Citywide Energy Efficiency, Resiliency & Sustainability Project (ENGIE)

Napa Climate Summit
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City of American Canyon
Efficiency Measures, Cleaner Generation and Storage

Need for Efficiency & Resiliency
City of American Canyon sought to reduce energy spending to help with a projected $3.2 million budget shortfall in 2020. The City planned for a future with reduced carbon emissions and impact from public safety power shutoffs (PSPS). The City leaned into an energy & sustainability initiative during a time of crisis.

Benefits
- Ability to maintain critical operations during PSPS events
- Reduced carbon emissions and utility bills and replace end-of-life equipment through improved efficiency and renewable generation
- Loan and grants secured meant the comprehensive energy program required zero up-front capital investment
- Ongoing energy savings cover the full cost of the loan payments
- 94% of the work completed by union labor
- Educate community on sustainability initiatives and green infrastructure, empower leaders of tomorrow

Funding
- Tax Exempt Lease Purchase
- $600,000 CAL OES Grant
- $89,200 SGIP Funding
- $7,000 EV Charging Rebate
Solution Summary

Scope
- 1.1 MW Solar PV across 3 sites
- 120 kW BESS system
- Emergency generators across 4 sites
- 4 dual-port EV chargers
- 1,200+ LED lighting retrofits and occupancy sensors
- HVAC upgrades and smart thermostats

Community
- Events & Outreach: Pollution Prevention Week, Earth Day Home Kits, Energy Saving Tips, Sustainability Website
- 2 Wastewater College Internships underway, 2 more in March
- Thought Leadership & recognition on cutting edge sustainability initiative
Climate Adaptation

Comprehensive Scope of Work focusing on Efficiency & Resiliency

- LED Lighting
- Solar Generation (PV)
- Battery Storage
- HVAC
- EMS
- EV Charging
- Emergency Generators

Water Reclamation Facility (WRF)
Water Treatment Plant (WTP)
Public Safety Building
City Hall
Senior Center
Corp Yard
Microgrid Building Blocks

Back-Up Power at Critical Facilities

Battery Storage – 120 kW System
Utility Savings Benefits:
• Cost savings from reduced demand charges
• Secured solar investment with improved performance
• Avoid unfavorable tariff rates and bills

Emergency Generators & Upgrades
• 500 kW Water Reclamation Facility
• 250 kW Water Treatment Plant
• 120 kW City Hall
• 300 kW Corp Yard

Microgrid Readiness
• Phased implementation of solar & storage designed to grow to a fully islanding microgrid
• Provides added reliability, power quality and resiliency
• Will allow WRF to maintain critical operations during grid de-energization events
Public Safety Building Solar Production

![Graph showing solar production for Public Safety Building from September 2022 to April 2023, with projected and actual kWh values, and cumulative production trend.](image)
Water Reclamation Solar Production

- Actual 2022 (Units) (kWh)
- Projected 2022 (Units) (kWh)
- Cumulative Actual 2022 (Units) (kWh)
- Cumulative Projected 2022 (Units) (kWh)
Water Treatment Plant Solar Production
City Hall EV Charging Station
January - April 2023
403 Total Charge Sessions
82,918 Total Charge Minutes

- Gasoline Saved: 526 Gallons
- Greenhouse Gas Prevented: 4,682 Kilograms
- Carbon Offsets: 5.25 Credits
- Electric Miles Provided: 21,894 Miles
- Equivalent CO2 Scrubbed: 130 Trees
City of American Canyon - Year 0

Under the Energy Services Contract by and between the City of American Canyon and ENGIE Services U.S. dated May 22, 2020, and CO #1 dated April 20, 2021, we installed Solar Photovoltaic Systems in three locations. ENGIE has guaranteed energy savings in dollars ($) from the project for 20 years in accordance with the Contract. This report summarizes the annual performance of the program as a whole.

Reporting Period:
Year 0 (Construction)
March 2021 through August 2022

Cost Savings by Month

1 Month (Month and Year) : 3/1/2021 12:00 AM - 8/31/2022 11:59 PM

Cost Savings per Month Contributed by Each Measure
“Begin – to begin is half the work, let half still remain; again begin this, and thou wilt have finished.”

~Marcus Aurelius
Questions at end of section