

CASE STUDY

SAVED WINERY 50% ON LIGHTING BILL WITH ECO-ENTERPRISE'S POE LED \$10,000 ANNUAL SAVINGS

EXECUTIVE SUMMARY

A New Jersey based winery school provides education to patrons all year round to learn how to make wine: from crushing fresh grapes by hand to bottling, corking and labeling. It also offers open house tastings for guests as well as closed-to-members only winemaking events. The school is nestled in an industrial park in Bridgewater, NJ, in a 7,000 square foot warehouse. The facility remained fully operational with staff and customers by appointment during the hours of 7am to 7pm. The cost of electricity is 0.26 cent per kilowatt.

BEFORE ECO-ENTERPRISE PoE LED

- 19,000 kWh in 3 months (Dec 2019 - Feb 2020)
- 19,000 kWh * .26 cents per kWh = **\$4,940**

BEFORE ECO-ENTERPRISE PoE LED

- 50% reduction in energy usage
- Reduced Installation cost
- Reduced maintenance cost (labor & lamp replacement) from long life PoE LED's
- Energy savings > total product costs over time

AFTER ECO-ENTERPRISE PoE LED

- 9,410 kWh in 3 months (Dec 2020 - Feb 2021)
- 9,410 kWh * .26 cents per kWh = **\$2,447**



eco-enterprise

We drive sustainability for companies, nonprofits and governments while saving them money.

eco-enterprise.com / **888.444.1ECO**

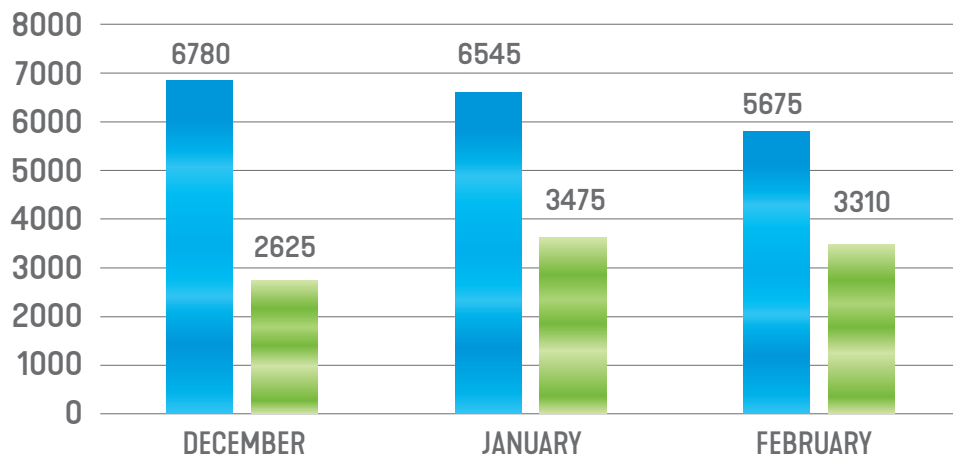
Available Worldwide



PREVIOUS LIGHTING SYSTEM

- The original lighting consisted of sixty 8-foot long low-bay luminaires, each running a pair of Philips Alto F96 T12 CFL tubes.
- Each CFL tube was responsible for approximately 110 watts for a total of 220 watts per luminaire.
- The original lighting offered 6,800 total lumens with approximately 40% of the light delivered direct to the target areas; the other 60% was dissipated or reflected by the luminaire housing.
- The luminous efficacy of the original lighting at 6,800 lumens was just below 62 lumens per watt, but accounting for the light loss due to the 360° light output, the luminous efficacy was closer to 25 lumens per watt or approximately 23-foot candles to the work plane.
- The dimness of these lights - even at full brightness - was such that additional light strings, floor and desk lamps and other decorative fixtures were added to help brighten the dimly lit open floor.
- Flashlights were often used in the barrel storage areas – even when overhead lighting was on.

KILOWATT HOURS CONSUMPTION



ECO-ENTERPRISE PoE LED LIGHTING SYSTEM

- A total of sixty-eight 13-inch shop lights (4' PoE Equivalent Shop Light) were installed between the warehouse storage, production and tasting areas.
- Installation also included:
 - 1,000 Watt UpoE Network Switch
 - PoE Light Multi-sensor
 - Equipment Rack

- Eco-Enterprise helped the facility save almost 10,000 kilowatt hours and created a windfall of approximately \$2,493 or an average of \$831 USD per month saved.
- Eco-Enterprise PoE LED Lighting and Lighting Controls was designed to lower energy costs, improve area lighting, and scale quickly.
- The fixtures produce more than 170 lumens per watt.
- Eco-Enterprise Lighting Controls offers advanced management, ultra-low latency on demand control, scenes/schedules, and automation with integrated smart sensors.
- Eco-Enterprise PoE LED lighting fixtures were wired using only Category-6a UTP cable and RJ-45 connectors, which means that fixtures can be added or moved without a lot of headache or cost.
- Considerations: Primary HVAC, Auxiliary Overhead Heater, Premise Lighting, Pumps/Filtration Machinery, Computers/Servers, Audio Visual and other consumer electronics
- Client premise lighting is approximately 35% of the total electrical costs.
- Key features of Eco-Enterprise PoE LED Lighting System:
 - 1,000 Watt UpoE Network Switch
 - PoE Light Multi-sensor
 - Equipment Rack
 - According to ETL Labs, at no point during our product's lifespan is there light loss perceptible to the human eye
 - 30 Watts per fixture
 - 55,000-hour lifespan (over 12 years)
 - Fixtures are recycled and contain no Mercury

MAINTENANCE

| MATERIAL & TIME ITEMS | F96T12HO X 2 PER FIXTURE | ECO-ENTERPRISE SHOP LIGHT FIXTURE |
|----------------------------|------------------------------|-----------------------------------|
| Labor Rate, 2 Persons | \$80.30 per hour | \$80.30 per hour |
| Removal/Installation Time | 35-40 min | 35-40 min |
| Bulb Disposal | \$18.00 Each Pair | Recycled (N/C) |
| EPA Mercury Disposal | \$2.50 Each Pair | None |
| Time between replacements | 2.75 Years | 12.5 Years |
| Replacement Bulb/Fixture | \$6.50 Each Pair | \$78.10 Each Fixture |
| Replacement Ballast/Driver | \$39.87 Each 2- Bulb Ballast | NA – included with fixture |

COMPARISON

| MATERIAL & TIME & SAVINGS ITEMS | CFL LIGHTING | ECO-ENTERPRISE POE LED LIGHTS |
|--|--------------|-------------------------------|
| Number of Fixtures | 60 | 68 |
| Watts | 220 | 30 |
| Hours of Operation / Day | 12 | 12 |
| Average Foot-Candles | 23 | 51 |
| Delivered Lumens per Fixture | 2,720 | 5250 |
| Hour Lifespan | 12,000 | 55,000 |
| Annual Energy Savings per Fixture ¹ | \$0 | \$147 |
| Energy Savings % | 0% | 50% |
| Annual Energy Savings - Monitoring | \$0 | \$111 |
| 15 Year Maintenance Cost ² | \$719 | \$158 |
| Lifetime Savings (Energy, Cost, Labor, Monitoring & Maintenance) | \$0 | \$1260 |

REFERENCES

1. Based on annualized average monthly savings of \$831 per month at \$0.26kWh. 2. Based on \$40 / lamp; \$80 / hour rate; 2 person, 1.5 hours labor; \$6 disposal cost

DO YOU WANT TO SAVE MONEY ON PoE LIGHTING?

Turn to our experts and leverage years of experience saving companies hundreds-of-thousands of dollars in lighting costs.

(888) 444-1ECO [1326] / info@eco-enterprise.com

www.eco-enterprise.com

