ONE SUN
SOLAR DONE RIGHT
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REDWOOD HILL FARM & CREAMERY CASE STUDY

COMPANY BACKGROUND: Redwood Hill Farm & Creamery is known for its superior goat milk products from goats bred and raised on its own local dairy. "… we're concerned about climate change and have always been concerned about how much energy we're using to make our products," says Jennifer Bice, owner. "Switching our whole creamery to solar also helps mitigate the fact that we have to transport our products to distant areas."

Project Overview

Location:	**Sebastopol, CA**
Completion Date:	**October 2010**
Size of System:	**586 kW**
Peak Capacity:	**834,998kW hours/year**
PV Surface Area:	**80,000 sq.ft.**
No. of Modules:	**2,548**
Products:	**Siliken 230w modules; PV Powered 260kW inverters; Iron Ridge racking components; Quick Mount posts.**

THE CHALLENGE:
Redwood Hill Farm relocated to a leased space in a former apple processing plant in 2003, investing in remodeling to suit its creamery operations and adopting energy efficiency measures to address the energy-intensive nature of food production. The next step for the creamery was to convert to solar power and that presented new challenges. The first challenge was to install a new electrical service because the existing utility account and meter associated with the production facility belonged to the property owner and was undersized for the growth needs of Redwood Hill. Next, the solar project required not only obtaining permission from the property owner, but also negotiating an extended property lease. And, as there are multiple tenants in the building, a separate roof lease to cover the 25-year life of the solar system was required. "Of course, all of this takes time, negotiations and lawyers…" Ms. Bice says. Ultimately, she felt overcoming the challenges was worth the effort to switch to renewable solar electricity.

THE SOLUTION:

One Sun Inc. worked with Redwood Hill executives, the property owner, Sonoma West Holdings, and Pacific Gas & Electric to install the new electrical service and tie it into the building.

Finally, 2,548 Siliken 230w solar panels, made in Carlsbad, CA, were installed at a 10 degree tilt over 80,000 sq. ft. of roof surface and connected to two PV Powered 260kW inverters.

The Exchange Bank of Sonoma County provided project financing.

THE BENEFITS:

- The system will provide 100% of the facility's energy requirements.
- Rebates and tax incentives paid for 50% of the project cost.
- The system will save the company approximately $1.5 million in utility costs over 10 years
- The payments on the loan will be nearly the same as month utility bills but after that the electricity will be free.
- The 586 kW DC solar PV system reduces the amount of carbon dioxide emitted into the environment by 810,840 lbs. The equivalent to removing 54 cars from the road or powering 76 homes.