



# Selma-Kingsburg-Fowler County Sanitation District



“Our District is excited to implement a program that will not only save us \$14.7 million in energy costs, but also allow us to demonstrate the positive fiscal and environmental impact of leading-edge solar and energy storage solutions to our customers across Fresno and to other public agencies statewide.”

David Cárdenas, Chairman, Selma-Kingsburg-Fowler County Sanitation District

## THE OPPORTUNITY

Selma-Kingsburg-Fowler County Sanitation District (SKFCSD) is a public agency that provides collection, treatment, and disposal of wastewater from residential, commercial, institutional, and industrial customers within the service area. Approximately 42,000 people are served by SKFCSD, through nearly 11,300 connections. The wastewater treatment and disposal facilities are located on a 550-acre site in Fresno County, California. In February 2016, SKFCSD worked with ENGIE Services U.S. (ENGIE) to conduct an Opportunity Assessment for a comprehensive project to reduce energy expenditures and positively impact the environment. The contract was approved in October of 2016 and construction began in mid 2017.

## THE PARTNERSHIP

More than 2.4 megawatts of solar photovoltaics (PV) were installed at the Wastewater Treatment Plant, along with a solar parking structure at the Administration Building. Battery storage and other key energy efficiency measures such as HVAC unit replacements and LED lighting retrofits supplemented the solar implementation. The ENGIE Services U.S. team has worked closely with their sister company, ENGIE Storage, on sizing the battery storage component of this program.

## Program Highlights (Over 20-year project life)

- Expected to achieve \$14.7MM in net savings, with guaranteed savings and performance
- Expected to create the equivalent of 244 jobs resulting from the economic multiplier effect
- Expected to reduce carbon emissions equivalent to removing 700 cars from highways annually

## Technical Scope

- 2.39 MW ground-mounted single-axis tracking solar PV system
- 38-kW solar PV parking structure at the Administration Building
- Indoor and outdoor LED lighting retrofits
- HVAC unit replacements
- 500 kW/1,000 kWh energy storage system including intelligent cloud-based software and lithium-ion battery storage



## PROGRAM TIMELINE

### FEBRUARY 2016

ENGIE conducted an Opportunity Assessment to identify potential avenues for maximum savings.

### MARCH - MAY 2016

ENGIE and SKFCSD collaborated to develop the program.

### OCTOBER 2016

The SKFCSD board approved the Energy Services Contract.

### DECEMBER 2016

Engineering began.

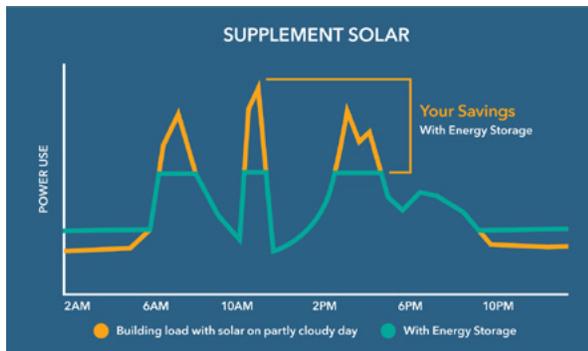
### 2017 - 2018

Ongoing construction.

### NOVEMBER 2018

Implementation complete.

The largest part of the program is the ground-mounted solar system installed at the Wastewater Treatment Plant. The system tracks the movement of the sun throughout the day, ensuring maximum renewable energy production and streamlined costs using the proven tracking technology. By installing the system under Net Energy Metering (NEM), the District receives full compensation from the utility, Pacific Gas & Electric, for all the electricity generated by the solar projects at any time. ENGIE also worked with SKFCSD to design the system to accommodate future plant expansion. In addition to the large ground-mount system, a 38-kW solar parking structure at the Administration Building provides District employees and visitors shaded parking spots with additional lighting under the canopies for enhanced nighttime safety.



This graph depicts grid draw for a facility with solar on a cloudy day, with and without energy storage. The orange line represents the original facility load and the green line represents the new flattened load with energy storage.

The 500 kW/1,000 kWh battery storage system allows for cost savings from reduced demand charges and secures solar investment with improved performance. It also avoids unfavorable tariff rates and supports process control at the Wastewater Treatment Plant with no manual demand shedding. With the new battery storage technology, SKFCSD will avoid paying peak demand charges from the utility by flattening its load.

The \$9.8 million program was financed with Clean Renewable Energy Bonds (CREB) at a low interest rate. Additionally, SKFCSD took advantage of the Self Generation Incentive Program (SGIP), a ratepayer-funded rebate program overseen by the California Public Utilities Commission, available to retail electric and gas customers of California utilities.

## 3 DIMENSIONS OF IMPACT

ENGIE is committed to building three dimensions of impact in every customer's future. As a result of the multi-tiered solutions, SKFCSD is delivering positive economic, environmental, and community impacts for its customers in the Fresno area. Benefits include:



### Supporting People

- Improving indoor comfort for occupants with enhanced climate control and lighting
- Saving maintenance time and costs associated with managing more energy efficient lighting and HVAC equipment
- Creating jobs and stimulating the local economy



### Saving Money

- Reducing District electricity spend by 70%
- Hedging against rising energy costs



### Protecting the Environment

- Reducing carbon emissions equivalent to removing 700 cars from highways annually