

"Powerit's system has significantly improved our ability to implement demand management, enabling us to really do our part in conserving energy."

Kurt Eulberg, Technical Manager, Gallo Winery

Case Study: E. & J. Gallo Winery



Powerit's Financial & Environmental Impact:



10-20% decrease in peak demand*



ROI: Immediately**



Avoided the generation capacity to power 740 homes***



Equals generation capacity CO2 offset of 1,300 acres of fir tree forests

*Dependent on time of year due to seasonal production. **Includes participation in utility programs. ***Based on the US DOE Residential Energy Consumption Survey, 2003, and based on the definition of a single-family home.

E. & J. Gallo Winery, Fresno, California

Initial Load Management Requirements:

- Chiller
- Compressors
- Wine Pumps
- Filter Pumps

Powerit Solutions Installed:

- Energy Management Hardware and Software
- Konnekt™ Wireless IO
- Energy Sub-metering



E. & J. Gallo Winery is one of the largest winemaking operations in the world, distributing their wines to more than 90 countries and employing more than 4,600 people. Since its foundation in 1933, Gallo has built an international reputation in wine grape growing and winemaking, offering a diverse selection of products from fine table and sparkling wines to distilled, wine-based spirits and beverage wines. Gallo's Fresno facility distills the E. & J.® VS Brandy and E. & J.® VSOP Brandy, which amounts to 50% of their total production, as well as makes grape juice concentrate and wine, which accounts for the other 50%. Out of Gallo's numerous wineries throughout California, the Fresno location is the only one that produces brandy and juice concentrate.

A Powerful Need

Gallo's winemaking operations involve energy-intensive equipment, such as chillers and compressors, leading them to pursue an energy management system that would allow them to reduce their electricity bill as well as conserve power. Gallo was particularly interested in conserving power to help prevent rotating outages from occurring in the region, so they wanted to participate in demand reduction during peak events. Gallo processes perishable products, so to maintain product integrity many of their loads cannot be arbitrarily shut down. Powerit Solutions conducted an onsite energy assessment and identified a number of plant loads that could be carefully curtailed during peak periods of demand without adversely affecting the condition of their wines, production rates, or building comfort.

A Powerful Solution

The energy management system integrates with Gallo's existing load controls, and enables Gallo to manage the individual and specific rule sets for each load. When the system predicts the plant will enter peak demand, it automatically forces designated chillers into a "high-pressure" setting, reducing the demand for refrigeration. The associated compressor then detects an immediate change in cooling demand and unloads, thereby lowering kW for just the right amount of time to avoid the peak. Gallo's plant operations personnel may remove specific chillers from the demand shedding scheme as needed for critical cooling. When the peak demand period ends, Gallo seamlessly resumes normal operation. The energy management system has reduced Gallo's average monthly peak demand with a forecasted financial payback period before utility incentives of only 14 months; after incentives, payback was immediate.

