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The SJSU Cogeneration Plant installation was completed in December of 1984. The Central Plant includes the Allison 501KH gas turbine, absorption and centrifugal chillers, backup boiler plant with water tube boilers, air emission systems, compressors, generators, water purifiers and other mechanical equipment. The 5.6 MW Cheng Cycle(R) plant provides steam for heating and cooling for campus buildings. About 80% electricity needed for the campus is provided by the cogeneration system.

The Utility Master Plan for SJSU specifies the approach to continue providing the campus with sustainable and reliable energy. Strategies include considering the conversion of all buildings to 12kV as well as renewable energy sources such as solar panels (PV), fuel cells, and other low/no-fossil-fuel technologies. New renewable energy sources are continually being reviewed, and we continue to implement MBCx of campus buildings.

Rooftop solar on 10 main campus roofs, along with covered carport solar systems at south campus will be installed to provide renewable energy to the campus. Savings are estimated at $4.6M through the warranty period of the panels, while lowering our carbon footprint by 511 metric tons CO2-eq. Design will begin in 2019, with installation to occur over the 2019/2020 fiscal year.

Demand Side Management has been implemented at the Central Plant since 2003 when the Central Plant installed a thermal energy storage tank that generates ice at night when electrical rates are lower and ambient temperatures cooler. The ice is then used to produce chilledwater for pumping into buildings during the day when cooling is needed.

Terra-Gen and Mortenson have announced the activation of the Edwards & Sanborn Solar + Energy Storage project, the largest solar-plus-storage project in the United States. Mortenson served as engineering, procurement, and construction contractor for the project.

The project is a true renewable energy behemoth, spanning 4,600 acres, comprised of 1.9 million First Solar panels. It holds a capacity of 875 MWdc solar, and nearly 3.3 GWh of energy storage. It has a 1.3 GW interconnection capacity.

California"s grid is expected to receive enough electricity to power the equivalent of about 238,000 homes from the project. This leads to an estimated 320,000 tons of carbon dioxide emissions abated annually.

The energy storage is made up of LG Chem, Samsung, and BYD batteries. This feat of engineering required 98 miles of MV Wire, over 361 miles of DC wiring, and 120,720 batteries.

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Edwards & Sanborn is partially located on the Edwards Air Force Base in Kern County, California, a hub for many of the largest solar projects in the United Staes. It represents the largest public-private collaboration in US Department of Defense history. Since 2020, more than 1,000 craftworkers contributed to the project, and it was executed with more than a million hours of injury-free labor.

"Only in America can we take barren land, embrace the power of the sun, and create an engineering marvel," said Brigadier General William Kale, Air Force civil engineer center commander. "So, take the time to reflect, see the great work that was done, and understand the significance of this project and what it can lead to. Hopefully, this is just the spark."

The active project supplies power to the city of San Jose, Southern California Edison, Pacific Gas & Electric, the Clean Power Alliance, and Starbucks corporation, among others.

The project"s first phase added 346 MWac of solar modules and 1.5 GWh of battery storage. Financing for the the first phase was closed in 2021 and included $804 million senior secured credit facilities. This includes $400 million construction and term loan facility, a $328 million tax equity bridge facility, and a $76 million construction and revolving letter of credit facility. J.P. Morgan is providing the tax equity commitment for the initial phase of the project, with Deutsche Bank leading the construction and term financing.