

## **Eco-wineries turn wine red, white and green**



John Conover, general manager and partner, looking over solar panels on the roof of the Cade winery in Angwin, Calif. The LEED certified winery is one of the greenest in the state. The winery was made with recycled materials, is solar powered and is organically farmed.

John Conover was looking for the best place to grow the Napa Valley’s famous cabernet sauvignon grapes. Turns out the same southwest-facing, sunny hillside that gives him great grapes also raises a mean crop of solar panels.

“We wanted to be as green as we can be,” says Conover, a partner in the Cade winery, which was on track for Gold certification under the U.S. Green Building Council’s LEED (Leadership in Energy and Environmental Design).

Green wine is catching on.

“We’re seeing a trend toward more sustainable wineries,” says Ashley Katz, spokeswoman for the Green Building Council.

The council doesn’t track industries specifically, but Katz says at least four wineries already have received LEED certification and more than a dozen more are going through the process. Wineries with Gold-certified facilities include Stoller Vineyards in Dayton, Ore., and Hall St. Helena in the Napa Valley.

Meanwhile, solar panels have become common across wine country, and some wineries are rethinking water usage. Jackson Family Wines, makers of the popular Kendall-Jackson chardonnay, announced it will recycle water used for rinsing wine barrels and tanks, resulting in significantly less water and energy use.

In dry California, water conservation is the new frontier of winery design, says Roger Boulton, who is helping to create a planned Platinum LEED-certified winery at UC Davis.

“The real question in the future will be, how many times did you use the water? And ‘one’ will not be a good answer,” he says.

The under-construction university teaching winery, privately funded and part of the UC Davis Robert Mondavi Institute for Wine and Food Science, is packed with sustainable operating features, including on-site sourcing and efficient use of both water and energy.

The winery, which aims to be the first to get Platinum certification, the highest level, will be fully solar-powered, including during harvest, the peak period for a winery’s energy consumption. Eventually, all of the water used for cleaning will be from large tanks that will collect rain from the adjacent academic building during the winter and use it throughout the year.

“We want to set an example of what’s possible with existing technologies,” says Boulton, UC Davis professor of viticulture and enology.

At Cade, which hopes to get its entire facility Gold-certified by spring, solar panels cover 60 percent of the roof, providing more energy than the winery uses nine months out of the year. The panels even run two electric car chargers for use by customers who have plug-in wheels.

Steel used in the building was recycled — even a stunning banquet table is made from the beaten and burnished hull of a submarine — and the concrete is 30 percent fly ash, which is recycled ash from coal-fired power plants.

The insulation? Old blue jeans that were shredded and sprayed into the walls.

Another big energy saver: 15,000 square feet of caves tunneled into the mountain that provide year-round storage for the wines with no heating or cooling. All landscaping water is recycled; bathrooms feature low-flush toilets, and for the gents, waterless urinals.

Jackson Family Wines, a supporter of the Davis winery, has also worked with Boulton and others to create a water reuse program using a filtration cleaning system that also retains heat. The company recently completed a yearlong pilot program and is implementing the system at the Kendall-Jackson winery in Sonoma County. Winery officials estimate a water savings of 6 million gallons a year.

In some ways, what's new is old in the wine industry.

In the days before power plants, wine country pioneers had no choice but to go green. "People built buildings that were aligned with the way the sun tracks in the sky; they aligned their building east-to-west to take advantage of crosswinds," says Conover.

Cade designers took a tip out of that old book, designing the 8,000-square-foot fermentation building to track daylight and maximize breezes. Only about 600 square feet — the winemaker's office and employee break room — are artificially heated and cooled.

"We've come almost full circle," says Conover.