

When it came to Solar, Shafer Vineyards chose Premier Power

Background

In addition to its award-winning wines, Shafer Vineyards is widely recognized inside and outside of the wine industry for its leadership and commitment to sustainable farming and the environment. So, it came as no surprise in December 2004 when it extended that commitment and began powering its operations with clean, renewable solar energy.

Reuse & Recycle

However, before it could invest in a photovoltaic system, the winery needed to be sure the installation itself would be compatible with its "future farming" philosophy. Shafer Vineyards places a high value on how it uses its land as well as its natural resources. The winery reuses and recycles its water, makes its own compost for fertilizer and partners with owls, songbirds, hawks, bats and other wildlife to cultivate successful vineyards.

The Next Step in Sustainable Farming

With that in mind and knowing available land was at a premium, Shafer Vineyards chose Premier Power to design, engineer and install a photovoltaic system that could meet up to 100 percent of its electrical needs, yet work in harmony with the land and natural resources. Premier Power conducted a site assessment and feasibility study, then designed and installed a PV system, specifically to take advantage of existing roof space.

Project Overview

Project location Napa, CA
System Completion December 2004 & June 2008
Solar System Types . . . Roof Mount & Ground Mount
Total System Size 229.11 kW-DC

System Configuration

PV modules used 784 GE 165W
570 Sharp 175W
Inverters 45kW, 30kW Xantrex & IG4500 Fronius

Environmental benefits, annually

Greenhouse gases reduction (CO₂) 652,262 lbs
Cars not driven 54.16 cars
Gasoline not consumed 33,582 gallons
Oil not consumed 688 barrels
Coal not burned 1.54 railcars
Offset CO₂ emissions from electricity
use from homes 39 homes
Forest preserved from deforestation 2.1 acres

Source: U.S. Environmental Protection Agency
<http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

“Hey, the sun is shining and the meter is running backward. It is so cool!”

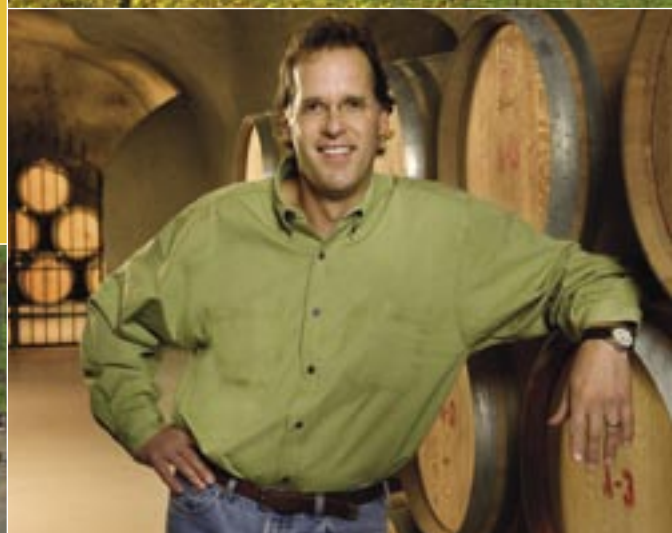
Doug Shafer, President of Shafer Vineyards

In order to produce the amount of electricity Shafer Vineyards needed, Premier Power designed a system that would take advantage of both the east and west sides of the main building's roof. This configuration enables the solar arrays to produce electricity from early morning and throughout the day as the sun rises and sets. Premier Power placed an additional south-facing array on the winery's tractor barn along with a small ground-mounted system to assure Shafer Vineyards meets its solar energy goal.

Since installing the first PV system in 2004, Shafer Vineyards business has grown and, while its original solar energy system continues to supply renewable electricity for its operations, over the years the demand began to exceed its capacity. Rather than pull power from the grid to make up the shortfall, in 2008, Shafer asked Premier Power to come back and see if it could add to the system to meet the new demand. As a testament to its environmental commitment, Shafer Vineyards even considered re-purposing some of its land in order to meet its 100% solar power goal. Premier Power conducted several site surveys for orientation and shading issues, then designed and installed two ground-mounted arrays on the shore of an irrigation pond, maximizing the winery's land use, assuring Shafer Vineyards could continue to meet its solar energy goal.

Solar, Environmental and Financial Benefits

“In the first three weeks of going live, during overcast winter days, the entire winery used only 15 kilowatts of power from PG&E, the same amount of energy the average home consumes in 12 hours,” said Doug Shafer, president of Shafer Vineyards. “We see solar power as the next step in sustainable farming. Going solar is our way of treating the air as well as we treat the land.”



www.premierpower.com
877.939.0400

CA License# 831223



Premier Power
Your solar electricity specialists