

SHOWCASE PROJECT: EAH HOUSING: LOS ROBLES APARTMENTS

SOLUTION OVERVIEW

Built in 1974, Los Robles was acquired by EAH Housing in 1995 under the Low Income Housing Preservation and Residential Homeownership Act (LIHPRHA). The property's 140 units are spread across 19 two-story buildings in a campus-like setting. Initial energy use at Los Robles continued to increase over time due to the multifamily property's age and building configuration, making it a prime candidate for energy- and water-efficiency upgrades.

Los Robles was one of the first LIHPHRA projects in the country to leverage Low-income Housing Tax Credits (LIHTC) and private capital to finance comprehensive energy- and water-efficiency retrofits. EAH Housing was able to take advantage of surging tax credit pricing and low permanent-loan interest rates to fund the full scope of rehabilitation.

SECTOR TYPE

Multifamily

LOCATION

Union City, California

PROJECT SIZE

156,000 Square Feet

SOLUTIONS

EAH Housing used the Build It Green [GreenPoint Rated Multifamily Checklist](#) to pinpoint the property's best opportunities for energy and water savings. The checklist provided a comprehensive "whole house" framework from initial planning and design to post-retrofit staff training. EAH conducted an assessment of physical needs/property conditions to define the scope of work. The goals of the project were to reduce energy and water use and improve resident comfort and health.

The energy- and water-efficiency upgrades at Los Robles included:

- High-efficiency domestic hot water heating and insulated pipes (R-6);
- Cool Roof-rated membrane (for flat roofs) and reflective shingles (>0.5 reflectance, >0.75 emmissivity) with 20- and 40-year ratings for durability, plus added insulation and new radiant barriers and passive attic venting where appropriate;
- Double-pane high-solar-heat-gain-coefficient windows (<U-0.4, >SHGC 0.5), double-pane or insulated metal doors, durable non-wood trim;

- High-efficiency site and interior lighting and ENERGY STAR® appliances;
- Space heating upgraded to 96 percent Annual Fuel Utilization Efficiency (AFUE) condensing furnaces, or combined hydronic systems, with a ductless mini-split heat-pump system for the community building; and
- Low-flow kitchen & bath sinks (1.5 gpm) and showerheads (2.0 gpm), and high-efficiency toilets (1.28 gpf) and dishwashers (CEC Tier II).

In addition to reducing energy and water use, EAH installed a 44 KW on-site solar photovoltaic system at Los Robles which has an estimated annual production of 75,000-100,000 kWh.

OTHER BENEFITS

EAH Housing used the experience at Los Robles to develop a sustainability-focused operations and maintenance manual for use at all EAH properties. All maintenance staff members received CALGreen training to ensure compliance with the California Green Building Standards Code. Finally, EAH began an outreach campaign and conservation contest to promote resident and staff engagement in reducing energy and water consumption.

As part of the retrofit, EAH Housing improved resident health and social services by remodeling seven units to make them fully ADA accessible, enhanced site accessibility, and created a shared barbeque area. Additionally, they improved indoor air quality (IAQ) with humidistat-activated bath fans and kitchen hoods that vent to the exterior plus fresh-air intakes (designed to ASHRAE 62.2 whole-house ventilation standards), carbon monoxide sensors, and low- and zero-VOC paint.

[Learn more](#) about the Los Robles renovation.

Annual Energy Use

(Source EUI)

Baseline(2010)



Actual(2013)



Energy Savings

20%

Annual Energy Cost

Baseline(2010)



Actual(2013)



Cost Savings

\$68,000



Los Robles Entryway



Los Robles Exterior



Los Robles Pre-Rehab