



Commercial Benefits

REFRIGERATION AND COOLING

Putting the chill on increasing energy costs

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By Lauren Corsey

Refrigeration accounts for 50% to 70% of a winery's energy use and so it is no surprise that wine companies are looking for ways to increase energy efficiency, thereby reducing greenhouse gas emissions and assisting the environmental sustainability of the wine industry.

ENERGY COST SAVING THROUGH WINERY AUTOMATION

Around 27 wineries around Australia and dozens more around the winemaking world are reaping the benefits of automated temperature control systems, such as the New Zealand-created VinWizard software program.

Developed by Wine Technology Marlborough (WTM) in 1995, the VinWizard program has the capacity to save even the smallest wineries up to 30% on the running costs of refrigeration plants using graphical winery temperature control using input from winemakers. The system eliminates the need for winery staff to check on tank temperature several times a day and ensures the maintenance of successful fermentation at the desired temperature.

Salena Estate has 30 fermentation tanks on-site at the time of installation and Grigoriou says that because of the accuracy of control that VinWizard provides, he has been able to add another 50 tanks over the past two years.

"A trial run with VinWizard was conducted with 30 tanks and we decided it was very simple to add more to the system. Every year we will add more tanks if capital allows.

Salena Estate Wines in South Australia's Riverland wine region is impressed with the energy efficiency VinWizard has offered it since installing the system prior to the 2004 vintage.

Chris Grigoriou, general manager, said the cost savings and increase in energy efficiency have been "black and white", as prior to installation, the winery had manual valves and no setting point for refrigeration control.

"After a capital outlay of \$80,000; \$30,000 of which was for the refrigeration, the system has payed for itself over the first vintage. The cost tank-by-tank is minimal and it ties in well with our existing software programs."

Grigoriou chose to include VinWizard's fermentation pumpover support program as part of the installation and has seen incredible savings in human resources as it eliminated the need for the nine staff Salena Estate required to undertake the pumpover across three shifts per day.