

USA: Treasure Homes – Fallen Leaf

BIODATA

PV community name: Treasure Homes – Fallen Leaf
Kind of urban area: Residential – urban
Main building type in community: Houses - single houses
New/Retrofit/Added: New district/community
Type of project: Commercial project
Start of operation: Year 2006 not yet completed
City, state, etc.: Sacramento, CA
Country: USA
Latitude: N38 34' 53"
Longitude: W121 29' 39"

PV SYSTEM CHARACTERISTICS

Total PV power: 64 kWp AC
Number of houses/buildings: 32 single-family homes
PV power per unit: 2 kWp AC
Energy yield per year: 3493 kWh per system
Main PV system type: Grid-connected - demand side
Main PV application type: Inclined roof – mounted
Main PV module type: Regular framed module
Main PV cell type: Multi-crystalline silicon
PV module manufacturer/brand: BP Solar
Inverter manufacturer/brand: Xantrex
Investment for PV systems: 15 000 for PV and efficiency

OWNERSHIP

Building owner: Inhabitant
PV owner: Inhabitant
PV energy user: Inhabitant

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PV COMMUNITY DESCRIPTION

PV Community Brief

Sacramento area's Fallen Leaf at Riverbend answers the universal problem of urban sprawl through the construction of desirable, attractive, energy efficient, solar homes in an infill area. With Treasure Homes' Award of Merit at the California Building Industry Association's Gold Nugget Awards in 2006, its Fallen Leaf community is one of the most comprehensive energy saving communities in the Sacramento region. The development features 32 energy efficient green homes with on-site solar generation.

Grid issue

There were no specific grid issues. The Sacramento Municipal Utility District (SMUD) is notably one of the most PV experienced US utilities. SMUD chose to decommission a nuclear power plant early and meet new demand with alternative energy and efficiency. SMUD provides incentives to builders to build near zero energy homes (near-ZEH).

Urban planning and architectural issues

An infill land parcel is often difficult to develop, because the utility infrastructure was not originally planned for the development and with the surrounding area built out, construction disruption can be expensive for the municipality and the developer. A near-ZEH development that is also green has minimal infrastructure impact and typically does not require any upgrade and the resulting construction disruptions to the urban area.

The modules are mounted very low profile and often referred to as "roof-integrated by the media.

Economic / financial issues

The estimated builder cost increases required to achieve targeted BA whole house energy savings levels range from \$15,180-15,286, after SMUD provided about \$6 700 towards the PV and efficiency measures. Additionally, SMUD has tiered residential electric rates. The first 700 kWh per month use are charged 8 ¢/kWh and any use above this pays 15 ¢/kWh. The homes at Fallen Leaf electricity use fell well under the first rate tier for a resulting electric bill of \$34/mnth or 63% less then the standard home.

Other remarks

The homes built in *Fallen Leaf at Riverbend* also meet the requirements of the California Green Builder program (CGB). The program was created to encourage greater participation in green building. Developed by the California Building Industry Association as a voluntary, performance-based program, CGB provides quantifiable environmental benefits to all – buyers, builders, and local jurisdictions. It is one of the most comprehensive, builder-driven initiatives in the nation and includes an independent, third party verification of plans and construction.

COMMUNITY INFORMATION

Project leader company: Treasure Homes

Other project company: ConSol

Project's www: <http://www.treasurehomes.com/>
<http://www.consol.ws/>