



Honolulu Airport Makes An International Statement with Solar

Challenge

The Daniel K. Inouye International Airport in Honolulu (HNL) is one of the busiest airports in the world, with 21 million passengers traveling through its terminals every year. The Hawaii Department of Transportation (HDOT) is transitioning the airport's electricity to solar energy to reduce costs and help the state reach its climate goal of 100% clean energy by 2045.

Solution

The solar installations are part of a comprehensive energy plan implemented in 2014, including energy-efficiency improvements and multiple phases of solar energy. As part of this plan, Sunspear Energy has installed a total of 12,592 SunPower® solar panels on terminal rooftops and parking garage solar carports.

Benefits

All in, the systems Sunspear installed will generate 8.7 megawatt hours of clean energy per year, offsetting 8% of the airport's electricity use. The state will save an estimated \$1.7 million in the first year alone. Total greenhouse gas emissions eliminated by the system are equivalent to those from 1,248 passenger vehicles every year.



Quick Facts



5.33 MW

Total System Size



12,592

Total Number Of Panels



SunPower® Long-Span Carport and Dual-Tilt Rooftop Solar

Installation Type



\$1.7 Million

Estimated First-Year Savings



8%

Electricity Offset



SUNPOWER®
Commercial Dealer

“There is so much to like about this improvement project. It's good for the environment, it will save the state money, and it provides covered parking at the airport.”

David Y. Ige
Governor of Hawaii

When it comes to energy, Hawaii has ambitious plans. In an effort to reduce the state's reliance on imported fossil fuels, Hawaii became the first state in the U.S. to set a goal to be 100 percent powered by clean energy by 2045. To reach these goals requires a fundamental restructuring of the energy system, from the public sector to the private, from large-scale industry to small mom-and-pop shops – all of whom are going solar at record rates.



At the Daniel K. Inouye International Airport (HNL), the islands' commitment to solar is visible to any traveler upon takeoff or landing, as more than 28,000 solar panels shine up from the rooftops of terminal buildings and parking structures.

Phase I of the project was installed back in 2013, and in 2019 Sunspear and its joint venture partner PLS Power completed the second phase as part of the 20-year Energy Savings Performance Contract (ESPC) between HDOT and Johnson Controls Inc.

The team installed several innovative renewable energy systems across the airport; A 1.9 MW system was installed on the roof of the Overseas Terminal, while two garage-top canopies were constructed for its parking structure. Another long-span canopy and a 1 MW energy storage system was installed on the 7th floor deck of the Inter-Island Terminal.

These projects, comprising a total of 5.3 MW with 12,592 SunPower panels, will provide an estimated HECO electric bill savings of \$82 million to the state's coffers over the next 25 years. And because the solar installations are being paid for by the money they save, taxes will not be affected by the costs.

Working with Sunspear enabled HDOT to choose SunPower panels, the most efficient on the market today,¹ backed by the industry's most comprehensive 25-year warranty.²

The solar installed by Sunspear at HNL will offset 5,777 metric tons of carbon dioxide every year – the equivalent produced by nearly 6.4 million tons of coal burned, or 650,000 gallons of gasoline consumed.³

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¹ Based on survey of datasheet values from websites of top 20 manufacturers per IHS, as of Jan. 2020.

² Based on Oct. 2019 review of warranties on manufacturer websites for top 20 manufacturers per IHS 2018.

³ According to the US EPA's Greenhouse Gas Equivalencies Calculator, accessed June 2020.