

Solar Implementation to Help County of Merced, California Generate Power Sustainably

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Merced County, California – With approximately 259,000 residents, Merced County is a culturally diverse, agriculturally productive region in the heart of the San Joaquin Valley. The County has been a long-term customer of Siemens Industry, Inc., and continues to implement energy-saving, sustainable projects to help reduce costs for the County's capital budget.

Objectives

In 2001, Merced County partnered with Siemens on a county-wide lighting and major mechanical energy performance contract. Through the improvements that were implemented, Siemens helped the County achieve 120% of its guaranteed energy savings. With that in mind, the County reengaged Siemens in 2007 for a second energy performance contract, which included a significant solar project.

Due to economic conditions, the solar project was postponed for a period of time. In 2010, the County chose to use those funds, which were reserved for capital projects, to build a solar array at their Sandy Mush correctional facility. Merced County selected Siemens to implement the solar energy project as the Design Build contractor.

Solutions

Siemens has design built a 1.4MW photovoltaic solar array to provide electricity to the County of Merced's Sandy Mush complex. The implementation includes approximately four acres of solar panels with a fixed ground mount structure. When online, the solar system provides electricity for two correctional facilities at the Sandy Mush campus. The Adult Correctional Facility can rely on solar energy to generate approximately 60% of its energy needs, while the Juvenile Corrections facility will use solar energy for 80% of its annual needs.

In addition to the solar energy work, Siemens is helping the County implement other HVAC, lighting and water conservation retrofits and improvements to help generate additional, future energy savings.

Results

Siemens estimates that the solar array system will help save Merced County approximately \$312,000 in energy expenses in the first year, with total estimated savings of \$14 million over the next 25 years.

Through this solar energy project, Merced County will become eligible for up to \$1.5 million in utility rebates. Siemens has helped the County to prepare its application to receive these funds and will validate energy production through an ongoing service contract. Over the next five years, the generated savings and rebates will be diverted to a separate County fund, which by policy, is dedicated to future energy-saving and/or capital projects.

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