wine gone green

WHEN SCIENTISTS STEVE OSBORN and his wife Kimberly Wagner sought a south-facing hillside for their winery and small vineyard, they planned to replicate the traditional practice of producing "slow wine," eschewing the use of pumps in favor of gravity tanks—a 500-year-old winemaking technique brought up to date. Just half a mile from the Hudson River in Marlboro, Stoutridge Vineyard officially opened in 2006 and currently produces about 15,000 cases of wine a year made from grapes grown only in New York State.

Osborn and Wagner purchased the 10-acre plot in 2001 "sight unseen," knowing that the slope and soil were ideal for what they wanted. The land hadn't been worked for some 30 years, and when Osborn was clearing it he unexpectedly found an 1855 stone wall that was part of an old farmhouse of the former Marano Winery that operated between 1902 and 1919.

"We didn't know that this was here," explains Osborn. "We found the wall and then found out that this was a former winery and a bootleg distillery."

In 2005, Osborn started to restore the old farmhouse. He also started constructing the expansive winery that would use gravity flow rather than pumps to move the wine from vat to barrel. The method treats grapes and juice gently while separating solids and liquids over a period of time. The minimal filtration preserves the integrity, taste and the aromatics of the wine. "The less you process wine, the more it affects the quality and the taste,"

text by abby luby
photos by jerry novesky

Osborn says. "We do as little filtering as we can; it takes about a year for the gravity process to filter the sediment out of the wine."

Most of the winemaking facility actually is underground—Osborn says the energy-efficient retaining walls function like geothermal structures, using the earth's constant 55° temperature to help maintain a steady temperature inside the winery year 'round. "Wineries have always been built into hillsides to moderate the temperature by using the energy from the earth," Osborn says. "This is a long, long tradition—they just didn't call is *geothermal*, they called it a *wine cellar*."

By 2005, when the system was finally up and running, the energy savings surprised both Osborn and Wagner. "With gravity, you're doing less processing and using less machinery, which lowers our electric bill. Our design turned out to be very efficient in terms of energy consumption," he notes. "Building into a hillside and building a gravity system cost a lot initially, but in the long run you save a lot."

With a state-of-the-art system of pulleys and weights, Osborn, unassisted, can tip giant tanks of newly pressed wine into large vats to be siphoned off to the wooden barrels. (The entire facility—from crushing grapes through bottling, corking and packing—is designed to be ultra-efficient and, in fact, can be operated by one person.)

While constructing the winery, Osborn and Wagner initially rejected the idea of using solar panels because of the high cost—it was an expense that would take too long to pay off. But as the cost of electricity went up, the cost of

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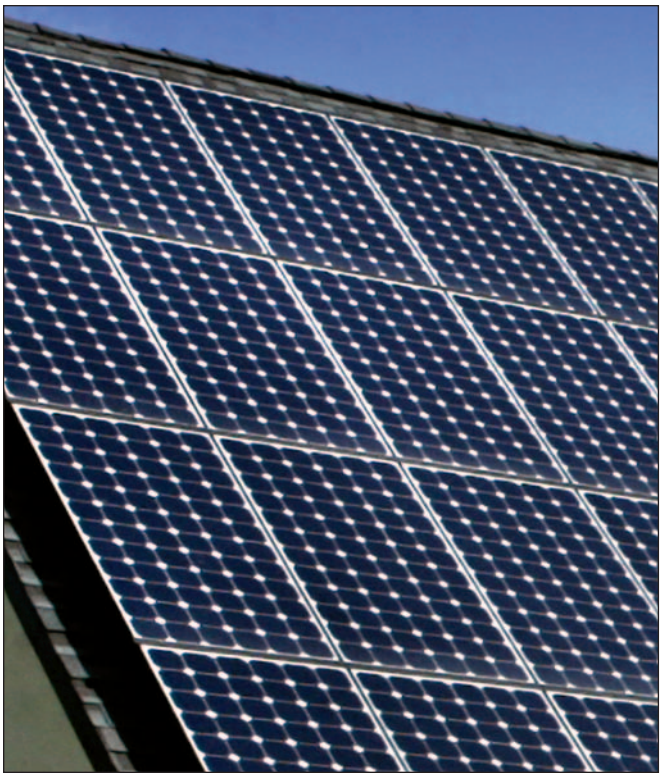
solar technology came down, and Wagner re-worked the numbers and realized solar was economically feasible.

"With New York State and federal subsidies supporting solar, it made economic sense to use it," Osborn recalls. "We saw the winery as being truly green, which in turn would attract more customers and agri-tourists. The additional sales would help the solar pay for itself."

The 2,100 square feet of solar panels gracing the Stoutridge roof will take about seven years to pay off. The economics, Osborn says, "is a no-brainer."

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Since Stoutridge officially opened in 2006 they have produced about 15,000 cases of wine a year. Starting next year, Stoutridge will release estate-bottled wines from grapes grown solely on their own vineyards. The varietals: Refosco, Pinot Blanc, Sangiovese and a Reisling. A Pinot Noir will be produced in 2010.

Osborn expects that the warmer temperatures he is already seeing from the impact of global warming also will help save energy. “Last year, the Hudson Valley was slightly warmer than the Napa Valley,” he claims. “When I was crushing grapes for fermentation last year, it felt like California; we were warmer than a cool year in Napa.” Osborn says projections show a definite shift for wine growers in the future. “If you map wine regions you can see that 50 years from now the center of winemaking in the United States will be right here in the Hudson Valley.”

That the old Marano winery was also a bootleg distillery was serendipitous, inspiring Osborn to consider distilling. “Even though my wife and I are trained scientists, we began to believe in karma,” Osborn says. “In 2003—the same time we learned the farm was also once a distillery—New York State passed the Micro Distillers Act.” Among other things, the new law allowed distilleries that produced less than 35,000 gallons a year to pay a small annual fee of $1,400 instead of the customary $51,000.

Three hand-made copper stills from Germany form the core of Stoutridge’s distilling operation. “Two of the distillers are for brandies and whiskeys,” Osborn explains. “The smaller stills are used for un-aged, clear brandy, which is different from vodka and not as pure. The smaller still is also good at imparting specific tastes. There’s a lot of art involved in what ingredients you want in the still. The whiskey and brandy need to age a few years before [they’re] ready.”

Osborn, aware of the numerous fruit farms in the Hudson Valley, decided that running a sustainable winery and distillery meant using local grains and fruits for his whiskeys. He started buying grains from Ulster and St. Lawrence Counties; by the end of this summer, Stoutridge will be selling vodkas and gins, some flavored with local fruit. “We will be producing vodka, gin, whiskey, brandy, grappa—anything that represents the flavor of the region,” Osborn notes. “I have a plum tree growing on the Kent Farm, up in Milton, and I will use it to make some slibowitz; I have a peach tree growing on Glories Farm and I want to make a peach flavored vodka.”

The distillery operation, too, figures into the energy conservation and production equation. Distilleries are usually run in the winter because the still’s heated condensers produce a lot of heat. The hot water produced by the stills is recirculated throughout the radiant heating system in the building. “In distillation, you have all this hot water—so what do you do with it?” Osborn says. “As the weather gets colder, we increase our distilling output because it is convenient and we can heat our building that way. We can stay open year ‘round with virtually no heating costs.”

The design of the facility is so efficient, in fact, that the roof-top, 2,100-square-foot solar array, the largest in Ulster County, can produce up to 30 kilowatts of electricity on a sunny day—more than is needed to run the facility. Until recently, that surplus was wasted. The state's new "net metering" law, however, mandates that electric companies buy back excess power produced by businesses that generate power from the sun, wind or farm waste. "If businesses produce electricity within certain parameters, you get to run your electric meter backwards," Osborn says. "That's a key

part of it—if we're not able to run the meter backwards we can't get that savings that helps reduce the number of years to pay it off." Overall, Osborn says, "Everything we've done to be green is now paying for itself."

These state-of-the-art energy conservation measures, the ultra-efficient design of the buildings, a licensed, state-of-the-art chemical testing lab, are all designed, of course, to produce wine and spirits—and tourism traffic. Indeed, making Stoutridge one of the Hudson Valley's primary agri-tourism destinations was Osborn's main objective. The facility is designed to handle groups as large as 60 for guided tours and tastings. "From the production side of our business, we produce alcohol; from the business side we are agri-tourism, entirely. We get busloads coming here—that's why we built this place," he smiles. "When tourists arrive, we can be ready for a tasting in 10 minutes."

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