

Energy Efficiency for Wineries and Vineyards

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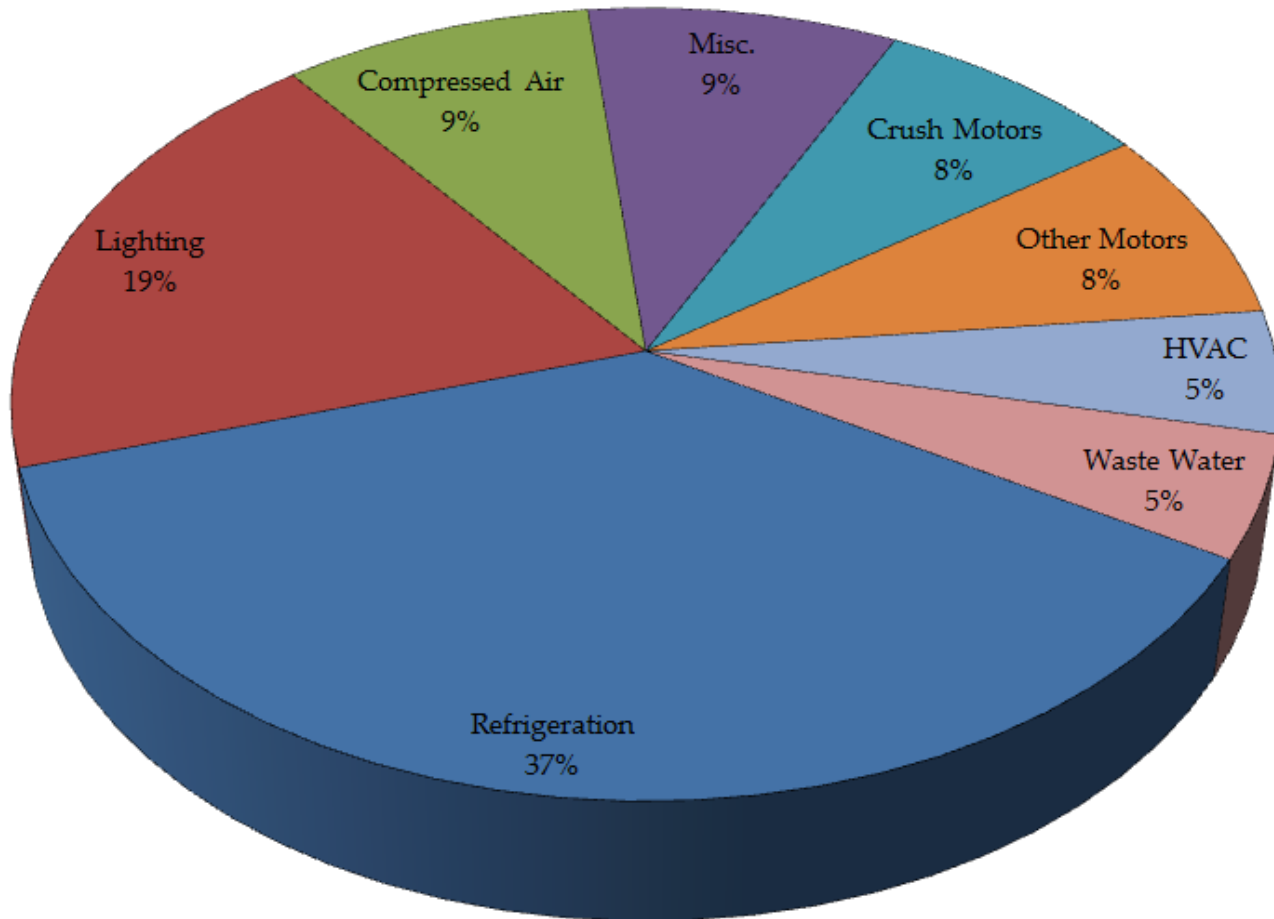
Overview of FortisBC



Why Should I Care?

- Energy can represent approximately **3-8% of winery operating costs, 1-2% of vineyard costs**
 - **Energy savings of 30%**
- Capital costs represent a small portion of lifetime system costs
- Efficient systems can **reduce maintenance costs** and last longer
- More **visually appealing and comfortable** spaces
- **Reduce climate impact** of operations

Energy Use in Wineries



Source: *Product Review: Refrigeration Upgrades for Small Wineries*: By Bill Pregler April 15, 2010

Low-No Cost Winery Opportunities

- Turn lights off
- Program your thermostat
- Install air curtains
- Turn-off air compressors when not in use
- Fix air compressor air leaks
- Reduce air compressor air pressure
- Maintain your HVAC equipment (filters, economizer)



Winery Energy Efficiency Opportunities

- Install LED lighting
- Upgrade refrigeration
 - Insulate pipes and tanks
 - Variable Speed Drives on compressors
 - Improve Controls (floating / compressor sequencing, temp)
- Use electrodialysis instead of cold stabilization
- Condensing boilers & heat recovery
- Install VFD on fan and pump motors



Vineyard Energy Efficiency Opportunities

- Irrigation
 - VFD on well pumps
 - Right-size pump and motor
 - Low pressure / low flow drip irrigation



Recent FortisBC Program Participants

Perseus Winery (Penticton, BC)

- \$1000 Rebate / ~50% off LED lighting

Blue Mountain Vineyards (OK Falls, BC)

- \$3500 Rebate / ~33% off LED Lighting
- Black Mountain Irrigation District
- \$4000 Rebate / ~20% of variable speed drive pumps



PERSEUS



Great! How do I get started?

- **Website: fortisbc.com/rebates**
- Commercial electric projects
 - Call: (250) 469-8035
 - Email: businessrebates@fortisbc.com
- Commercial natural gas projects
 - Call: 1-800-663-8400
 - Email: rebates@fortisbc.com



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Find FortisBC at:

Fortisbc.com



So what about Solar?

- Solar PV vs. hot water
- Prices are coming down
- Payback periods are currently 10-20 years
- FortisBC has feed-in tariff
- **Consider doing energy efficiency before alternative energy**

