



## Project Overview

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**Location:**

Atherton, California

**Completed:**

November, 2009

**Installation Type:**

400 year old tile, removed from roof in Italy and delivered to site

**System Size:**

5.1 kW – 24 Sunpower 215W module

**Inverters:**

1 SMA 5000 & 2 Sunny Islands for battery charging & inverting

**Batteries:**

48VDC 1500 AmpHour capacity for complete off-grid capacity

## Comments

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This is a LEED Platinum home featured as "Americas 2<sup>nd</sup> Greenest Home" on PBS. The system was grid tied, with battery backup enabling grid connectivity and net metering while maintaining a stand-alone isolation from the grid at any time. The array was mounted with a reverse tilt on rear roof to maintain "street aesthetics" of this beautifully featured home.

## Challenge

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This was to be a model home intended to achieve the highest LEED rating. The homeowner wanted to be capable of living off-grid, and maintaining a sustainable footprint with regard to power generation and consumption.

The installation was to be on the roof which would utilize imported Italian tile which was salvaged from a 400 year old villa. Additionally, the homeowner didn't want the array to be visible from the front of the home.

## Solution

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To address the off-grid independence, the system would utilize a battery backup system while still allowing net metering with the grid so as to earn utility credits, and qualify for state rebates.

The installation was located on the rear facing rooftop, but installed with a reverse tilt to the south to maximize power production.

Sandbar worked shoulder-to-shoulder with the roofers to install the array with the roof which is inaccessible, or non-walkable after the installation of the 400 year old tile. Electrical equipment other than the array was installed in accessible mechanical areas under the array within the home for future servicing.

## Results

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The home achieved a LEED Platinum rating and is featured in the Atherton Building Department, as well as on PBS as "Americas 2<sup>nd</sup> Greenest Home". The system operates smoothly during normal and utility outage conditions.

The homeowner is pleased with the installation performance and aesthetics.



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