

POWER PROFILE

Customer: Holt of California

Location:

Pleasant Grove, California

Customer Business Issue:

Carbon reduction, energy savings

Solution:

1,440 Cat® monocrystalline solar panels,
2,610 Cat thin-film solar panels

Cat® Dealer:

Holt of California



Holt of California sought to further reduce its carbon footprint by opting to install two solar arrays with a combined total output of 825 kW.

POWER NEED

As the exclusive Cat® dealer for 16 California counties—as well as all of Central Northern California for Caterpillar Lift Trucks—Holt of California is headquartered just north of Sacramento in Pleasant Grove.

The company’s origins date back to 1931, when the Marysville Tractor & Equipment Co. began operating as a Caterpillar dealer covering Marysville, Calif.

Today, the Cat dealer has more than 760 employees who work in five divisions: Earthmoving, Agriculture, Power Systems, Material Handling and the Cat Rental Store.

Holt of California is committed to sustainable business practices that center around recycling, waste reduction and reducing energy consumption at its 16 facilities.

The first step to most sustainability endeavors begins with auditing facility loads to identify where energy consumption can be reduced. Lighting, HVAC, insulation, doors and windows should be part of an energy audit.

Holt personnel found that lights cannot only use too much electricity, but also have an effect on job performance and safety. To combat these issues, the Cat dealer audited lights in its facilities at Williams, Yuba City, Pleasant Grove and Stockton. In total, approximately 500 light fixtures were replaced with LED lights and motion sensors. This change alone reduced overall demand by approximately 250,000 kWh per year combined.

At Pleasant Grove, one of the dealer’s largest facilities, an antiquated and inefficient boiler and chiller used to heat and cool the facility were replaced with a new air handling system that works in zones rather than across the entire facility. The new air handling system takes in the cool night air, releasing it into

the building as thermal energy storage to counter the heat that builds throughout the day. The system is much more efficient and environmentally friendly, using less energy to provide a more comfortable working environment.

SOLUTION

After replacing the HVAC system and upgrading to LED lights at its Pleasant Grove headquarters, Holt of California sought to further reduce its carbon footprint by opting to install two solar arrays. The carport and ground-mounted arrays have a combined total output of 825 kW.

A total of 1,440 Cat monocrystalline solar panels mounted on carports produce 525 kW of energy. A ground-mounted array with 2,610 Cat thin-film solar panels produces another 300 kW of solar energy. The monocrystalline version provides 365 watts per panel, while the thin-film variety generates 115 watts per panel.

“We wanted to reduce our carbon footprint, but also save on our energy costs,” says Rich Lund, sales and rental manager for power systems at Holt of California. “When you have a project with a return on investment (ROI) of 3.6 years, it’s hard not to want to do that.

“We always tell our customers to look at the load side of the equation first,” Lund says. “Replacing HVAC systems, lighting and insulation have a really quick payback, and there are things they can do to reduce their energy consumption before they make an investment in renewables.

“Our facilities are pretty old, and once we got into it, we didn’t realize just how inefficient and wasteful they were,” Lund says. “We didn’t have like a number in mind. We just knew we that it was something that needed to be addressed.”

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RESULTS

Since the two solar arrays were commissioned mid-year in 2020, the Pleasant Grove facility produced 929 megawatt hours (MWh) of clean energy as of April 2021. Solar energy now covers 80 to 85 percent of the facility's total energy usage.

Solar power helps Holt of California reduce the amount of energy consumed at the dealership headquarters during normal and peak demand periods. Because solar energy reduces the facility's overall energy demand during peak hours—thereby mitigating the peak demand charge from its electric utility, Pacific Gas & Electric—this results in anticipated annual savings of \$115,000.

The financial return on the project was improved thanks to a 30 percent federal investment tax credit.

The installation also serves as a demonstration microgrid project with Cat solar panels, Lund says.

"Since we are offering this to our customers, we wanted to be able to tell people that we have Cat solar panels, and that they are welcome to come and see it," he says. "Customers come by and look at it and they like what they see."

One of the Cat dealer's biggest power systems customers, Collins Electric, installed the solar panels, Lund said.

"We have a great partnership with them, and it worked out that they could do the installation for us at our Pleasant Grove facility."



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