



CASE STUDY Sonoma Wine Company

CHALLENGE

Reduce energy usage and expense in an industrial facility that consumes large amounts of natural gas-heated hot water and electricity without introducing high upfront capital costs.



"In vetting renewable energy solutions for Graton, we found Cogenra was the perfect match - high impact without high cost."

- Derek Benham, founder and owner of Sonoma Wine Company

Background

The Sonoma Wine Company is the North Coast's largest contract services winery, partnering with wine producers of all sizes to crush in excess of 7,500 tons of grapes, bottle over four million cases and store and service over 65,000 barrels of wine each year. The company owns and operates six facilities throughout California's wine country.

In the 180,000 square feet Graton facility about ten miles west of Santa Rosa, the Sonoma Wine Company operates bottling, wine processing and tank and barrel storage services for nearly three million cases of wine. The company has been recognized as an EPA Climate Leader since 2005 for its green house gas reductions and within the wine industry for its sustainable winemaking practices. It has implemented a range of energy efficiency and water conservation measures in Graton.

Challenge

In addition to its electricity consumption, Sonoma Wine Company uses large amounts of natural gas to heat water for its wine processing, sanitation and barrel services operations. The executive team was tasked with finding an on-site renewable energy solution with high environmental benefits

that best addressed the facility's energy mix and did not require a large capital investment.

Solution

Sonoma Wine Company found that they didn't have to choose between their energy and hot water needs—they could have both. Cogenra Solar, based in Mountain View, California, provides solar cogeneration systems that combine photovoltaic (PV) and solar thermal technologies to deliver renewable heat and power from the same solar unit.

Cogenra engineered the system and financed 100% of the installation with its Heat & Power Purchase Agreement (HPPA). Under the HPPA, Cogenra owns and operates the solar cogeneration modules and Sonoma Wine Company purchases the thermal energy and electricity generated at guaranteed rates for the duration of the contract. Cogenra offered an encompassing solution that aligned with the Sonoma Wine Company's energy demands and environmental goals while eliminating all upfront capital and ongoing maintenance costs of the project.

The Graton facility underwent an extensive site and energy usage evaluation to determine the most effective size of the

SOLUTION

Cogenra Solar's cogeneration technology that produces renewable heat and electricity, financed by its Heat & Power Purchase Agreement (HPPA).

BENEFITS

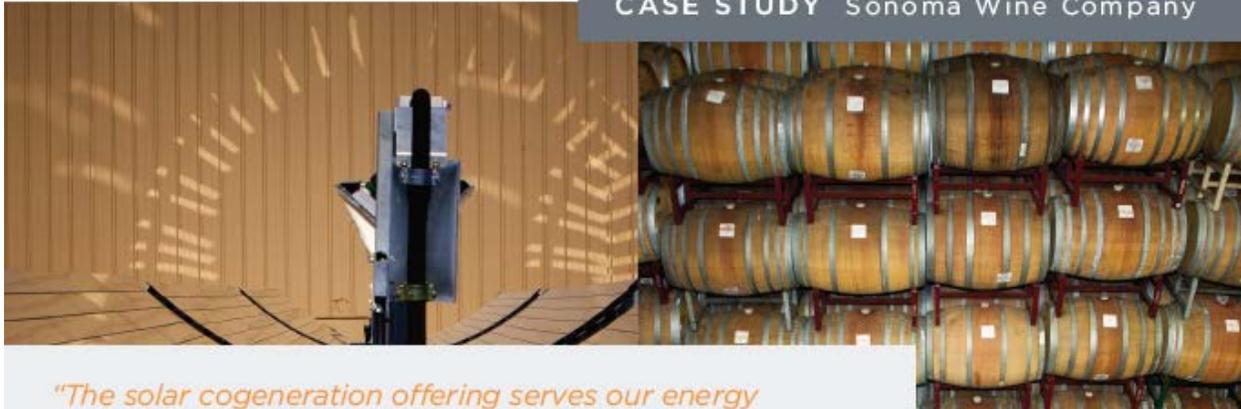
- Immediate savings and a hedge against rising electric and gas rates
- Eliminates capital investment & ongoing maintenance responsibilities
- Strengthens the facilities commitment to environmental sustainability



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"The solar cogeneration offering serves our energy requirements for hot water and electricity, and Cogenra's innovative financing solution provides all the benefits and savings of on-site generation without the capital costs."

- Derek Benham, founder and owner of Sonoma Wine Company

installation as well as the engineering requirements for seamless integration with the facility's existing natural gas water heaters and electrical equipment. The project called for 15 individual Cogenra SunBase™ modules, equating to 272 total kilowatts of electric and thermal output.

In less than two months from breaking ground, the solar cogeneration system was complete and delivering energy to support the facility's winery operations. Erected directly adjacent to the building, the solar arrays occupy less than 13,000 square feet of a previously unused plot of land.

The solar cogeneration system will displace approximately 64,000 kilowatt-hours and 12,500 therms of natural gas annually, a figure that increases dramatically in areas of greater sun than the north coast wine area. The solar thermal element will heat water to 165°F to sustainably fuel the facility's tank wash and Tom Beard™ machine, a state of the art automatic wine barrel washing system. More than 800 barrels undergo three wash cycles per three-person shift, with the water from the last cycle recycled to wash the following barrel.

Benefits

Since 1970, electric and gas utilities rates have increased by more than 650 percent and 1360 percent respectively. With low energy prices for the lifetime of the 15-year contract, Cogenra's Heat & Power Purchase Agreement (HPPA) serves as a hedge against future rate hikes. As utility rates continue to increase, the Sonoma Wine Company will reap more savings.

Additionally, the HPPA freed the Sonoma Wine Company from all upfront costs and ongoing maintenance responsibilities associated with the facility, allowing cash resources to be allocated to other business priorities.

Cogenra's solar cogeneration system builds on the Sonoma Wine Company's strong track record of environmental stewardship. The hybrid solution offers a clean alternative to grid-fed electricity and limits the amount of natural gas burned on-site, improving local air quality. The 272-kilowatt installation will eliminate more than 120 metric tons per year of greenhouse gases, the equivalent of removing nearly 25 passenger cars from the road annually.



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