



*Arbor Green Apartments
Carson, California
Photo by Branden Wermers*

Ultimate Green

Residents Save Money at New Solar-Powered Apartment Property in Southern California

Residents get their electricity mostly for free at Arbor Green Apartments, a new 40-unit low-income housing tax credit (LIHTC) development in Los Angeles County.

The reason? A sprawling rooftop solar photovoltaic (PV) system at the site that supplies nearly all of the power for the entire property, including the apartments and common areas.

The \$13.8 million project in the city of Carson, completed in March and fully leased within 30 days, is one of the greenest projects ever produced by Affirmed Housing Group, a San Diego-based developer and owner of affordable housing. The property has electric heating and cooling.

Residents pay only for electricity, but the solar power cuts their monthly utility bill by 80%, to \$5 or less.

Key sustainability features include the solar PV system, a solar domestic hot water system that helps preheat water, efficient plumbing fixtures in every apartment, high efficiency lighting throughout the property, and drought-resistant landscaping that conserves 47% more water.

The property, intended for large families, is literally green as well. Many exterior walls of the U-shaped, three-story building, which surrounds a central courtyard

and recreation space, are accented in an attractive shade of green.

Plenty of Amenities

Jim Silverwood, president and CEO of Affirmed Housing Group, said Arbor Green is special because of its “very green aspects and the sustainable features in the development. It also has a lot of amenities for the residents.”

Amenities include covered parking, a community room, a computer lab, a laundry room, a tot lot, and an outdoor barbecue area. On-site staff provides homework assistance, life skills training, and cooking classes in the community room.

Silverwood said the property, designed to LEED Platinum standards, has a nice flow between the inside common areas and the outdoor space. One feature is an architectural-grade garage door integrated into the building that can be rolled up on warm days to serve as a gathering place for residents as well as provide access to outdoors. “With the pretty moderate temperatures



Jim Silverwood

Photo by Yvonne Decario

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here in Southern California oftentimes on the weekend you can just leave the door open," says Silverwood.

Affirmed Housing decided to incorporate a large PV system capable of supplying nearly all of the power needed by the property – a rarity at affordable housing properties – for two reasons. "Number 1, we think it's great for sustainability and the environment," says Silverwood. The second reason, he said, was the ability to offset the cost of the system with a state grant and equity generated by 30% federal solar tax credits. The solar PV and hot water systems are part of the LIHTC project, not leased from a third-party provider.

Mix of Unit Sizes, Income Limits

Arbor Green Apartments has 40 one-, two-, and three-bedroom units, including a manager's unit, each with a storage locker. The 39 LIHTC units have a range of income limits, with some units reserved for households making 30% or less of the area median income (AMI), some at 50% or less of AMI, and some at 60% or less of AMI.

In the Los Angeles metro area, the current federal annual income limit for a four-person household at 60% of AMI is \$48,900.

Funding Sources

Funding sources for the project included nearly \$6.2 million in equity generated by federal housing and solar tax credits, which were syndicated by Raymond James Tax Credit Funds; a permanent mortgage of \$2.144 million; a loan of \$4.2 million from the city of Carson; and a \$60,000 deferred developer fee. The city also contributed a vacant lot for the project valued at \$1.2 million.

U.S. Bank provided construction financing.

Silverwood said the pricing received was about \$1.05 per dollar of credit for the housing tax credits and roughly \$1 per dollar

of credit for the solar tax credits. The California Tax Credit Allocation Committee awarded 9% federal housing tax credits for the project, in the amount of \$574,561 per year for 10 years, in July 2012.

Project Challenges

The city of Carson selected Affirmed Housing Group to develop the site from among proposals submitted by different developers in response to an RFP issued by the municipality.

Construction on Arbor Green Apartments began in February 2013 and the grand opening was held on March 4, 2014.

Silverwood said one of the challenges in putting the project together was assembling the site. In addition to the lot donated by the city, Affirmed Housing Group purchased two adjacent parcels from private owners that had dilapidated houses standing on them.

The other hurdle was designing the solar PV system, which has numerous solar panels. "Siting that on the roof and sizing it so that it would generate enough power to take care of nearly 100% of the electricity needs of the development was certainly a challenge," says Silverwood. "We spent a considerable amount of time and effort on that." **TCA**



Rooftop Solar Panels at Arbor Green Apartments

Photo by Branden Weimers