



# Solar Helps Keep Housing Affordable in Honolulu

## Challenge

Honolulu's Hale Kewalo is an environmentally sustainable, affordable housing community, with units featuring high-efficiency air conditioners and solar water heaters. In line with this eco-friendly approach, developers of the housing community wanted to offset the building's energy usage with a rooftop solar system and solarized carport for its tenants.

## Solution

Sunspear Energy designed a state-of-the-art SunPower® rooftop solar array with a dual-tilt racking system and added solar to the building's parking structure for maximum clean energy production.

## Benefits

The building's rooftop and solar carport system together produce 177,746 kilowatt hours of clean energy every year along with shaded parking for 11 vehicles. This is enough to offset 30% of the energy used for common areas such as the clubhouse, elevators and laundry facilities.



HALE KEWALO

## Quick Facts



**117 kW**

Total System Size



**Rooftop and Carport**

Installation Type



**\$40,255**

Estimated First-Year Savings



**\$1,921,261**

Savings Over 25 Years



**128,545 lbs of coal  
burned per year**

Equivalent CO<sup>2</sup> Emissions



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Commercial Dealer

"The Hale Kewalo solar project is noteworthy for its innovative design and execution. But more importantly, the solar installed at this community helps local residents live affordably, while directly contributing to Hawaii's goal to be 100% renewably powered."

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## Renewable Energy for Everyone

For decades, Hawaii has been known as a leader in solar installations. Today, the state gets 33 percent of its electricity from rooftop solar,<sup>1</sup> thanks to an established industry and strong support from the state legislature. In fact, the Aloha State has committed to powering its state entirely with renewable energy by 2045, with solar projects of all sizes playing a role in achieving this goal.



At the center of this movement is the capital city Honolulu, home to big waves, bright sun and distributed solar. It's also home to one of the world's highest costs of living. But at the Hale Kewalo, a newly constructed 11-story affordable housing project, working families can afford to live in one of the most desirable areas of the city in a building built with environmental sustainability at heart.

Designed and built by award-winning developer Stanford Carr, the building features Energy-Star appliances, solar water heating, and now, a rooftop SunPower® solar system and solar carport. While the environmental benefits are substantial, the savings generated from these systems help keep the building's operating costs in check, which in turn keeps rents affordable.

The rooftop solar and carport systems were designed and installed by Sunspear Energy, a local leader in renewable energy and energy-efficiency solutions. Working in collaboration with developers and city officials, the Sunspear team found that solarizing the Hale Kewalo carport in tandem with a roof array mounted on a dual-tilt racking system would be the best approach to optimizing the building's clean energy output.

## SunPower Solar Panels Achieve High Energy Output

Adhering to a tight timeline and working on a multi-story structure with challenging conduit lines and a complex roof layout was no easy feat. However, in just over 2 weeks, Sunspear successfully installed 166 SunPower® high-efficiency solar modules on the property's roof and carport. SunPower panels are highly regarded for their reliability and performance, providing up to 60 percent more energy over 25 years compared with conventional panels. The solarized carport provided an additional 11 shaded parking spots – a benefit tenants can see (and feel) on Hawaii's many sunny days.

<sup>1</sup> As Hawaii aims for 100% renewable energy, other states watch closely, *Scientific American*: April 27, 2018.