

# 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

### NESTERN City

September 1, 2021 | By Cal Cities Annual Conference and Expo speakers

### How the public and private sectors are creating more energy-efficient cities

Even if the world meets the goals set forth by the Paris Climate Agreement, the effects of a warming environment will be felt in California for decades: "Historical and unprecedented" wildrife seasons and droughts are becoming the norm and sea levels are predicted to rise by as much as seven feet by 2100. However, many local leaders are doing more than just hardening their communities against climate change; they are also actively working to reduce its effects.

One way dities can mitigate the effects of dimate change is by creating more efficient energy systems, which lower greenhouse gas emissions, reduce related utility costs, and help prevent potentially, catastrophic environmental damage, both locally and nationally. Here's how some leaders are creating a safer, greener future for their communities. Learn how you can apply their actions to your city or town during the League of California Cities Annual Conference and Expo.

#### Bold action, innovation during fiscal uncertainty, and environmental sustainability case studies

For city decision-makers, COVID-19 has created a financial crisis unlike any other. Most local governments decided to ride out the storm and wait for financial stability before even considering new infrastructure investments. But some leaders understood that even though public attention was focused on the pandemics enormous challenges, the intensitying climate crisis demanded immediate action.

In California, three cities located between San Francisco and Sacramento took a major leap forward in sustainability, even as they grappled with the COVID-19 economy, in each city,

grit to overcome parriers. Their bold solutions have already significantly improved energy efficiency and public safety will continue to pay off for many years to come.

These projects were often the result of small, but mighty changes. For example, the city of American Canyon Isunched a landmark intuitive to reduce its energy usage and improve restiency. The city took an incremental approach, focusing on critical technologies that would build towards a fully operation into providing an example of the city of the project included solar photovoltake generation infrastructure, energy storage, emerging enerators, electric veneric energing stations, k-MAC upgrades aginging retrofits, which furthered the city's climate action go, by lowering greenouse gas emissions over the long term and reducing utility costs.

A loan and two separate \$300,000 grants enabled America— Caryon to implement these improvements without any up-ficapital expense. Cuaranteed cost savings from the city's hind-party energy partner also helped the project make finsense. 'This crucial project demonstrates the city council's commitment to the community's sustainability goals,' said c Manager Jason Holley.

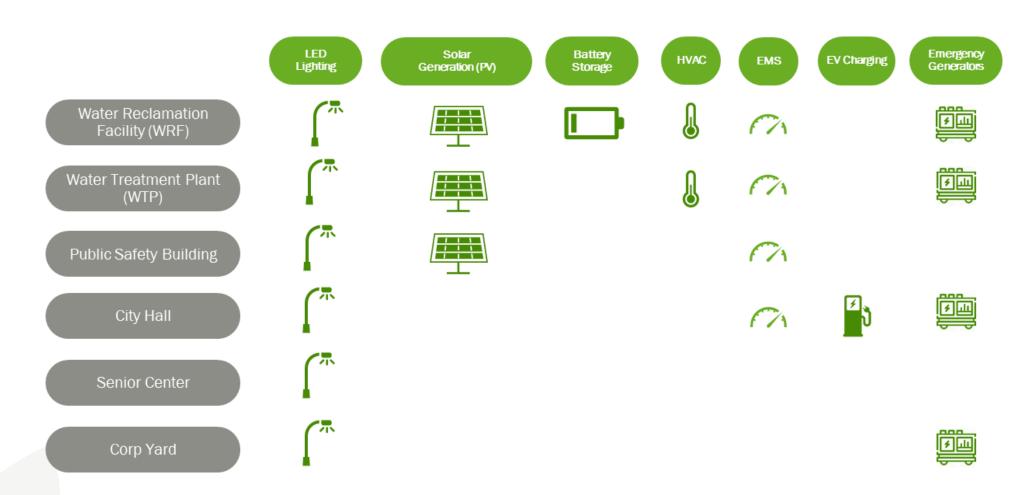
Sixteen miles to the south, the city of Hercules took bold fill action in the early days of the pandemic to reduce energy Usage and improve sustainability. Among its initiatives was recent energy upgrade project, which installed solar arrays retrofitted dry-owned buildings and streetights with new i efficient LED fixtures, resutting in reduced energy costs and project funding for other critical infrastructure improveme



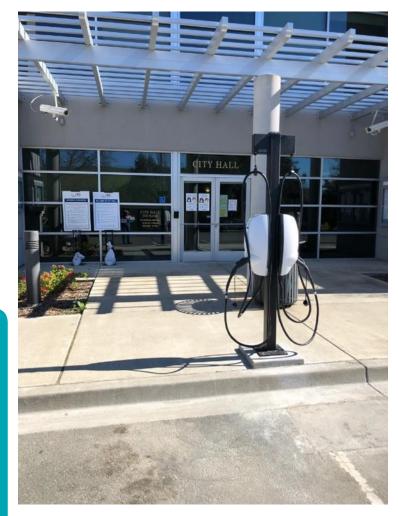


### **Climate Adaptation**

### Comprehensive Scope of Work focusing on Efficiency & Resiliency













### 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**

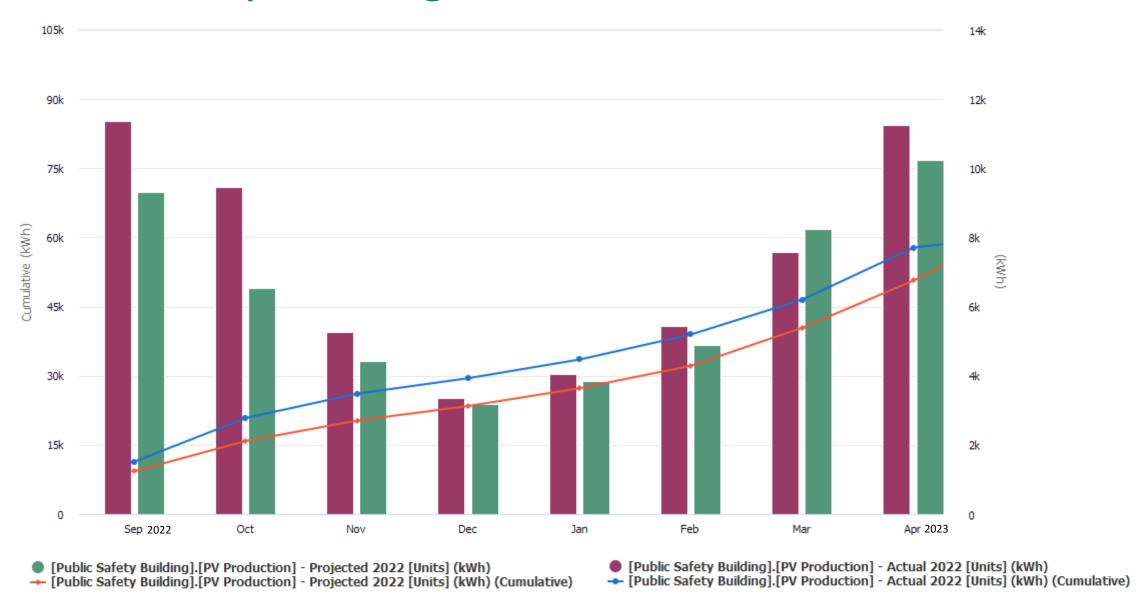
- 500 kW Water Reclamation Facility
- 250 kW Water Treatment Plant
- 120 kW City Hall
- 300 kW Corp Yard



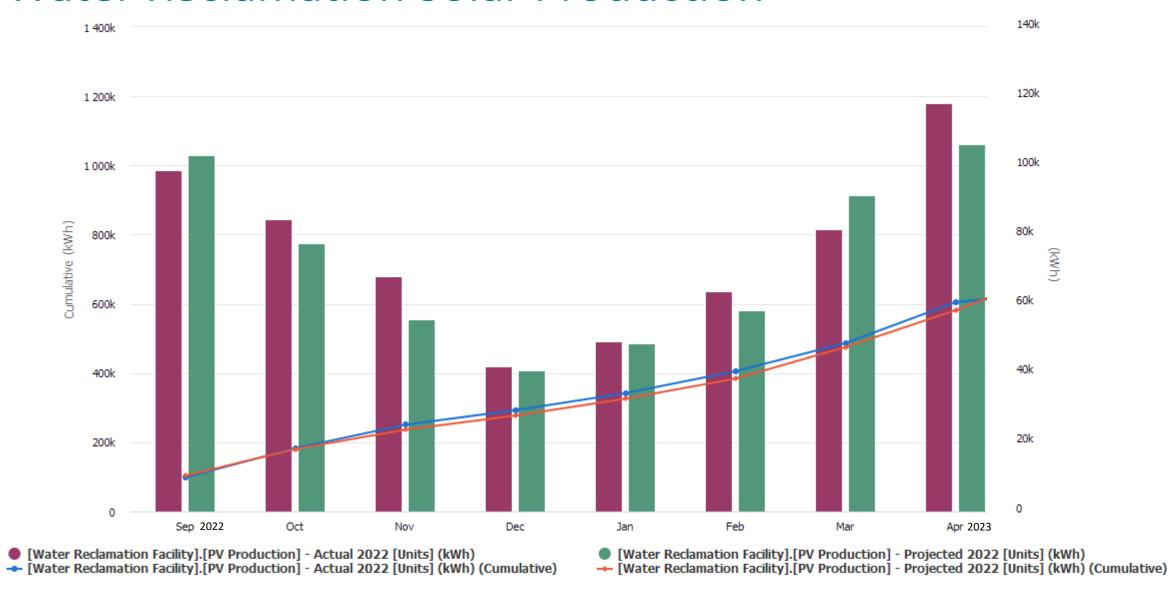
#### **Microgrid Readiness**

- 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 deenergization events

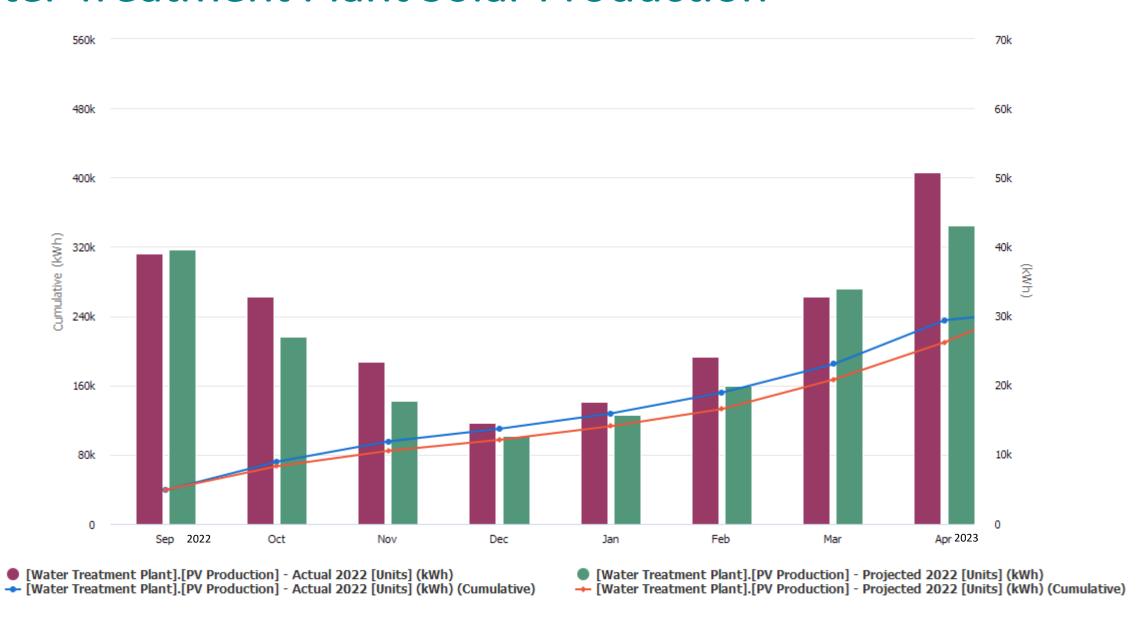
### **Public Safety Building Solar Production**



### Water Reclamation Solar Production



### Water Treatment Plant Solar Production





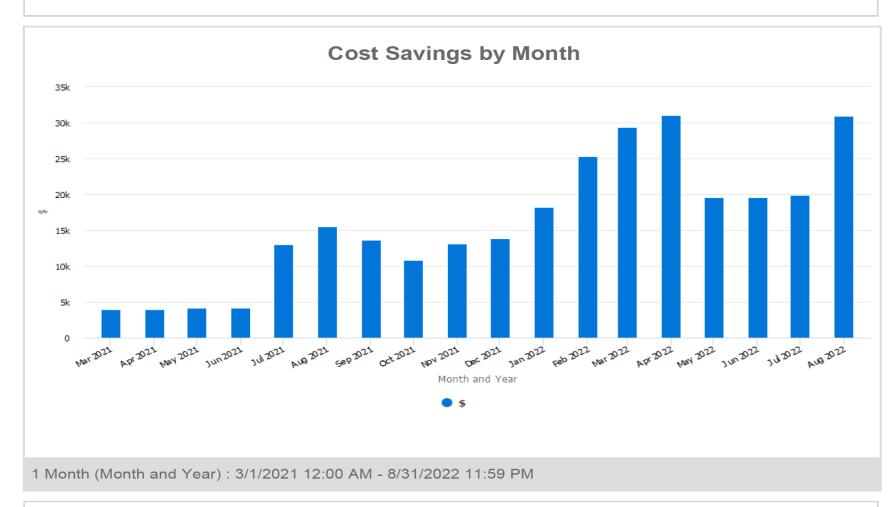
City Hall EV Charging Station
January - April 2023
403 Total Charge Sessions
82,918 Total Charge Minutes

### 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 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