

CASE STUDY



5.5 Acre Solar Orchard Juices Up Limoneira Company

Ventura County, Calif. is home to an outstanding example of a company that practices sustainable agriculture. Limoneira Company, founded in 1893, helped lay the foundation for California's citrus industry. Today, the company has over 7,000 acres in agricultural production of lemons, avocados, oranges, specialty citrus, pistachios and cherries.

In a continuing effort to further its sustainability practices, Limoneira has partnered with Perpetual Power of San Francisco to design and install a 1.2MW DC solar electric system, creating a 5.5 acre solar orchard on its property in Santa Paula, Calif. The system includes 6,400 Mitsubishi Electric lead-free 185Wp photovoltaic modules and will supply a third of the company's current energy needs.

Underneath the solar array, Limoneira has planted native vegetation as a cover crop to minimize dust on the modules that could affect the system's performance. The native vegetation allows the company to avoid spraying weed killer on the soil, and miniature sheep graze the vegetation to control the height of the plants. The system includes an educational observation deck with a 'green' roof above the power station.

Other environmentally friendly practices include the company's organics recycling program that converts green waste to mulch and compost; its biological pest management that minimizes the use of pesticides; and its water management system that uses water in the most efficient and uniform manner possible. Inside its factories, Limoneira has installed light sensors and energy-efficient lighting and refrigerator doors to help lower energy use.



*"Reducing our dependence on non renewable energy is key to our long term sustainability and stewardship position of the company."
Harold Edwards, President and CEO, Limoneira Company*

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LIMONEIRA COMPANY

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LIMONEIRA COMPANY (cont.)

The company's solar electric system is expected to produce 2,000,000 kWh of electricity annually. Over the life of the system, the air pollution saved will be equivalent to driving over 3 million miles. This investment in clean energy will keep 1060 tons of CO₂ from entering the environment.

By purchasing the system using a lease agreement, Limoneira Company benefits from a lease payment that is lower than their expected utility bill for the same amount of electricity. Limoneira was able to install the system with no upfront cost and Perpetual Power guarantees system performance and provides system maintenance for the duration of the lease period.

* Based on estimates from www.climatecare.org.

FOR MORE INFO:

www.mitsubishielectricsolar.com

www.p2solarsolutions.com

www.limoneira.com



PROJECT DETAILS:

System Size: 1MW AC, 1.2MW DC

Location: Santa Paula, California

Solar Panels: 6,400 Mitsubishi Electric
185Wp modules

Inverters: Two Satcon 500kW inverters

Mounting System: P2 Oasis

System Integrator: Perpetual Power

Estimated Annual kWh: 2,000,000 kWh



Mitsubishi Electric
5665 Plaza Drive
Cypress, CA 90630
714-220-2500
pv@meus.mea.com
www.mitsubishielectricsolar.com