



Case Study:

 **CalCom Solar**

## NEXTracker & CalCom Solar

### Helping California Agricultural Producers to Harvest the Power of the Sun

Solar farms are being installed at a rapid rate in California thanks to the experience and dedication of CalCom Solar. CalCom Solar is a design-build company, focused exclusively on solar energy systems for agriculture and water. They design and install systems that offset the high electrical demands of agricultural production while helping customers to reduce operational expenses, improve their bottom line, and farm more sustainably.

Agricultural producers in almost every sector – almonds, dairy, tomatoes, citrus, row crops, cotton, and many others – are turning to the solar solutions offered by NEXTracker and CalCom Solar to minimize crop displacement, reduce operational impacts, and maximize their return on investment. Medeiros & Son Dairy, Bar VP Farms, and Woolf Farming & Processing

are a few examples of agricultural companies determined to improve efficiencies across their entire operation – and they value quantifiable results. These customers chose the CalCom Solar/NEXTracker solution because of its high performance, greater yields and cost effectiveness – minimizing overall operations and maintenance.

Often times solar energy arrays require custom designs that fit inside irregular parcel configurations or otherwise unusable / non-arable land. Thanks to NEXTracker's NX Horizon single axis tracker, these constraints are skillfully overcome. NX Horizon's independent row architecture allows for unmatched flexibility in site design so CalCom Solar's customers can use their available acreage to design an optimal solar array.



## Woolf Farming and Processing

**Capacity:** 1.1 MW single-axis tracker system in Huron, CA

**Annual production:** 2,162,559 kWh

**Challenge:** Woolf West, phase 1 of 3, is a branch of Woolf Farming and Processing, in Huron, California. Woolf Farming specializes in almonds, tomatoes, pistachios, garlic among other crops. Continual reinvestment in land, water infrastructure, and innovation has allowed the Woolfs to successfully expand their operations. Given these investments, property boundaries were a constraint. The solar power system was to be sited on parcel bordering on a railroad easement, and crop rows limited the usable space at a far corner of this farm.

**Solution:** NX Horizon's independent, self-powered rows provide tremendous system design flexibility, enabling Woolf Farming to make use of an irregularly-shaped parcel of land. By configuring the array with the site constraints, the CalCom Solar/NEXTracker design opened up space for additional solar modules, maximizing the energy output.

**Benefits:** Offsetting a significant percentage of the operation's electrical usage, the Woolfs will enjoy projected annual savings worth \$345,000 in the first year alone, and 85% of aggregated meters energy usage will be offset by solar. The 2,220,000 kWh of clean generation per year equates to 138 homes' electricity use.



## Medeiros & Son Dairy

**Capacity:** 1.1 MW single-axis tracker system in Hanford, CA

**Annual production:** 2,162,559 kWh

**Challenge:** Medeiros & Son Dairy is an established dairy with over 1,400 acres in Hanford, CA. During pre-construction of their system, they were challenged with a constrained parcel in the north-south direction due to limited space.

**Solution:** NX Horizon's powerful 80 module rows take full advantage of the limited land allotment. Powered by a small 24-volt motors and unencumbered by drive linkages, NX Horizon's self-powered, independent row design makes half-rows possible. Limited on the north and south side of the array, half-row trackers fill in space that would remain untapped using other tracker technologies. Annually, these half-row trackers squeeze an additional 300kWh —one-third of this system's output— from otherwise unproductive land.

**Benefits:** Medeiros now has low electricity costs with an annual estimated savings of \$320,000 on utility charges. They will also benefit from 2,220,000 kWh of clean energy generation per year, which is the equivalent of 138 homes' electricity use or taking 319 passenger cars off the road, reducing CO<sub>2</sub>.



## VanderPoel Dairy

**Capacity:** 1.1 MW single-axis tracker system in Pixley, CA.

**Annual production:** 2,200,000 kWh per year

**Challenge:** With its newly commissioned 1.1 MW solar plant, this leading California dairy producer will save millions of dollars on energy costs over the lifetime of their array. Their challenge was building a reliable, easy to maintain PV system at a busy, productive dairy farm.

**Solution:** With fewer moving parts and a construction-friendly design, the VanderPoel project installed quickly and will require minimal maintenance. CalCom Solar deployment of NX Horizon's independent, self-powered tracker rows makes routine cleaning fast and efficient. Furthermore, maintenance vehicles move swiftly between rows with no drive linkages to block the way. This helps VanderPoel Dairy lower maintenance time and labor costs.

**Benefits:** The PV array results in projected annual kWh offset worth \$264,000 in the first year alone; the system offsets 42% in utility costs. The 2,220,000 kWh of clean generation per year equates to 138 homes' electricity use.

