



## Wastewater Energy Program Case Study: LangeTwins Winery



LangeTwins Winery and Vineyards (LangeTwins) is located in Acampo, California. LangeTwins has successfully completed the installation of their new energy efficient wastewater treatment system. The facility captures wastewater influent from the winery in ponds and aerates it to supply the needed oxygen to treat the wastewater.

The new energy efficient wastewater treatment facility includes two 10 horsepower electric floating brush aerators. The two energy efficiency projects that LangeTwins implemented on their wastewater treatment system are:

- Premium efficiency aerator motors
- Automatic dissolved oxygen control

*This program is funded by California utility customers and administered on behalf of PG&E by BASE under the auspices of the California Public Utilities Commission.*



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## PREMIUM EFFICIENCY AERATOR MOTORS

NEMA Premium Efficiency Motors are the most energy efficient motors currently on the market. Premium efficiency motors typically offer efficiency improvements of up to 5.6% (depending on the motor size) over standard efficiency motors, resulting in significant energy and cost savings over the life of the motor. The two 10 horsepower aerator motors used at the wastewater facility featured a motor efficiency of 91.7%, in contrast to a standard motor efficiency of 89.5%.

## AUTOMATIC DISSOLVED OXYGEN CONTROL

Typically aeration systems are manually controlled (turned on and off) by facility operators, which may result in over-aerating the wastewater. Installing automatic dissolved oxygen control allows the wastewater system to continuously monitor oxygen level in the wastewater and turn off the aerators when the oxygen demand is met. Based on the aeration capacity of the wastewater treatment system and the average wastewater oxygen requirement, the automated dissolved oxygen control is able to reduce the aerator energy consumption by approximately 50% during the non-crush season. This measure also results in labor cost savings, which is not included here.

## PROJECT SUMMARY

The benefits and costs for implementing the above energy efficient technologies are as follows:

- 38,161 kWh/yr energy savings
- \$4,579/yr energy cost savings
- \$3,053 financial incentives
- \$9,610 project incremental cost
- 17 months simple payback period

**For more information on how WEP can help your facility become energy efficient, please contact:**

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