

# Renewables in Practice

## Federal Renewable Initiatives CASE REPORTS

### PHA PORTFOLIO WIDE SOLAR INSTALLATION

#### Santa Barbara County Housing Authority

#### California



**SOLAR PROVIDER** Planet Solar

**GREEN BEENFITS** CO<sub>2</sub> Emissions:

#### ACTIVITY TYPE

**Solar Photovoltaic**

#### PROJECT DETAILS

#### RETROFIT

System Common areas and tenant units  
Coverage: - 21 properties  
- 250 building  
- 863 units  
Size/Rating: 1.7 MW; 7,200 panels  
On Site 2.6 million KWh/ yr.  
Generation: Offsets 100% of tenant electric use  
Cost Savings: \$300,000 (@\$0.15/kWh)  
Completion Date: September, 2011

#### FINANCIAL DETAILS

Cost: \$12.25 million  
Project - Power Purchase Agreement (PPA)  
- \$0.08/kWh  
Financing: - 20 year term w/ Buyout Option  
- CA MASH Rebates,  
Leveraged - Federal ITC (1603)  
Sources: - ARRA – HUD Energy Grant  
- Energy Performance Contract

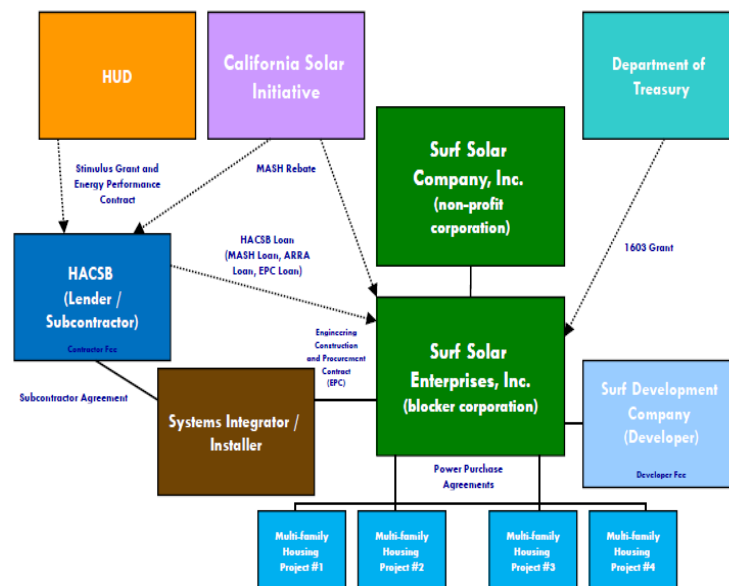
The Housing Authority of the County of Santa Barbara (HACSB) has successfully implemented a portfolio-wide renewable energy strategy offsetting 100% of the electrical consumption at 21 properties and HACSB's administration buildings. The 1.7 MW project involved the installation of over 1,700 solar photovoltaic panels on 250 buildings serving 863 dwelling units located in 6 permitting jurisdictions served by 3 different utility companies and is the largest and arguably the most complex renewable energy project undertaken by a public housing authority to date.

A key impetus for the project was the confluence of California renewable energy incentives, federal grants and renewable investment tax credit provisions enacted by the American Recovery and Reinvestment Act, and HUD's Energy Performance Contract (EPC), which facilitated complementary investments in energy efficiency measures.

About 50 percent of the project funding was provided from federal sources. Federal resources provided a foundation for the development and execution of an innovative financing strategy that was achieved through a captive energy company, Surf Solar, and Power Purchase Agreements with HACSB properties.

This structure enabled HACSB to capture and leverage tax benefits that might have been lost because of the PHA's tax status, and capture a portion of the value of the power generated by the system to cover investment debt not offset by grants or other incentives.

#### HACSB – Proposed Captive Energy Company



Another complexity was the added coordination required in working with three separate utility districts, which different requirements and institutional practices, to accomplish the reviews, inspections, and utility interconnections.

The actual installation of the project solar systems also required expertise in every facet of solar installation, including carport construction, ballasted and tilted flat roof installation and the use of string inverters, micro-inverters, and power maximizers, which required monitoring and quality control.

The underlying success of this project was as much about the process for navigating through the financial, technical, and institutional complexities, as the result, which is a portfolio of more affordable and sustainable housing.