

Almond Processor Reaps Solar Savings for State-of-the-Art Operation

SUNPOWER®



Challenge

Golden Empire Shelling (GES) wanted to realize operational efficiencies for its leading-edge almond shelling facility with a high-performance solar system.

SunPower's Solution

Commercial Dealer SunPower by Sun Solar installed a 1.04 MW SunPower® Helix™ system, with 2,400 panels tracking the sun for maximum energy production on 4.5 acres..

Customer Benefit

The system offsets an estimated 90 percent of the almond processor's electricity use with solar in the peak season, and more than covers electricity use during the off-season.



Quick Facts

 **1.04 MW**
Total System Size

 **Ground-Mount Helix Tracker**
Installation Type

 **\$10 Million**
Projected 20-Year Savings

 **90%**
Electricity Offset

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John Wynn

General Manager, Golden Empire Shelling

When John Wynn, general manager of Golden Empire Shelling, got his start in the almond business nearly 20 years ago, the industry was producing a fraction of the crop it does today. Wildly popular for their health and taste appeal, almonds are now used in everything from cereals to snack foods and are one of California’s most valuable agricultural commodities — second only to milk in 2015, according to the California Department of Food and Agriculture.¹ Yet almond yields have declined over the past few years, in part due to California’s raging drought.²



Sowing the Seeds of Solar

Founded in 2007, GES is a grower-owned, state-of-the-art facility, processing up to 70 million pounds of almonds per year. When the drought caused yields to decline, Wynn sought an equally progressive solution that could help cut costs: solar.

“I’d looked at solar three or four times over the past 10 years,” Wynn recalls, “and each time it became more affordable. Now, as an industry we are really at a point where solar makes complete financial sense.”

While GES is a dry-processing operation, it does use lots of power. The 45,000-square-foot facility runs 24/7 during the four-month harvest, and maintaining a dust-free operation requires giant Hoover-style vacuums. With the company’s cost of power increasing an average of five percent per year, Wynn recognized the need to drastically reduce or eliminate the company’s electric bill.

That’s when Wynn turned to Jeff Periera, owner of SunPower by Sun Solar, for a solution. Knowing the company’s reputation for high-quality equipment, Periera recommended the Helix system. It was a recommendation Wynn could embrace.

“I believe in the SunPower® product – the longer life and lower degradation rate of the panels – and knowing that Jeff would stand behind the product made the difference,” Wynn notes.

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Tracking the Sun for Maximum Savings

With SunPower’s high-efficiency panels and integrated Helix Tracker system, GES was able to use less land than projected for the ground-mount system, an important consideration. Plus, the SunPower system produces 30 percent more energy than competitive systems.



SunPower offers a resource-efficient robotic cleaning solution that cleans ten times faster than manual cleaning, and with 75% less water.

GES now offsets its electricity use by an average of 90 percent in the peak season. In the off-season, the system outpaces consumption for a credit on the company’s utility bill. Partially financed with a low-interest loan from Farm Credit West, the company also took advantage of federal tax credits and applied for a USDA REAP grant, which may provide up to an additional \$500,000 in funding. While the grant decision hasn’t come in yet, even without it Wynn says the project will pay for itself in less than five years and produce clean energy for many more years to come.

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1 <https://www.cdfa.ca.gov/statistics/>

2 2015 Almond Almanac, Almond Board of California http://www.almonds.com/sites/default/files/content/attachments/2015_almanac.pdf

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