed: July 2009

System Cost (at current prices): $48,000

Approximate Energy Provided: Solar Electric – 526 KWh per month

Approximate Cost Savings at 15 cents/kwh: Approximately $80/month. This system qualifies the homeowner for a $13,500 tax credit, $13,200 Entergy solar rebate, increase the property value by $18,000, and will produce over $91,500 worth of solar energy during its lifetime.

Description of Installation:
This grid-tie with battery back-up 5.25 KW Solar PV system consists of 30 BP 175 Watt panels which are southern facing. The panels are attached to the composite shingle roof. This system uses a Xantrex 6048 grid tie inverter and 16 MK L16s batteries to make the power conversion from DC to AC.

This system was designed to power a portion of the home should grid power be lost during a storm, and make free energy for the home during normal non-outage periods.

Green Building Extras/Notable Information:
The homeowner has also installed a gas powered generator in the event they chose to power the entire home during an outage. They also wanted the solar battery back-up because of concerns that the generator would be noisy during the evening hours should they lose power.