

# Farrar Green Home Solar Power



## What Solar System was chosen for the Farrar Green Home?

The Photovoltaic Solar Power System was designed and installed by the experts at Real Goods Solar. The system comprises thirty six Sharp NU-U235F3 235W monocrystalline silicon panels and a SMA America Model SB-8000US inverter. The panels attach directly to the seams of the standing seam metal roof, eliminating the need for a frame to support the panels. The roof was designed with a 9 degree tilt and 215 degree azimuth, ideally suited for solar power generation. The rated output for the system is 8.46kW DC and 7.316kW AC. The Solar System has generated a little over 14MW-h during its first year of operation, enough to power the whole house, the pool, the well, and the Farrar's all electric Nissan Leaf. In the first year, the Farrar Green Home Solar Power has saved over 12 tons of carbon dioxide from production of power for their home and car.

## How does it work?

The photovoltaic panels converts the photons from the sun into electricity to use throughout the home. The DC energy generated by the panels is converted by an inverter into AC current and connects to the SDG&E grid through the electric meter. During the day, the solar panels generate more power than the home needs and excess electricity is transferred to the electric grid, causing the electric meter to run backwards. During the night, when there is no sun, electricity is drawn back off the grid, causing the meter to run forward. The Farrar Green Home is considered "net zero" because the net usage, the amount of electricity created is greater than or equal to the amount of electricity used, over a year.

### Benefits:

- No fossil fuels needed
- Emission free
- Reduces electricity needed from Power Plant by 130%
- Does not contribute to Global Warming
- Clean
- Quiet
- No maintenance
- Electricity heats the pool and spa too!
- A path to a Net Zero Energy Home

Farrar Green Home Annual Production: 14.5MW-h

