Turning Sunshine into Services in Yolo County

Quick Facts
71,120 Cars Not Driven
Emissions Offset over 35 years
$60 Million
Projected 35-Year Savings

Challenge
Faced with ever-tightening budgets, Yolo County in Northern California needed to drastically reduce its energy bills – and expand its services to county residents.

SunPower’s Solution
Yolo County installed a 6.8MW SunPower® system in two phases – a 1MW solar power system at the Yolo County Justice Campus in 2010, and three additional arrays totaling an additional 5.8MW countywide, completed in 2013. All projects were installed with no upfront costs, with innovative financing that ensured the systems were net positive from their first day of operation.

Customer Benefit
Yolo County completely eliminated its electric bill—and is the first county government in the U.S. to be grid-positive. The county produces enough clean energy to meet 152 percent of the county’s electricity needs and is expected to generate $60 million in county revenue over the next 35 years. The solar installations are like a living laboratory for students in Yolo County, who learn about renewable energy in educational academies developed in partnership with SunPower.
Yolo County Needed a Low-Cost, High-Return Solution for Reducing its Energy Bills – and Expanding Human Services

Yolo County, with a population of just 200,000, is small by California standards. But as counties and municipalities throughout the state struggle with budgetary restraints, severe drought and skyrocketing energy prices, Yolo County has demonstrated vision and leadership greater than many of the largest counties in California.

In 2010, Yolo County, just west of Sacramento, was facing a mounting annual electric bill of $1.4 million and a recession that was drying up tax revenues. The county needed to find a way to cut expenses, or risk cutting valuable services to residents. Terry Vernon, deputy director of Yolo County General Services, understood the value of energy. During the 1980s, he was involved in an effort at Stanford University to install 39MW of power into the grid. This project would be more difficult, however, as Yolo County had no money to invest in a solar system.

“We had to find a solution that required zero-capital investment because we didn't have any capital,” said Vernon. “It would have to pay for itself from the very first day.”

SunPower Partnered with the County to Deliver an Affordable Solution that Performed from Day One after Activation

Working with SunPower, Yolo County and its financial advisors developed an innovative package of low-interest financing to install an initial 1-megawatt ground-mount solar system at the Yolo County Justice Campus in the county seat of Woodland. The system was completed in 2010, six weeks ahead of schedule, utilizing SunPower solar panels with the SunPower Tracker system. The Tracker system follows the sun’s movement during the day, increasing

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Terry Vernon
Deputy Director of Yolo County General Services

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sunlight capture by up to 25 percent over conventional fixed-tilt systems, while reducing land-use requirements.

The county’s innovative management team pursued every possible line of funding to ensure the project could be installed with no upfront costs. The primary source of funding was Qualified Energy Conservation Bonds (QECBs) and Clean Renewable Energy Bonds (CREBs). These qualified tax credit bonds are an especially attractive way for revenue-strapped governments to finance renewable energy installations because the Department of Treasury provides an up-front subsidy that amounts to 70% of the qualified tax credit. In the case of Yolo County, a low-interest California Energy Commission (CEC) loan and a California Solar Initiative (CSI) production-based incentive provided additional funding.

“With the funding we secured, Yolo County required no out-of-pocket expenses to build this project. It was net cash-flow positive from day one,” explained Helen M. Thomson, Chairwoman of the Yolo County Board of Supervisors.

As a result of the initial project’s success, the team decided to build on the momentum. In 2013, the county worked with SunPower to install three additional ground-mount arrays totaling 5.8 MW of power across the county. The first array produces 800kW for three buildings on the county government campus in Woodland, reducing the campus’ electric bill by 75 percent through net energy metering. Two additional arrays totaling 5MW were installed at Grassland Regional Park in Davis. One array was placed under the RESBCT utility program, which enables Yolo to share bill credits across multiple locations, and the other array was placed under a feed-in-tariff (FiT) program to sell power back to Pacific Gas & Electric (PG&E). These projects were also installed with no upfront costs.

Today, Yolo County is Grid Positive, Generating Energy Revenue, Slashing Emissions and Saving Taxpayers Millions.

Yolo County now generates enough clean power to meet 152 percent of its electricity needs – earning the county a spot as one of the nation’s top 20 on-site green power producers by the Environmental Protection Agency. County officials conservatively predict the system will generate $60 million over the next 35 years and avoid 12,000 metric tons of carbon dioxide emissions each year.

“If we wouldn’t have turned to solar, our financial situation would be very different,” explained Vernon. “With the amount of power our county uses today, our bill would be nearly $3 million per year. Instead, we’re actually seeing positive cash flow that’s grown every year. The savings and the revenue we generate all relates directly to services for citizens of the county.”
Partnering to Power a County – and the Next Generation – with Clean Energy

The success of Yolo County’s solar energy program can be credited to many people working together, Vernon notes – including the Yolo Board of Supervisors, the county administrative management, as well as SunPower. “No one had ever done this type of project before,” Vernon says. “It was truly the first of its kind – groundbreaking from a financial, environmental and educational perspective.”

Even before solar was installed, Yolo County has been adopting innovative energy efficiency and resource recovery projects. “Our board of supervisors are true visionaries when it comes to renewable energy and reducing our carbon footprint,” Vernon says.

Through its partnership with the Yolo County Office of Education, the county secured $23 million in Qualified Zone Academy Bonds (QZABs) to fund the second phase of the project. The purpose of the bond program is to fund capital projects accompanied by an educational component that benefits students.

The bond program educational component enabled the Yolo County Office of Education to develop seven educational academies, teaching students about climate change, environmental science, renewable energy technologies and energy.

“SunPower is hands down the most dynamic, honest company I’ve ever worked with,” Vernon notes. “This project was a winner on all counts – but the true winners are the children of California.”

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“Any county or city can duplicate what we did here in Yolo County, even on a small scale.”

Terry Yolo
Deputy Director of Yolo County General Services.

1 RESBCT, or the Renewable Energy Self-Generation Bill Credit Transfer program, is a utility-administered program that allows local governments or campuses to generate electricity at one site, known as a “generation account,” and create bill credits for surplus generation not used on-site. The bill credits can then be applied to offset energy costs at other facilities owned by the generating entity, known as “benefiting accounts.”

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