

CASE STUDY:

Pearl Crop Achieves Cost Savings and Sustainability Goals with Solar Installations



OVERVIEW

Pearl Crop, a family-run nut processing business with five facilities in the heart of California's nut-growing region, turned to Renewable America to transform its operations through commercial solar. Its facilities have high energy demands, and Pearl Crop faced escalating energy costs. The company also has ambitious sustainability targets and recognized the need to power its operations with clean energy.

BACKGROUND

Pearl Crop is a family-run business that prides itself on being an integral part of the local agriculture community. Its food-processing facilities require significant energy to operate efficiently, and the company sought solutions that would support its sustainability goals while contributing to profitability. Since its founding, Pearl Crop has developed strong relationships with growers, their families, and local residents. Its top priority was to install solar in a manner that maintains community ties and preserves the environment.



THE CHALLENGES

Since Pearl Crop has multiple facilities, each location required a customized approach to installation to accommodate its infrastructure and energy requirements. Initially, the projects also faced stakeholder concerns about structural and visual impacts.

THE SOLUTIONS

RNA served as the developer for the four-project portfolio, with RNA Services, LLC, as the EPC. RNA Services conducted site-specific evaluations at Stockton, Linden, and Ripon, and designed customized systems for each - ensuring optimal energy production while minimizing any disruption to day-to-day operations. The team implemented rooftop-only installations and conducted thorough structural assessments to ensure roof integrity. These installations provided energy efficiency to Pearl Crop and abated community concerns about aesthetic and environmental impacts. In total, the projects were designed with approximately 5,400 410-watt monocrystalline solar panels and utilized ballasted and rail-mounted systems across 251,114 square feet.

The Benefits

RNA developed an approach with financial, environmental, and community benefits.



Economic Savings

RNA designed and optimized a 2MW C&I rooftop portfolio to yield year-over-year utility cost savings.



Financial longevity

In addition to the direct savings, the project hedges against future energy price increases, giving Pearl Crop more control over its operational expenses.



Aesthetic Impact

Rooftop installation designs seamlessly integrated with existing infrastructure to minimize visibility from public areas and maintain the facilities' aesthetics.



Environmental Impact

The rooftop-mounted installations have no adverse effects on local wildlife or land use. RNA Services adhered to all local environmental standards, ensuring minimal disruption during construction and long-term operation.



The Results

The two completed sites achieved 2024 Commercial Operation Dates (COD): Linden, October 9; Ripon-I, October 18. The other two sites, Stockton and Ripon-II, are scheduled for completion in 2025.

- The largest site, Stockton, will now use solar for 86% of its energy needs, providing Pearl Crop with an estimated \$230,000 in annual utility cost savings – more than half its annual energy usage (53.2%) at the Stockton location alone.
- The significant reduction in utility costs has allowed Pearl Crop to allocate resources for other business needs and reinvestment opportunities.
- Pearl Crop made significant progress towards its sustainability targets by lowering its carbon footprint.
- The company maintained its community relationships by seamlessly integrating renewable energy into the food processing industry.
- The commercial solar installation and resulting operational improvements provide Pearl Crop with a scalable model for future savings and production efficiency.

Key Takeaways

RNA Service's partnership with Pearl Crop demonstrates how agricultural businesses can align their operational needs with environmental stewardship. This achievement also positions Pearl Crop as a leader in adopting innovative clean energy solutions for the food processing sector.

On a broader scale, the project highlights the untapped potential for commercial and industrial companies to integrate solar solutions, and inspires peer organizations to explore opportunities for cost-effective, sustainable, and forward-thinking clean energy strategies.

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CONTACT US

(408) 497-6363
(408) 663-6647 ext. 707

info@renewam.com

4675 Stevens Creek Blvd, Ste 250
Santa Clara, CA 95051

