



DESCHUTES GROWERY SHINES A LIGHT ON SUSTAINABLE CANNABIS PRODUCTION

BEND GROWER CUTS ANNUAL ENERGY USE WITH EFFICIENT LED LIGHTING AND SOLAR ELECTRIC SYSTEM

Deschutes Growery works diligently to offset the environmental impacts of its cannabis production by closely monitoring all aspects of its operation, from equipment usage to business partnerships. Energy efficiency is at the center of the Bend grower's efforts to minimize its carbon footprint. By opting for efficient LED lighting and installing a roof-mounted solar system, Deschutes Growery slashed annual energy use by an estimated 2.5 million kilowatt hours and trimmed an estimated \$197,000 from its yearly energy operating costs.

"Our original high-pressure sodium lighting wasted an enormous amount of energy," said Justin Clapick, co-owner. "It also produced way too much heat and waste for the intensive nature of growing indoors."

Converting to LEDs, which produce minimal heat, allowed Deschutes Growery to put lights very close to the plants throughout its vegetative, flower and clone rooms. Combined with an innovative mobile racking system that has up to four levels of plants growing per room, the LEDs enable a high level of bio-density, while achieving a lighting power density of less than 20 watts per square foot in some areas.



Energy Trust is very forward thinking. Its cash incentives helped soften the huge infrastructure cost of installing LEDs.

Justin Clapick, co-owner, Deschutes Growery



PROJECTS-AT-A-GLANCE

► LED lighting in flower, vegetative and clone rooms

Financial analysis

- \$928,330 project cost
- \$386,040 in cash incentives from Energy Trust
- \$192,000 estimated annual energy cost savings

Estimated annual savings

- 2.5 million kilowatt hours
- 1,361 tons of carbon dioxide

► Solar electric system (56.4-kW, roof mounted)

Financial analysis

- \$197,000 project cost
- \$46,500 cash incentive from Energy Trust
- \$4,590 estimated annual energy cost savings

Estimated annual savings

- 64,000 kilowatt hours
- 35 tons of carbon dioxide



“We’re growing a 10,000-square-foot canopy in an 8,000-square-foot building,” Clapick said. “That 8,000 square feet includes everything from our flower, mother and clone rooms. LEDs not only save us energy, they save on real estate, which is significant.”

Deschutes Growery was also among the first in their industry to use new LED technology that optimizes the wavelength of the light for the different stages of a cannabis plant’s growth cycle. “We use full-spectrum LEDs in the flower stage and a blue spectrum for vegetative and cloning stages. We also installed dimmers that adjust the light level to exactly what the plants need at specific times of growth. It’s all controlled by a computer, making operation simpler.”

The lighting project cost \$928,330, and Deschutes Growery received \$386,040 in cash incentives from Energy Trust of Oregon based on the energy savings. The company expects to save \$192,000 in annual energy costs, so the investment should pay for itself in less than three years. “That doesn’t even count what we’re saving on light bulb replacement costs because LEDs last at least 10 years rather than one year,” said Clapick.

The cannabis producer also boasts a 56.4-kilowatt roof-mounted solar electric system installed by the building owner. “We’re fortunate to have great business partners who believe in our story and are just as committed to sustainability as we are,” said Clapick. Energy Trust provided a \$46,500 cash incentive for the solar system, which produces an estimated 64,000 kilowatt hours a year.



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