

Bedell Cellars Reduces Water Use and Saves on Energy



Challenge

Winery seeks to learn more about sustainable opportunities.

Solution

NYSP2I conducted an onsite assessment and analyzed data obtained to help determine where cost improvements could be made.

Results

- The highest electricity use in a winery is from the chiller units and, on average, accounts for 37% of total use.
- Insulation of the chiller lines can save 4% in energy costs.
- Replacing spray nozzles with high pressure, low volume units on their crush pad can save 245,000 gallons of water per year.

Bedell Cellars

Bedell Cellars is a winery on the North Fork Wine Trail of Long Island and has three vineyard sites that span approximately 80 acres.

Challenge

The winery has been working on sustainable viticulture for many years and is interested in making similar sustainability improvements in its winery operation.

Solutions

New York State Pollution Prevention Institute (NYSP2I) staff visited the facility to perform an onsite assessment of the winery's operations. All water and energy bills were analyzed for trends associated with the seasonal activities. Water meters were installed at key locations to measure water use during harvest. An inventory of chemicals used on site was also completed.

Results

The highest electricity use in a winery is typically associated with running the chiller units. Winebusiness.com shows that, on average, 37% of the total electricity use is attributed to chilling. For Bedell Cellars, tangible energy savings were identified with the insulation of the chiller lines. The payback for insulating the main trunk lines coming off the chillers was estimated to be about one year.

Bedell uses relatively benign cleaning chemicals such as PAA (peroxyacetic acid) to clean and sanitize equipment.

During the three-month harvest period, water use was approximately 40% of the annual water consumption, or about 400,000 gallons. Replacing Bedell's spray nozzles with high pressure, low volume spray units on their crush pad was estimated to save approximately 245,000 gallons per year. The associated payback for this equipment is between 2 and 3 years; other key advantages include faster equipment cleaning and reduced septic system loading.

- The highest electricity use in a winery is from the chiller units and, on average, accounts for 37% of total use.
- Insulation of the chiller lines can save 4% in energy costs.
- Replacing spray nozzles with high pressure, low volume units on their crush pad can save 245,000 gallons of water per year.

Implementation

- Chiller lines were insulated, and ~4% energy savings realized
- High-pressure wash unit was purchased and used on the crush pad, saving ~200,000 gal/year in water

Partners



B

BEDELL

📞 631-734-7537
@ wine@bedellcellars.com
🌐 www.bedellcellars.com
🏠 36225 Main Rd
Cutchogue, NY 11935

For more information please contact us:

📞 585-475-2512
@ nysp2i@rit.edu
🌐 rit.edu/nysp2i
🏠 111 Lomb Memorial Drive, Bldg 78
Rochester, NY 14623