



Sunetric Commercial Case Study

D.OTANI PRODUCE

"We rely heavily on electricity because we have a one-acre refrigeration system that keeps our produce fresh. Unfortunately, with the rising cost of oil, our electricity bill more than doubled since 2006 so we needed to do something quickly that would help us to reduce our electricity bill." - Dwight Otani, D. Otani Produce Founder/Owner

In November, 2008 Sunetric successfully designed and installed this 223kW high-efficiency PV installation at D. Otani Produce in Kalihi, Hawaii. The project consists of 1,224 panels, which took seven weeks to install produces enough energy for around 40 homes for one year.

With the system becoming operational at the beginning of November, 2008, D.Otani Produce hopes to save around 20 percent off its monthly electricity bill – roughly \$80,000 per year.

"This was the largest PV system we had installed to date on Oahu, and we were able to do it in less than two months," Sunetric, President, Sean Mullen. " After meeting with Dwight, our engineers developed a tailored solution that met D. Otani's energy needs, while our crews were able to retrofit the system seamlessly into the existing roof structure."

Project Summary

Annual Electricity Production: **377,673 kWh**

Location: Kalihi, HI
System Size: 223 kW Roof Mount - Non-penetrating
Completed: November, 2008

System Description:

- 1,224 SolarWorld SW- 175 W Modules
- One SatCon, PowerGate Plus 250 W Utility Interactive Inverter
- Professional Solar Racking, RoofTrac
- Fat Spaniel PV Energy Monitoring System
- 10 – Year Installation Warranty

Benefits: The energy saved with this PV system in one year is equivalent following greenhouse gas reductions:

- Annual greenhouse gas emissions from 65 vehicles
- CO₂ emissions from 38,137 gallons of gasoline consumed
- CO₂ emissions from 788 barrels of oil consumed
- CO₂ emissions from 41 homes' electricity use for one year
- Carbon sequestered by 8,693 trees grown for 10 years
- Carbon sequestered annually by 3 acres of forest preserved from deforestation
- Greenhouse gas emissions avoided by recycling 114 tons of waste instead of sending it to the landfill

Value of Annual Electricity Production: **\$80,000¹**

¹ Approximation based on an average per kWh price of \$0.205. Average rate based on Hawaiian Electric Company's Effective Rates Summary for Hawaiian Electric Co., Maui Electric Co. and Hawaii Electric Light Co. published July 2010 for Schedule H - Cooking, Heating, A/C, Refrigeration. [see http://www.heco.com](http://www.heco.com)

² 5.5MW (39.76%) of 12.576MW total Net Metered Systems as reported by Hawaiian Electric Co., Maui Electric Co. and Hawaii Electric Light Co. in the *Net Energy Metering Status Report* filed with the Public Utilities Commission on January 26, 2010.



Responsible for 40% of
Net Metered PV in Hawaii²



Hawaii's Solar Authority