

CASE STUDY CRESCENT PARK AFFORDABLE HOUSING



EAH began planning an energy retrofit for its Crescent Park in 2005. The renovation included a 900 kW PV solar system believed to be the **largest affordable** housing solar installation in America.

The Project Challenges

While Crescent Park's communal buildings have conventionally pitched roofs, the eponymous crescent-shape of many of the buildings posed unique design challenges for maximizing the efficiency of the solar installation. Each roof has a different orientation to the sun. Additional challenges included tree shading, structural limitations, existing electrical service equipment, and interconnection for such a large cumulative system.

The Sun Light & Power Solution

Sun Light & Power is extremely proud to have been chosen to design and install Crescent Park's solar system. Engineering expertise and experienced project management teams were key to the project's success as were close working relationships with the owner, EAH, the general contractor, West Coast Contractor, the architect, Okamoto Saijo and the various permitting and interconnecting agencies. To avoid added expense, SL&P committed to providing fixed module costs in a volatile panel market and connected each building's PV system to the existing electrical service equipment via a line-side-tap.

The results are extraordinary. Completed in 2009, the City of Richmond is able to meet approximately 20% of its renewable energy goals with the clean energy generated from Crescent Park.





System Size	900 kW DC
Equipment	4,285 SunPower 210
Est. Production	1,220,832 kWh/year
Est. CO ² Avoided	1,464,998 lbs/year
Est. Common Loa	ad Covered 60-80 %

Environmental Benefits

Every year this system removes the equivalent of 168 cars from the road, or prevents 2,039 barrels of oil from being drilled, transported and burned.

Financial Profile

Crescent Park's PV system has already been paid for through rebates, Renewable Energy Credits and tax credits. The reduction in owner-paid electricity costs of over \$150,000 per year, allowed for a budget reduction of almost \$3 million in bond-financed permanent debt. The system will now provide years of free clean energy and operating cost control.

Customer Profile

EAH (eahhousing.org), a non-profit developer and advocate for smart growth, is a leader in sustainable living for all income levels. Their high standards for environmental quality directly benefit residents and employees. Since 1968 EAH has developed, acquired or renovated more than 6,400 affordable housing units, serving more than 20,000 families.

Sun Light & Power Profile

Passionate people tend to get very good at what they do. With 34 years of experience as a leader and pioneer in the solar industry, Sun Light & Power, provides the highest possible design, engineering and installation expertise for solar electric and thermal energy needs and places a high value on lasting customer relationships.

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