



Go Solar Santa Cruz

COMMERCIAL SOLAR CASE STUDIES

Join your neighbors in saving energy and money!



Palace Business Solutions Building

LIVE OAK

System Size: 31.5 Kw

System Details

- Number of panels: 126
- Panel manufacturer & model: REC Solar Model REC250PE-US
- Inverter manufacturer & model: Fronius USA model IG Plus 10.0-240

Date Installed: June 2014

Installer: Day One Solar Inc.

Estimated solar production per year: 43,234 kWh

Baseline utility energy usage: 80,800 kWh

Portion of electricity demand met by system: 53%

Average utility cost at time of installation: \$0.18/kWh

Average cost of solar electricity over 20 years: \$0.084/kWh

Final net cost of the system after the 30% Federal Investment Tax Credit and tax avoided due to 6 year MACRS depreciation was under \$40,000.



Palace Business Solutions owns a combined corporate office and warehouse facility built in 1988 in the Live Oak area of Santa Cruz. With several retail outlets being Green Business Certified and having a customer base that favors green operations, goods and services, it was a natural decision to move forward with purchasing and installing a roof-mounted solar photovoltaic (PV) system. Solar PV complements other energy efficiency investments the company has made in EnergyStar computers, solar tubes, fuel efficient vehicles, and interior and exterior lighting upgrades. Because Palace expects to make more energy efficiency improvements in thermal paned windows, HVAC replacement and company servers, they installed a system that meets 53% of their current electricity demand.

According to the state of California the price to install solar in homes and business has gone down 37% since 2010.

In making the decision to go solar, Palace first assessed their roof orientation and condition.

They determined that a new roof was in order and

installed a white, reflective surface, welded roof, coordinated at the same time as the solar installation. Although they have a bit of shading on one corner of the roof, the east-west roof orientation offered more than sufficient space for a prime south facing solar array.

An Engineering analysis was done to determine that the existing rafters were structurally adequate to handle the weight of the solar system. The coordination between Day One Solar and the roofer went quite well with the roofer taking warranty responsibility for the solar racking roof penetrations. A challenge for the project was installing the inverters since the side of the building where the inverters are installed goes almost to the property line. Good relationships and coordination with neighbors proved to be the key to overcoming that challenge. Palace President Roy Trowbride said that Palace “had a fantastic experience with low stress and a high degree of trust in the solar contractor/roofing company.” The entire process took about 5 weeks, including permitting time.

Palace consulted with their CPA on how best to finance and take advantage of available tax incentives. Palace secured a five-year loan for the system and after the 30% tax credit and accelerated depreciation tax benefits, the system will pay for itself five to six years. They also anticipate purchasing an online dashboard to monitor the system once prices for that component decrease. Palace Business Solutions continues to be a leader in green solutions for commercial business operations.

Do you have any questions about solar installation in the City of Santa Cruz?
Contact our Climate Action Program at (831) 420 - 5113 | www.cityofsantacruz.com/GoSolarSC