

CITY OF  
AMERICAN  
CANYON



# Citywide Energy Efficiency, Resiliency & Sustainability Project (ENGIE)

Napa Climate Summit

May 24, 2023

Felix Hernandez, III

# 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

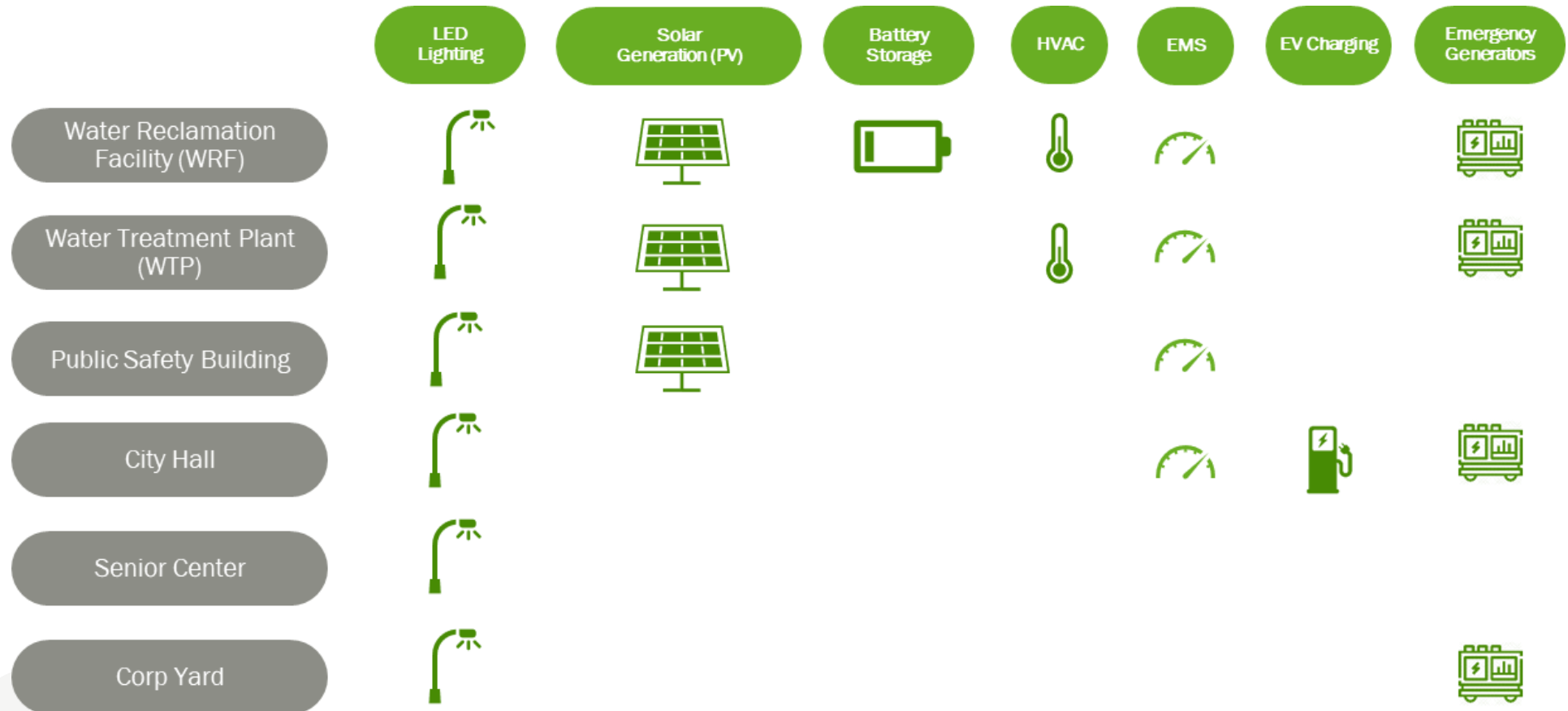
## Community

- 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









**GENERAC**  
INDUSTRIAL  
POWER

**GENERAC**  
INDUSTRIAL  
POWER

**CAUTION**  
HIGH VOLTAGE  
ELECTRICAL EQUIPMENT  
SERIOUS INJURY/DEATH

**NO SMOKING**

**DIESEL  
COMBUSTIBLE  
189 GALLONS**



# 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

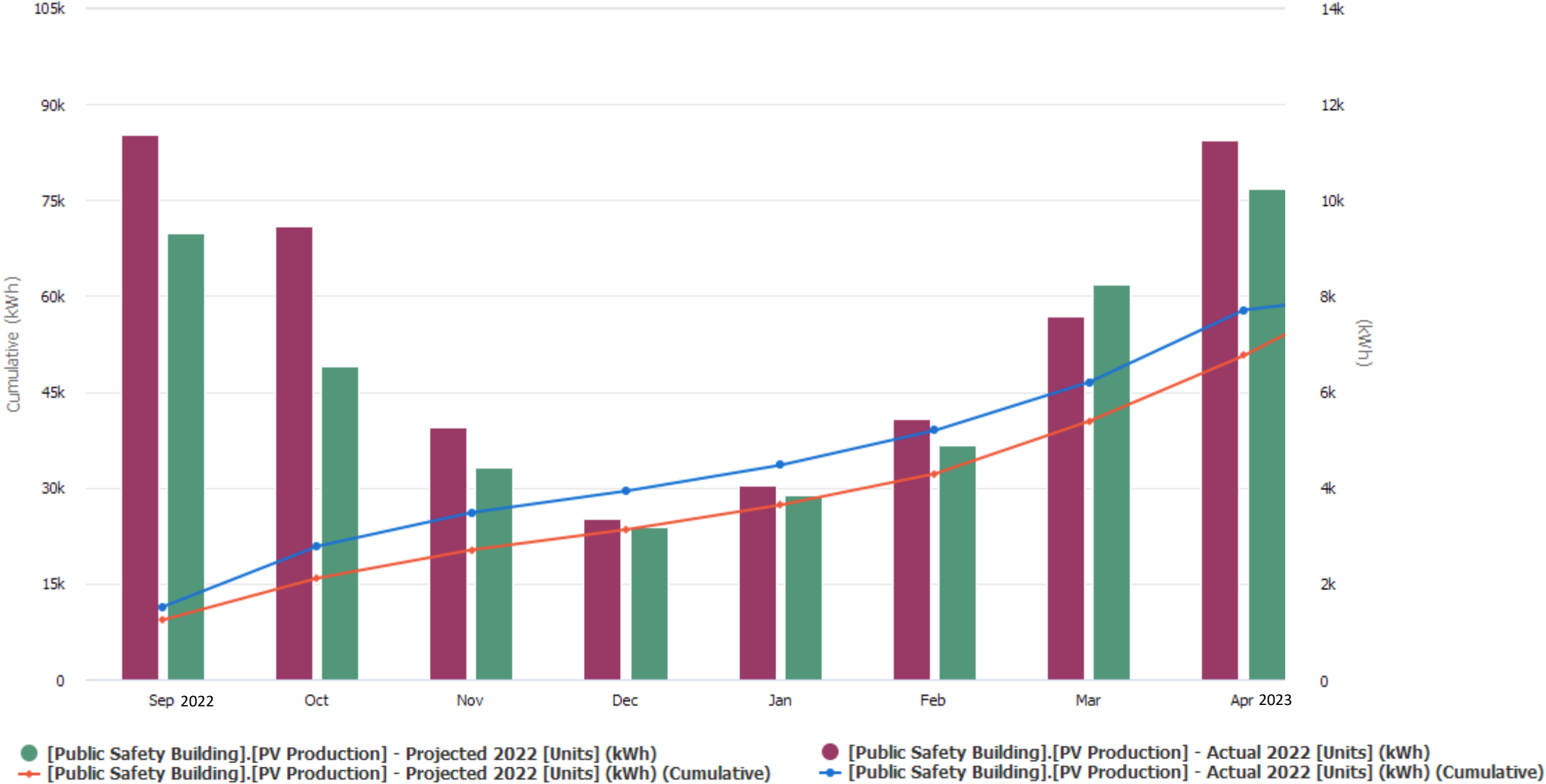


### Microgrid Readiness

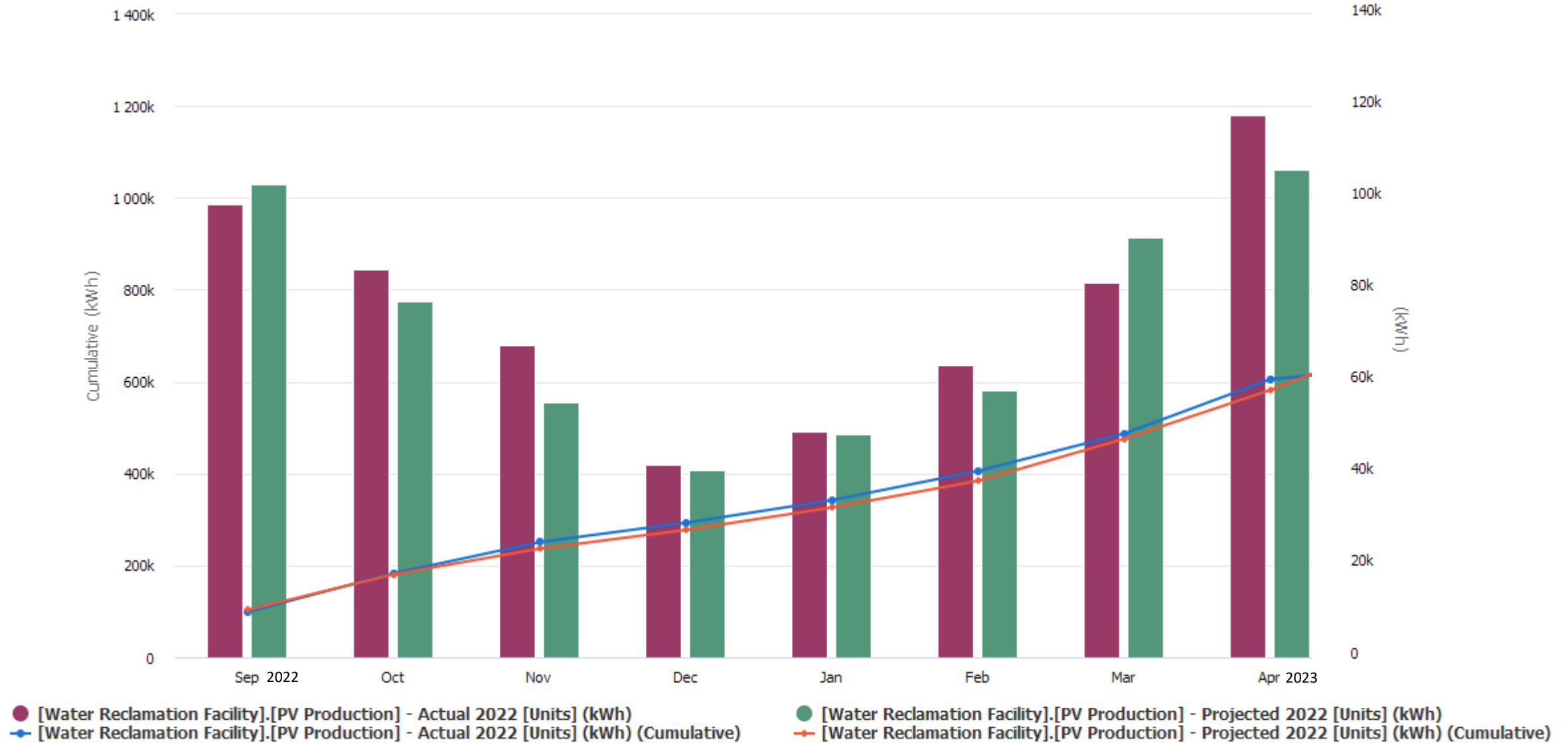
- Phased implementation of solar & storage designed to grow to a fully islanding microgrid
- Provides added reliability, power quality and resiliency
- Will allow WRF to maintain critical operations during grid de-energization events



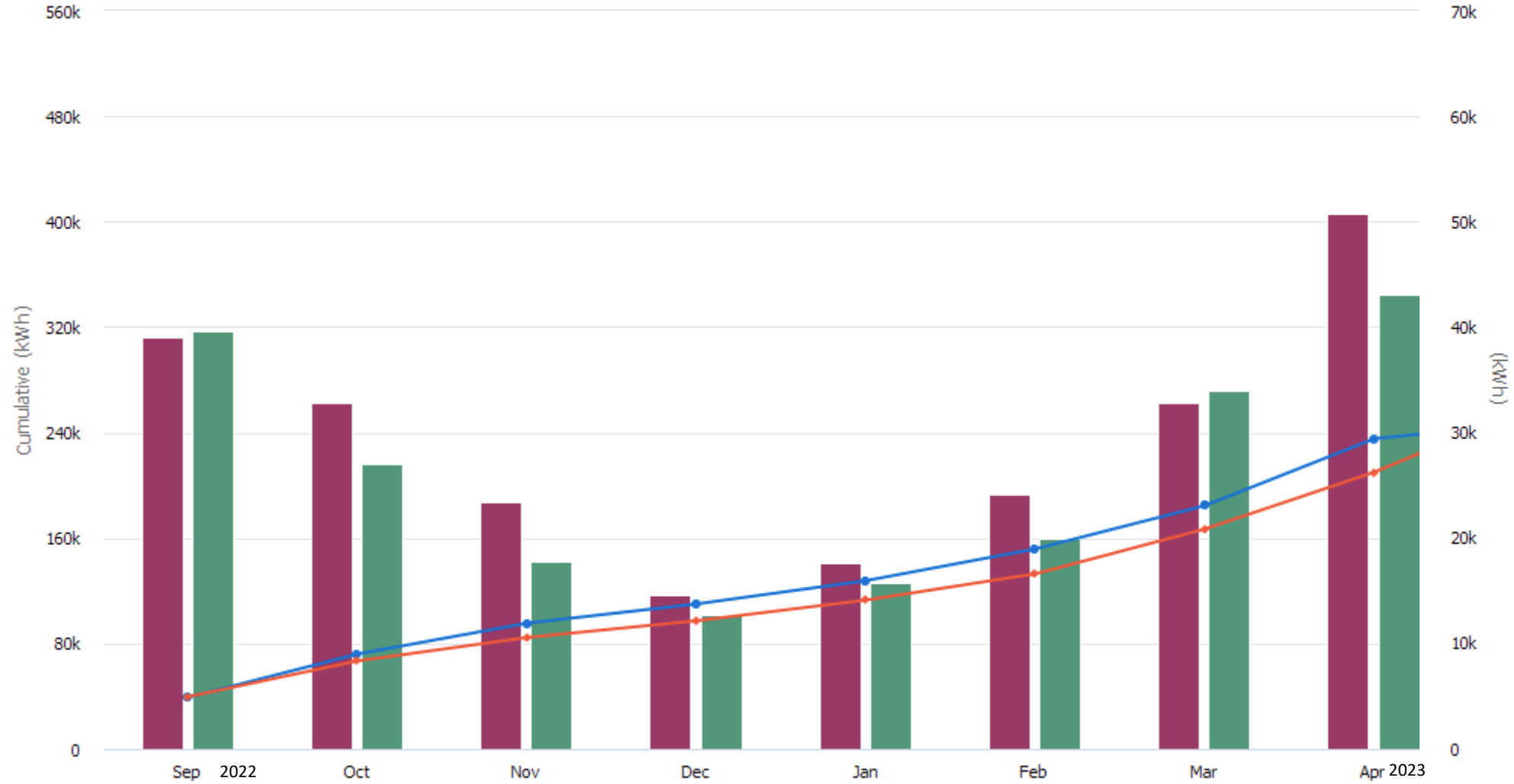
# Public Safety Building Solar Production



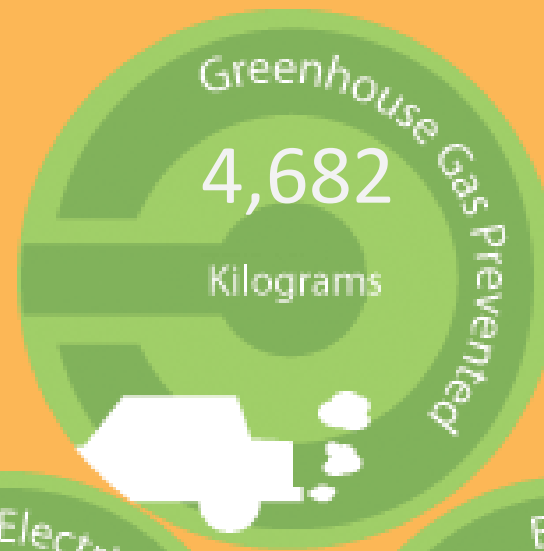
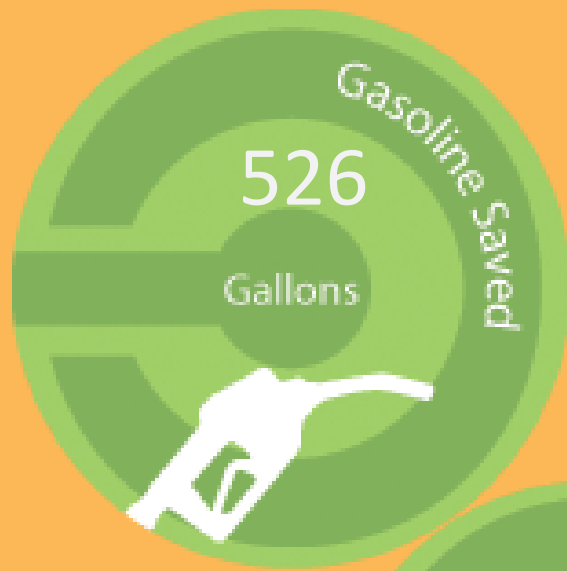
# Water Reclamation Solar Production



# Water Treatment Plant Solar Production



● [Water Treatment Plant].[PV Production] - Actual 2022 [Units] (kWh)
 ● [Water Treatment Plant].[PV Production] - Projected 2022 [Units] (kWh)
 —●— [Water Treatment Plant].[PV Production] - Actual 2022 [Units] (kWh) (Cumulative)
 —●— [Water Treatment Plant].[PV Production] - Projected 2022 [Units] (kWh) (Cumulative)



## City Hall EV Charging Station

January - April 2023

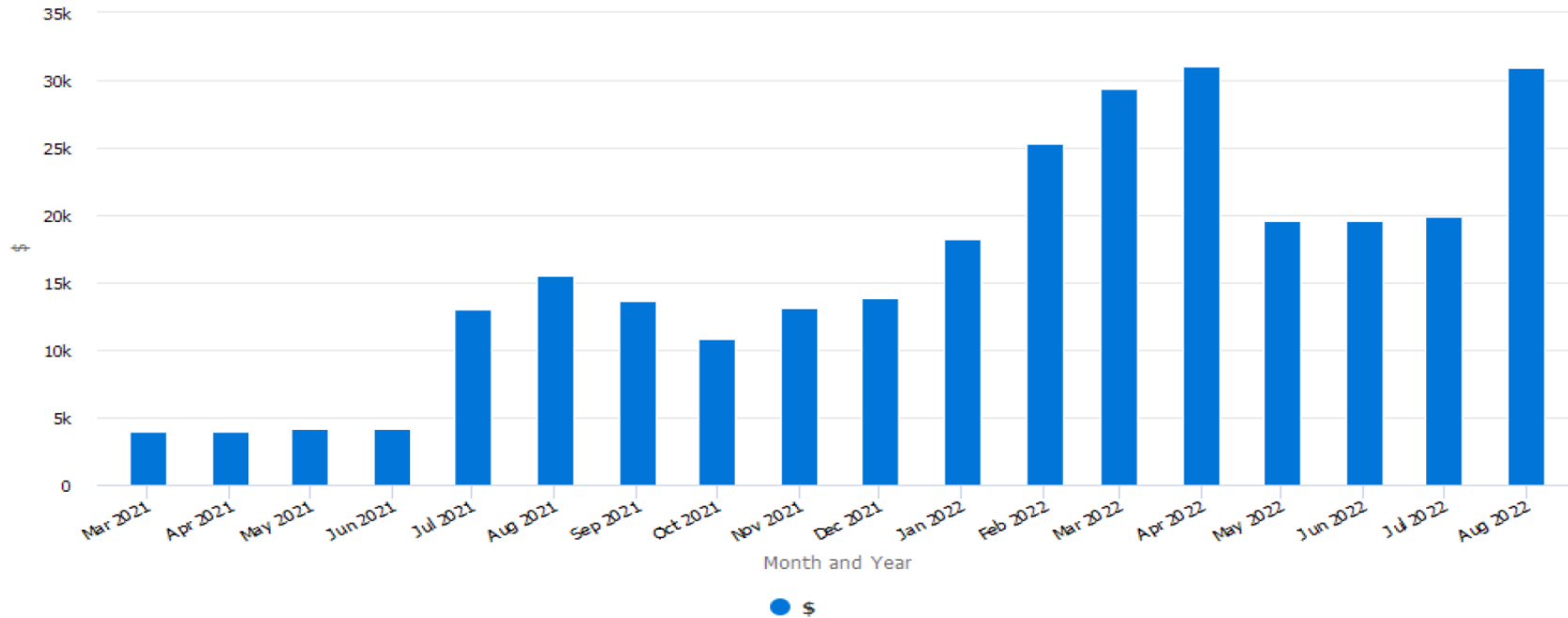
403 Total Charge Sessions

82,918 Total Charge Minutes

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