



HAWAIIAN ISLAND POWERED BY SOLAR ENERGY AFTER DARK

“The system will provide power on demand to meet evening peak on the island’s grid. The solar farm will power the Powerpack system each day and allow it send 10 to 13MW to the grid each evening to meet electricity demand in the heavy-use 5 p.m. to 10 p.m. hours.”

David Bissell, President and CEO, KIUC

OPPORTUNITY

Kauai Island Utility Cooperative (KIUC) has made significant progress towards its goal of meeting 70% of the island’s energy demand with renewables by 2030. Nearly 95% of the island’s daytime load is supplied by utility-scale and rooftop solar on the sunniest days. However, solar power is inherently intermittent so there is need for storage to shift the solar energy towards evening peak loads. KIUC signed a 20-year PPA for a 13MW solar system paired with a 13MW / 52MWh Powerpack system.

SOLUTION

The project uses Powerpack 2, Tesla’s latest generation storage system, which includes a Tesla inverter. Tesla is also providing a performance guarantee in the form of a Capacity Maintenance Agreement (CMA) that will ensure a minimum amount of system energy available that KIUC can utilize each year during the term of the PPA.

RESULTS

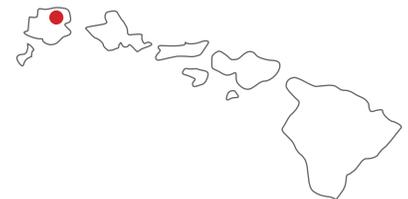
KIUC will utilize the storage system for generation shifting and ramp control. KIUC will dispatch the asset so that the solar energy can be shifted to provide energy from 5pm-10pm. This will prevent over generation and solar curtailment during the middle of the day and reduce the need to rapidly ramp up expensive peaker plants in the evening. By pairing a large-scale solar plant with storage, KIUC can continue to increase the renewable penetration on the island, while still being able to provide reliable, clean, and cost-effective energy to its customers during times of peak demand.

Customer

KIUC

Location

Kauai Island, Hawaii



Solar Power System

13MW

Powerpack System

13MW / 52MWh

Applications

Solar energy shifting

Commissioned

2017