

How Low Can They Go? Oregon Wineries Tackle Carbon Reduction

A group of 14 wineries completes a challenge to measure, minimize and offset their greenhouse gases

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What would happen if Oregon became too warm to consistently produce high-quality Pinot Noir, the notoriously sensitive grape behind its signature wine? A group of wineries and growers concerned about the effects of climate change have banded together to try to reduce their environmental impact. Now, nearly three years after they started, 14 of them—representing about 20 percent of the state's wine production—have completed the Carbon Neutral Challenge, a project to measure and cut greenhouse gases emitted by farming vineyards, producing wines and selling them globally.

More than a dozen other wineries around the world, including Parducci and Rodney Strong in California, already claim to have achieved carbon neutrality, reducing the amount of greenhouse gases they produce and then balancing out the remainder with offsets. But this is the largest group of U.S. wineries to go through a voluntary program together to reduce their carbon footprint.

"A lot of Oregon's wineries were motivated to look at what they can do to be part of the solution," said Andrea Durbin, executive director of the Oregon Environmental Council, which has partnered with the Oregon Wine Board on the Carbon Neutral Challenge program since 2007. "The wine industry sees themselves as the canary in the coal mine."

"As a whole, the wine industry may not be the biggest contributor to greenhouse gas emissions, but we're really impacted by climate change," said Alison Sokol Blosser of Sokol Blosser, one of the 14 who completed the program. "As the heat units rise, we're going to start seeing more concentration in the wines, we're going to see higher alcohol wines, and then we may also start to see other varietals being planted that are going to grow in warmer climates."

The 14 that have completed the challenge are Abacela, Adelsheim, A to Z Wineworks/Rex Hill, Chehalem Winery, Cooper Mountain Wine, King Estate, Left Coast Cellars, Lemelson Vineyards, Mahonia Vineyards and Nursery, Sokol Blosser Winery, Soter Vineyards, Stoller Vineyards, Willamette Valley Vineyards and Winderlea Wine Company.

Another dozen or so are still working their way through the program, continuing to figure out how to measure and reduce their emissions. Durbin explained that some smaller wineries ran into hurdles because they did not have the organization or staff to collect all the data. And in the current economy, the cost of the program was also a factor; some could not make needed investments to reduce emissions or support the offsets.

In the challenge's first step, participating wineries and vineyards assess their greenhouse gas emissions, both direct emissions, such as those produced by company vehicles, and indirect, such as those made while generating electricity the wineries purchase. They did so using a carbon inventory tool developed for the wine business by Ecos Consulting, based on international standards supported by the Climate Registry, a national system for public reporting of emissions. All of the participating wineries and vineyards became members of the Climate Registry, and six of them had their emissions verified by an auditor, at a cost of \$2,500 per winery.

"When doing this type of greenhouse-gas reporting, it takes two to three years to get an accurate picture of the emissions," says Mat Elmore, program associate for the Carbon Neutral Challenge. He noted that the wineries had a steep learning curve, but as they went through the process, it became quicker and more accurate.

In the second step, wineries and growers work on reducing their emissions and saving on purchased energy. Among the changes they've made are using goats or sheep to mow the grass in the vineyards, installing renewable energy sources such as solar power, and introducing more energy-efficient lighting and cooling systems that can also help save them money.

"It's really quite a rigorous program," said Tony Soter of Soter Vineyards. Many of the participating wineries are already leaders in Oregon's sustainable farming movement, and they wanted to set high standards for themselves. Some wineries went beyond the practices required by the Climate Registry and accounted for employee business travel and shipments of their wine to the end point; these are considered a separate category of indirect emissions in international standards because another business could also be responsible. Soter, for example, is trying out a new bottle that's 30 percent lighter for his 2008 Pinot Noir to reduce emissions from shipping.

In the final step, if participants have emissions they can't eliminate, they balance those out by purchasing offsets. To make the project more meaningful to them and their customers, the Oregon wineries chose to focus on regional offset projects in the agricultural industry: one is Threemile Canyon Farms in Boardman, Ore., the state's largest dairy farm, which is working on a project to collect methane waste from the cows and convert it into biogas. The other two projects are methane digesters in Idaho and Washington that have been on the carbon offset market for some time. The offsets are expected to prevent about 211 metric tons of methane from being released into the atmosphere each year—in terms of its impact, that's equivalent to the amount of carbon dioxide emitted by 770 cars annually.

"For us, it was important to find one or two projects that can be linked directly back to us," said Elmore. That allows tasting-room and sales staff to explain the program more easily to their customers. "A lot of people are skeptical about offsets. We wanted wineries to be able to tell their consumers they can go a couple hundreds miles and they could see this and it's supporting farmers. We wanted to be able to have some close accountability."

The wineries that have completed the program aren't claiming they've achieved true carbon neutrality; they acknowledge that there is still much to learn about tracking emissions in the wine industry, and they would like to require independent verification. Over the next year, they hope to establish a certification program, to be managed by Low-Input Viticulture and Enology (LIVE), a group that oversees sustainable vineyard and winery certification in Oregon and Washington.

And the wineries have also come up with about a dozen issues they want to study further, so they can establish best practices to be used throughout the industry, says Durbin. These include packaging experiments, such as using kegs in tasting rooms or restaurants to reduce bottles or switching to a standard, lighter bottle.

The end goal is to extend the program's impact to other wineries and to other industries in the state. Already, says

Durbin, the introduction of the winery challenge led to Oregon nurseries starting their own initiative with OEC.

The Carbon Neutral Challenge ties in with the Oregon wine industry's larger push to market itself as eco-friendly. About 34 percent of the state's vineyards are certified as sustainably, organically or biodynamically farmed. And this spring, the board rolled out its **Oregon Certified Sustainable Wine** program to the public; already more than 140,000 cases of wine are approved to carry the OCSW labels, indicating that an independent agency has verified the wine is made from certified vineyards in certified sustainable wineries.

The Oregon wine industry's approach to carbon-reduction differs slightly from others, but the program shares many similarities in standards. Countries such as Australia and New Zealand have well-established carbon-reduction programs for businesses, in which wineries have participated. Other wineries in Canada, South Africa and South America have pursued their own efforts based on international standards, while in California, Parducci and Rodney Strong follow Climate Registry standards. A handful of wineries do partial offsets or focus on one wine or a line of wines.

"We're one of or the first group that's solely in the wine industry working together," says Elmore of the Carbon Neutral Challenge. "That's unique and helpful to the wineries; they can call each other. All their issues are really similar regardless of size. So I think a wine-industry-specific program is really beneficial."

Wineries with Carbon-Neutral Programs in Other Regions

Australia: Cullen Wines, Elderton Wines, Wakefield Estates/Taylors (only Eighty Acres range), Zilzie Wines (only Bulloak range)

Canada: Tinhorn Creek

New Zealand: Grove Mill Winery/New Zealand Winery Company, Cape Campbell Wines, Huia Vineyards, Kairimira Ventures Ltd., Yealand Estate Wines, Palliser Vineyards, Dry River Wines Ltd.

South Africa: Backsberg Estates Cellars

South America: De Martino Wines, Santa Carolina, Y + B Wines

United States: Parducci, Rodney Strong, Sonoma-Loeb (only its Chardonnay)