

FOCUS: BERRIES, GRAPES & VINEYARDS

# Don't waste your energy more efficiently!

KAREN DAVIDSON

Since 2005, Bill Redelmeier has operated Southbrook Vineyards from a sustainable perspective. It's always been an idyllic 150 acres near Niagara-on-the-Lake with 70 grazing sheep providing the manure for the vines.

"At Southbrook we make every effort to live in harmony with the land," says the chirpy copy on the website. "From our biodynamic, organic vineyard we produce fine age-worthy wines, most notably Cabernet Sauvignon, Cabernet Franc, classic Bordeaux blends and Chardonnays."

But behind that scenic vineyard and winery was a utility bill that was downright ugly. Redelmeier's energy literacy has spiked with the employment of energy consultant Enviro Stewards Inc. based in Elmira, Ontario. Here's an example of one improvement.

Says Redelmeier, "One assumption is that a storage room has to be 16°C. at all times to keep the wine temperature steady. We have found that we can set the temperature setpoints 1°C. cooler at night and 1°C. warmer during the day without affecting the wine temperature. The coolers work more efficiently at night, and a nice bonus is that electricity is cheaper than too."

Niagara-on-the-Lake (NOTL) Hydro recently commissioned a conventional energy conservation study for Southbrook which was already a LEED gold-certified facility. At the outset, it would seem that there would be few areas to squeeze out more savings, and indeed, the recommendation came back for five per cent savings with a 20-year payback after new refrigeration equipment was installed. However, Enviro-Stewards' subsequent audit discovered that Southbrook could reduce both electricity and natural gas consumption by 40 per cent with a combined payback period of four months. NOTL Hydro then assisted with co-funding implementation of the conservation opportunities. These measures will also reduce greenhouse gas emissions by 55 tonnes per year and reduce the number of solar panels required for net metering by one-third.

"We have become addicted to solar," says Bruce Taylor, president, Enviro Stewards. "Don't waste your energy more efficiently! When North Americans think of green energy, we typically think of installing solar panels. But energy conservation has better

returns than net metering with solar."

In July 2017, Southbrook commissioned a net metering solar project to supply most of the remainder of its electricity consumption. As previously mentioned, conservation measures reduced the number of panels required and hence avoided covering productive vineyard acres with solar panels. In turn, that land can produce wine, about 50 cases per year valued at \$20,000.

"What Southbrook proved is


that addressing conservation first had a substantial economic advantage over proceeding directly to installing renewables," says Taylor. "It's normally hard to show not doing something. In this case, you can literally come to Southbrook and drink the wine that was preserved by conserving energy."

Picture right: Southbrook Vineyards, Niagara-on-the-Lake, ON.



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