



# Accelerating Clean Energy in Rural and Disadvantaged Communities

CALIFORNIA CLIMATE & ENERGY COLLABORATIVE (CCEC) FORUM PANEL #18

SEPTEMBER 22, 2022

10:30 AM – 11:45 AM

# SJVCEO Overview

## Who is SJVCEO?



We fundamentally believe that all Californian's deserve access to more efficient, more reliable, and more affordable energy.

## What is SJVCEO?

- ✓ Free Policy and Project Support founded on data observations and support of local control
- ✓ Cities, Counties, k-12, Special Districts
- ✓ Develops energy saving opportunities, leads for Utility Programs--like GK12, develops short, mid and long-term EE pipelines.
- ✓ PG&E program, competitively bid, no cost/obligation to customer

# Understanding Geography/Intros



## **Speakers:**

- ▶ Ann Kloose, Sustainability Manager/City of Fresno
- ▶ Christine Viterelli, Grants Manager/City of Arvin
- ▶ Mark Staples, Director, Planning and Development Services/City of Taft
- ▶ Michelle Villa, Account Manager/Willdan

## **Host:**

- ▶ Rochelle Butler, Energy Manager/San Joaquin Valley Clean Energy Organization (SJVCEO)/Central California Energy Watch (CCEW)



# City of Fresno

ANN KLOOSE, SUSTAINABILITY MANAGER

# City of Fresno

**ONEFRESNO**

*Let's Build Together!*



- ▶ **Fresno 2020 Census – Population 542,012**
  - ▶ 112 square miles
  - ▶ 5<sup>th</sup> Largest City in CA
  - ▶ 34<sup>th</sup> Largest City in the Nation
- ▶ Beautify Fresno – Citywide Clean-ups
  - ▶ 170,360 lb of trash removed
  - ▶ 28,338 volunteer hours
- ▶ The Sustainability Division is committed to City goals by reducing GHGs via:
  - ▶ Energy efficiency
  - ▶ Developing renewable energy

# Putting the “Action” in Climate Action Planning



## The Need to Become Energy Efficient

- ▶ Commitment to CAP goals
- ▶ Rising costs of energy
  - ▶ The toll of rising costs on Citywide budget
- ▶ State & local energy goals
- ▶ Energy efficiency projects:
  - ▶ LED streetlights conversion
  - ▶ City Hall & Municipal Service Center
  - ▶ Police & Fire Facilities
  - ▶ City Parks & Community Centers
  - ▶ These projects combined will result in:
    - \$3.4 million annual savings on our PG&E (electricity) bill
    - 15 million kWh annual savings, which is equivalent to:
      - Removing 2,290 vehicles off the road
      - 10,665 metric tons of CO<sub>2</sub> emissions avoided
- ▶ Identifying the right energy efficiency partner – *Alliance Building Solutions, Inc.*

# City of Fresno

## *Energy Efficiency Road Map – Parks & Public Safety*

### Scope of Work

- LED lighting upgrades – 73 Sites
- HVAC upgrades – 20 Sites
- System controls upgrades – 43 Sites
- Transformer upgrades – 10 Sites
- 2 mobile backup generators – panel upgrades at various sites

### Project Savings

- Estimated first year utility bill savings - \$1.4m
- Estimated first year O&M savings - \$624,000
- Estimated 15-Year project savings - \$22.6 million
- Energy performance contract guarantee



# City of Fresno

## *Energy Efficiency – Making the Numbers Work!*

### City of Fresno Funding & Financing Strategies

- PG&E bill savings will be captured and applied to energy project financing
- Standard energy loan financing at 2.62%
- PG&E – On bill financing (OBF) at 0% interest up to \$1.7 million
- Construction costs are financed and fully recovered by energy savings
- City administrative and permitting costs covered by City funding
- Solar Power Purchase Agreement (PPA) savings





# Solar and Battery Storage

- ▶ Renewable Energy & Battery Storage
- ▶ Over 32 Megawatts (MW) of new solar & battery storage
  - ▶ Over 15 City solar sites
  - ▶ One of the largest SGIP Awards on record at \$3.2 million
  - ▶ \$2.2 million utility bill savings in year 1
  - ▶ Over \$100 million savings over 20 years
  - ▶ Over 36,000 tons of CO<sub>2</sub> emissions avoided
  - ▶ 8,000 gas powered cars off the streets
  - ▶ 600,000 tree seedlings grown for 10 years



# US Conference of Mayors Climate Protection Award Winner 2022



THE UNITED STATES  
CONFERENCE OF MAYORS

## The Mayor's Citywide Energy and Sustainability Program

- ▶ Energy Efficiency & Renewable Energy
- ▶ The two-part program saves more than:
  - ▶ \$166 million in taxpayer funds over the next 20 years
  - ▶ Environmentally equivalent to:
    - ▶ Removing 10,000 vehicles off city streets
    - ▶ Growing 775,000 new trees in just 10 years



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# City of Arvin

CHRISTINE VITERELLI, GRANTS MANAGER

# City of Arvin- A Rural DAC

- ▶ **Population: 19,495**
- ▶ **Size: 4.9 Square Miles**
- ▶ **94% Hispanic**
- ▶ **Median Income: \$ 39,750**
- ▶ **32% Living in Poverty**
- ▶ **Environmental Challenges:** Air Pollution, Lack of Clean Drinking Water, Pesticides
- ▶ **City Challenges:** Lack of Sufficient Tax-Based Revenue for projects, Limited Staff Capacity



# City of Arvin- A Rural DAC

- ▶ **Creative Solutions to Staff Capacity:**
  - ▶ AmeriCorps Program
  - ▶ Civic Spark Program
  - ▶ Grant Writing for Expansion of Staff based on project needs



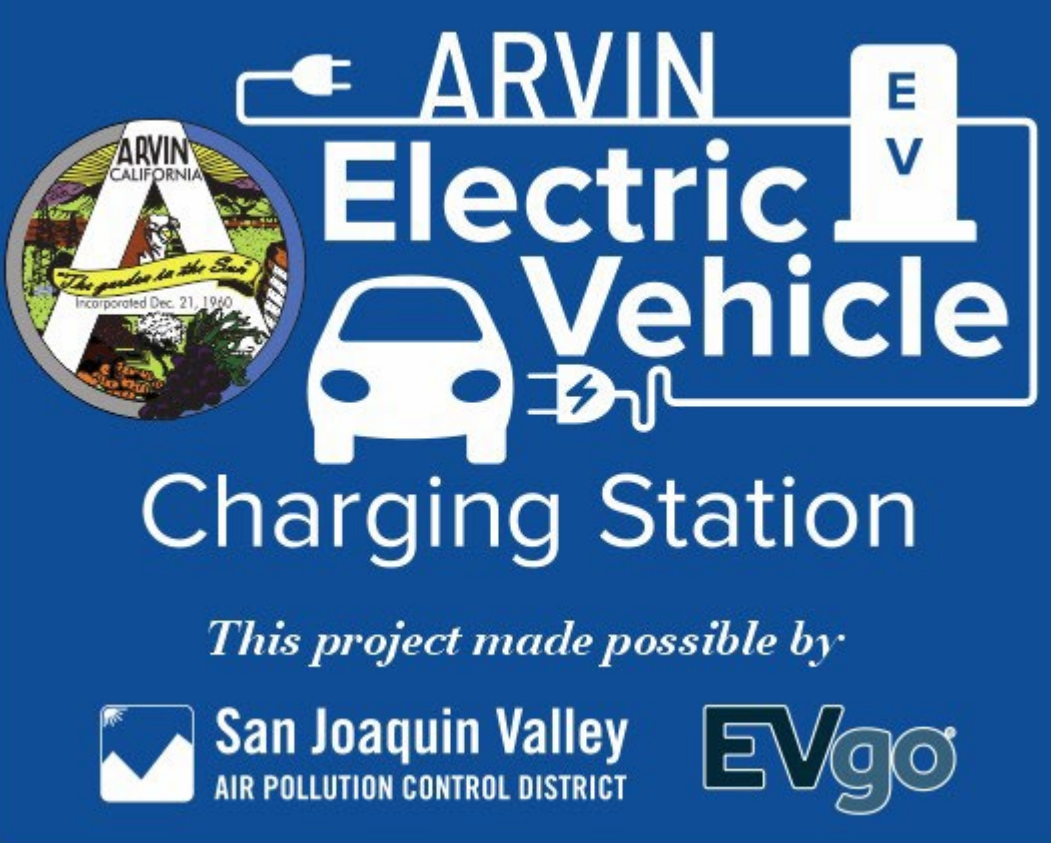
**AmeriCorps**



**CALIFORNIA**  
**VOLUNTEERS**

Office of the Governor

# City of Arvin- Layering Grants to Achieve Energy Efficiency Goals



The logo for the Arvin Electric Vehicle Charging Station is set against a blue background. It features the word "ARVIN" in a large, white, sans-serif font at the top. Below it, the words "Electric Vehicle" are written in a larger, white, sans-serif font. To the left of "Electric Vehicle" is a white silhouette of an electric car. To the right is a white silhouette of an electric vehicle charging station. A white power cord with a plug icon connects the car to the station. Below the main text, the words "Charging Station" are written in a white, sans-serif font. At the bottom, the text "This project made possible by" is written in a smaller, white, italicized font. Below this text are two logos: the San Joaquin Valley Air Pollution Control District logo, which includes a stylized mountain and sun icon and the text "San Joaquin Valley AIR POLLUTION CONTROL DISTRICT", and the EVgo logo, which consists of the letters "EVgo" in a stylized, rounded font.

**ARVIN**  
**Electric Vehicle**  
**Charging Station**

*This project made possible by*

**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT

**EVgo**

**Challenge: Install Public EV Charging Stations with no general fund dollars**

- 1) EV Go- Special Program- installed electrical infrastructure and ground cables for 10 charging Station**  
**\*alternative current programs include PGE and SCE utility programs and Shell Recharge for installing charging stations**
- 2) SJVAPCD- "Charge Up" Program- \$ 5,000 per EV Charger**

# City of Arvin- Layering Grants to Achieve Energy Efficiency Goals

## **Microgrid and Bus Project- Advance Planning and Layering of Funds**

**Challenge:** The City was interested in Procuring a **Microgrid and 2 New Electric Buses** for its Transit Dept.

Microgrid had additional benefits, including a reduction of over 3 million dollars in energy over 20 years

Arvin explored PPA options and ultimately decided to create a budget, analyze data, research funding, and begin reserving reliable sources of yearly match funds.

**Benefits:** Avoids long-term PPA and service agreements.

**Pitfalls:** Requires unwavering commitment and patience for the project timeline.



Bus and Option Specifics	1 Bus w/Micro Grid	2 Busses w/Micro Grid
Zero Emissions Paratransit Shuttle Bus Shuttle	\$ 345,000.00	\$ 345,000.00
Proterra ZX5 450Kwh 35' Base Bus		\$ 826,847.00
Specific items below were requested by Hesham Elshazly to be included in the \$120,000 budget price per bus: *Fog lights *Bike Rack for two bikes *Electronic fare box *Wheel chair lift at front door *Bus exterior with Arvin Transit Logo's installed *Apollo camera system with DVR and eight cameras: (3) exterior, (5) interior, (2) rear, (2) front, and (1) rear vision camera		
Bus Configerables		\$120,000
12 Year Energy Storage System Warranty on (Batteries)		\$ 75,000.00
Complete (Bus) Extended Warranty (5) years or 250,000 Miles		\$ 51,700.00
Reccomended Spare Bus Parts for Service Department (only one parts supply is needed for multiple buses)	\$ 5,200.00	\$ 5,200.00
Solar Microgrid for Renewable Energy Generation with Battery Back Up for Resiliency (PSPS events, Disasters, Emergency Response)	\$ 2,379,440.00	\$ 2,379,440.00
<b>Total</b>	<b>\$ 2,729,640.00</b>	<b>\$ 3,803,187.00</b>
WorkForce Development & Outreach (Workforce Development & Public Outreach)	\$ 50,000.00	\$ 50,000.00
<b>Scalable Totals:</b>	<b>\$ 2,779,640.00</b>	<b>\$ 3,853,187.00</b>
<b>Match Funds: (Deduct)</b>		
LCTOP 2021 -Local match for '35 Bus (Confirmed)		(\$22,775.00)
LCTOP 2022- Local match for '35 Bus (annual source)		(\$35,000.00)
SGR SB1 2021 & 2022 -Local match for Grid (Confirmed)	(\$132,689.00)	(\$132,689.00)
HVIP 2021 Vouchers-Match for Bus (Confirmed)	(\$69,000.00)	(\$120,000.00)
Rose Foundation-Kern Air Pollution Mitigation- Match for Grid	(\$243,973.00)	(\$200,000.00)
SJVAPCD CVIP (TBD)	(\$243,973.00)	(\$243,973.00)
Arvin General Fund Contribution -Workforce Budget	(\$10,000.00)	(\$10,000.00)
2021 & 2022 Low Carbon Fuel Credits-Local Match for Grid	(\$63,200.00)	(\$63,200.00)
Arvin TDA Funds Contribution	(\$20,000.00)	(\$103,000.00)
<b>Match Total:</b>	<b>(\$782,835.00)</b>	<b>(\$930,637.00)</b>
<b>% as Match</b>	<b>28%</b>	<b>24%</b>
In the event CVIP estimated amounts change-Arvin will contribute additional TDA Funds (Please see Attach 7,Page 1 & 2)		
<b>FTA Low No Grant:</b>	<b>\$ 1,996,805.00</b>	<b>\$ 2,922,550.00</b>



# City of Arvin- Achieve EE Goals by using more than one methodology

- ▶ **Grants**
- ▶ **Rebates**
- ▶ **Incentives**
- ▶ **Special Utility Programs (PGE, SCE, Shell Recharge)**
- ▶ **On-Bill Financing**



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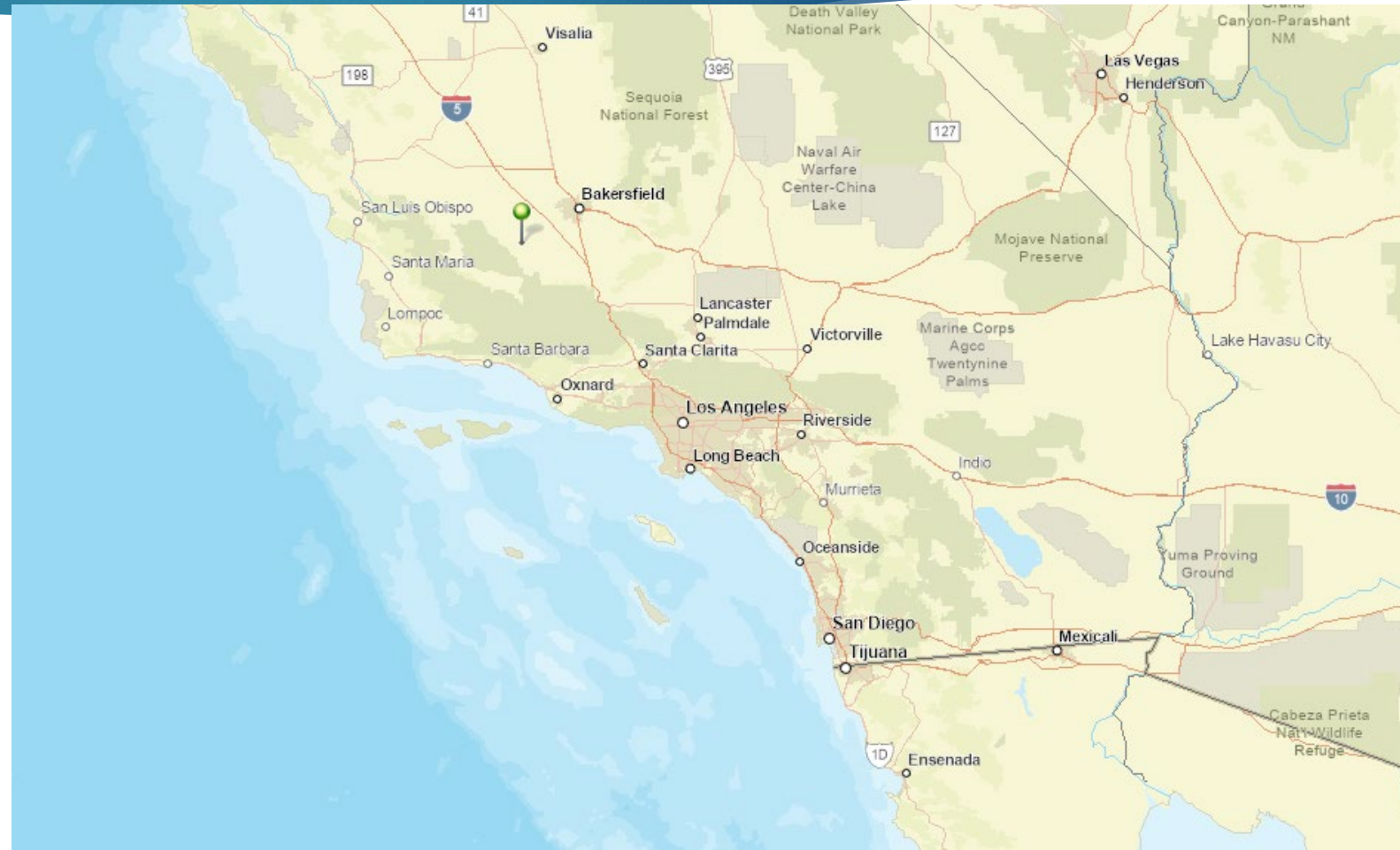


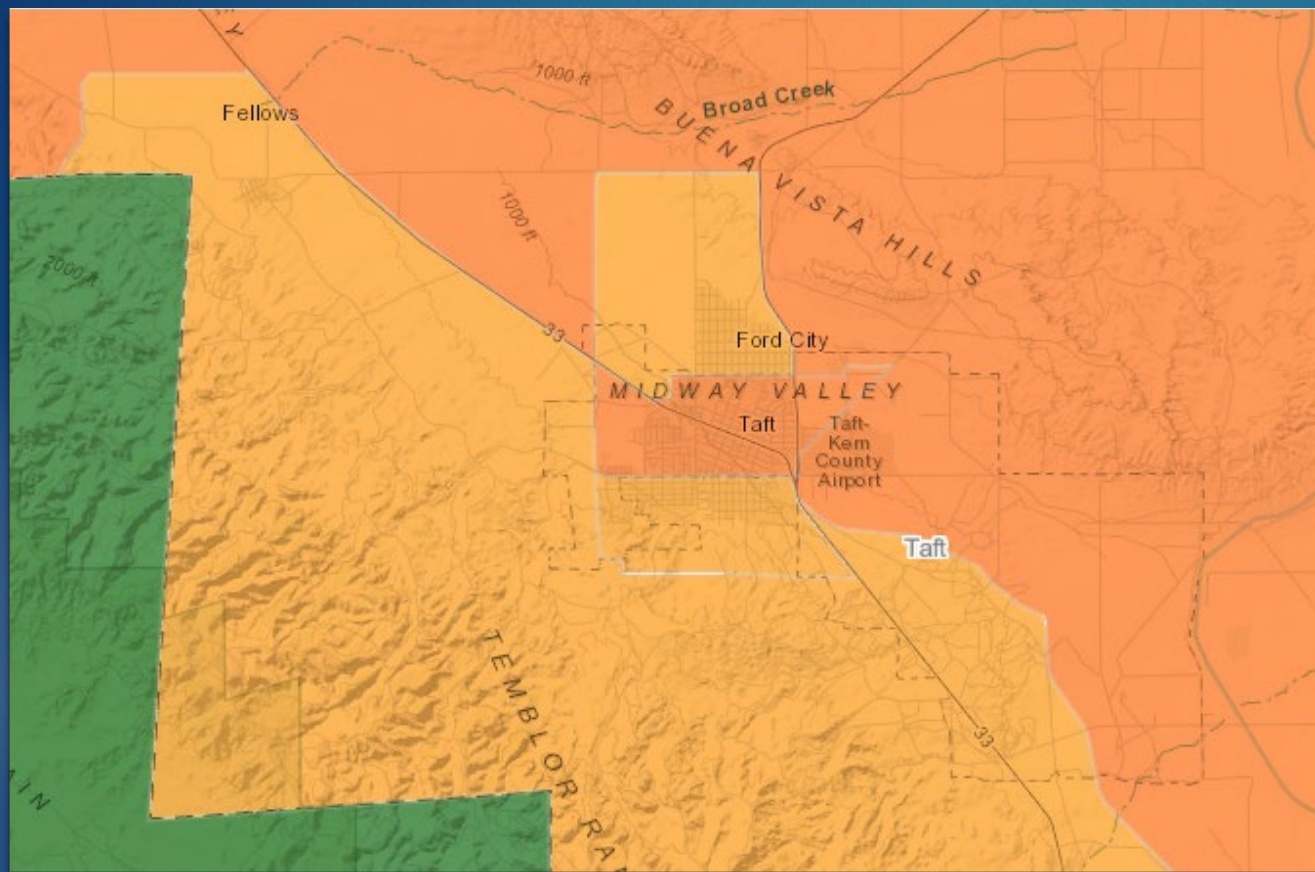
# City of Taft

MARK STAPLES, DIRECTOR, PLANNING AND  
DEVELOPMENT SERVICES

# City of Taft

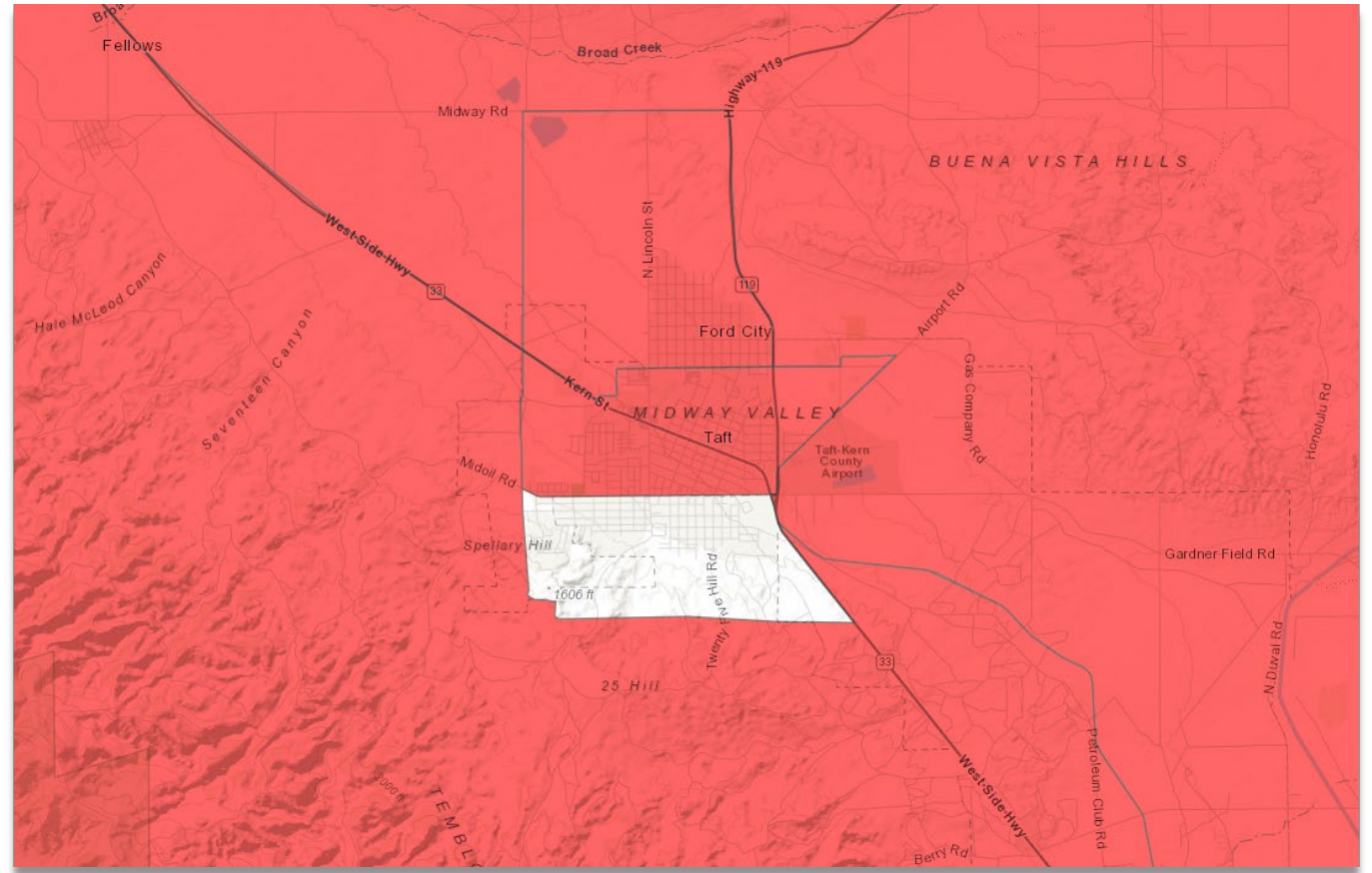
- ▶ **Central Valley**
- ▶ **Kern County**
- ▶ **Population: 7,011  
(DOF, 1/1/2022)**
- ▶ **Oil & Gas Production**
- ▶ **Mixed  
Disadvantaged  
Community**





# CalEnviroScreen 4.0 Map

# SB 535 Disadvantaged Communities Map



# City of Taft Projects

- ▶ **2011-12 EE Audits by PG&E**
  - ▶ Direct Install EE CFLs – City Hall, Police Department, Community Correction Facility
  - ▶ Solar Carports – City Hall, Police Department (Power Purchase Agreements)
  - ▶ Solar Fields – Taft Wastewater Treatment Plan, Taft Correctional Institute WWTP (PPA?)
  - ▶ City does not like the PPA it previously entered into for solar installations
- ▶ **2021 Direct Install Project**
  - ▶ Willdan and Staples Energy
  - ▶ Change from EE CFLs to LEDs in Police Department and Public Works maintenance building
  - ▶ Completed in about 2 to 3 weeks



# Challenging Projects and Issues

- ▶ **Modified Community Correctional Facility (Former CCF)**
  - ▶ Closed 2011-2013... Closed again May 2021
  - ▶ Upgraded CFLs in 2012
  - ▶ 2021 Upgrade project to LEDs on hold due to timing and cost, uncertainty if and when facility could reopen
- ▶ **On Bill Financing (OBF) Hesitation**
  - ▶ Fully Understanding OBF
  - ▶ OBF is not PPA



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# Getting Projects Done: The Four Ps to Serving DACs

Michelle Villa  
CCEC Annual Conference, San Diego

September 22, 2021



# Who is Willdan?

- Willdan Group, Inc. (NASDAQ: WLDN)
- National **energy services** and **professional engineering firm**
- Founded in **1964**
- **1,350+** employees, **50+** U.S. offices
- Implement **130 utility programs** nationwide



California Public Experience and Delivery

**57**  
Years of Public Experience

**13,000+**  
Local Government Projects in  
PG&E Cities and Counties

**1,000**  
K-12 schools in CA

 **760**  
GWh

 **72**  
MW

 **26M**  
therms



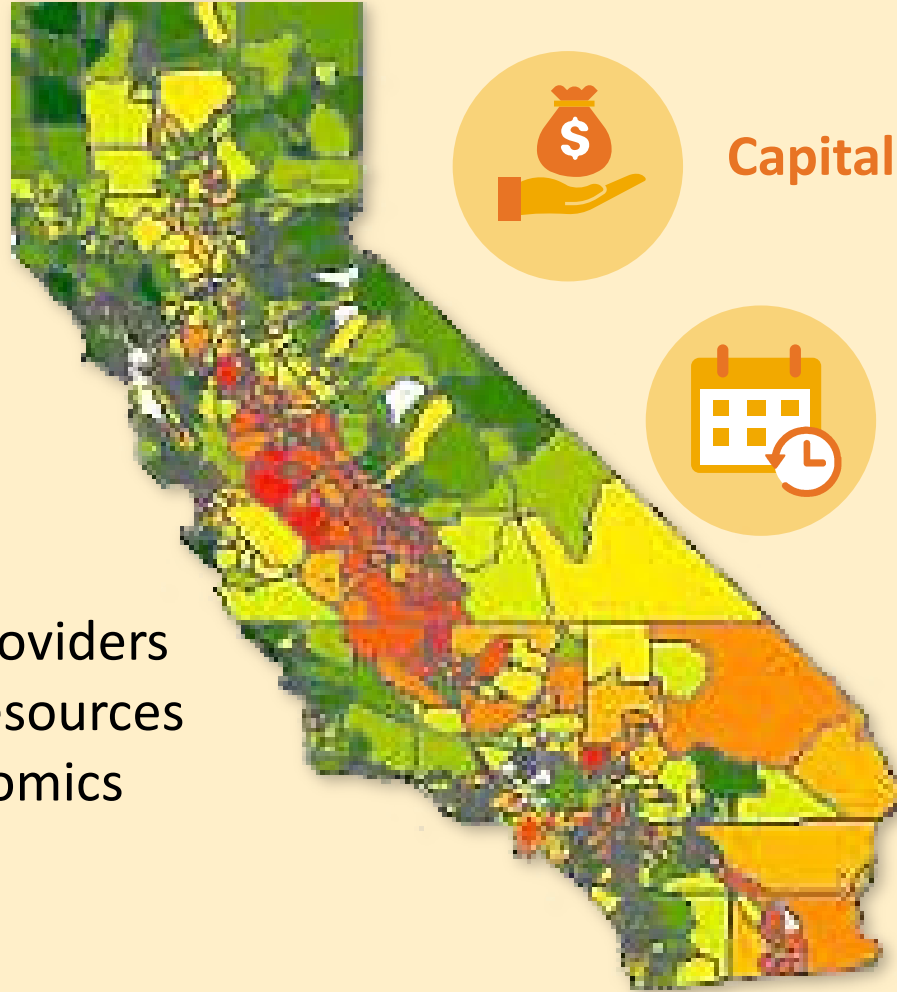
# Understanding Rural and DAC Barriers

Before identifying solutions, you need to understand what barriers rural/DAC customers face when it comes to pursuing energy efficiency projects



## Geographic Barriers:

- Lack of qualified providers
- Lack of access to resources
- Implementer economics



## Capital Constraints



## Time/Resource Constraints:

- DACs tend to have fewer staff members
- Must wear many hats

# What We've Learned - Make it Easy



Energy efficiency projects must be **TURNKEY**:

- Material and install is provided at low-to-no-cost
- Zero upfront costs whenever possible

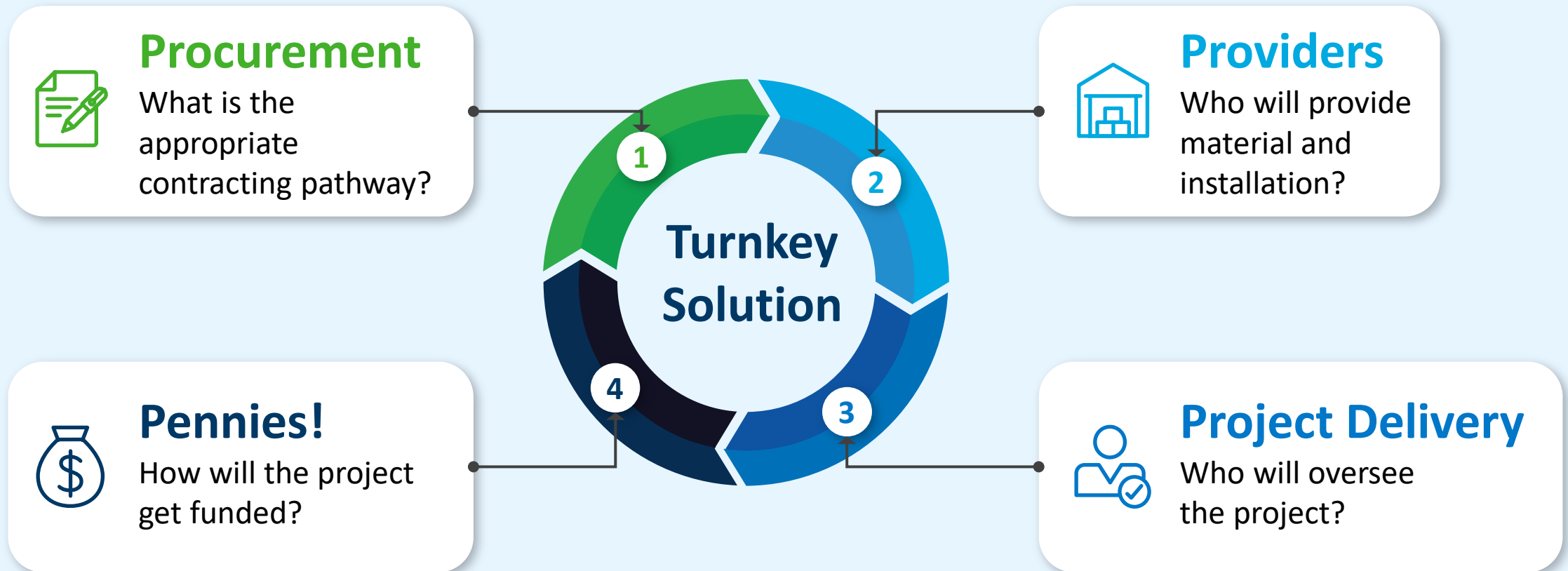


Offering must be **FLEXIBLE** to meet cities where they are at:

- Work with preferred contractors
- Procurement pathways
- Financing vs. Incentives

# Solution: The Four Ps

To maximize energy efficiency adoption in DACs, projects must solve the **Four “P”s**







# Procurement

- **Sole Sourcing vs. Competitive Bid**
- **Know your codes!!**
  - PUC 1720
  - PCC 3400
  - 4217
  - PUC 388



## CASE STUDY

### El Dorado County Transit Authority:

- Joint Powers agency that provides transport services in El Dorado County
- **Project:** LED Lighting
- **Procurement Pathway:** Sole Source (PCC 3400)
- Net costs (after incentives) were below procurement thresholds
- Allowed El Dorado TA to bypass competitive bid process



## Providers

Identify quality sources for material and labor, bring resources directly to customers:

- Establish subcontracts with manufacturers, distributors, and trade professionals
- Prioritize local vendors whenever possible



### CASE STUDIES

#### Nevada City:

- 60 miles from Sacramento, population of 3,000
- **Project:** Replace natural gas water heaters with Heat Pump Water Heaters (HPWHs)
- **Provider Solution:** Subcontracted with local vendor to perform install

#### North Coast (solution pending):

- **Project:** HPWHs
- Motivated CCA with match dollars help finance project
- No qualified local vendor exists



# Project Delivery

## Singe Point of Contact (POC)

works closely with the City and manages project delivery from beginning to end:

- Minimizes hassle-factor
- Allows the POC to understand unique customer needs and adjust offering if needed

## CASE STUDY



## City of Stockton

- **Project:** Upgrade streetlighting to LED
- City was unable to sole source-project must go through competitive bid process and council approval
- **Project Delivery Solution:** Worked with the City to develop a scope of work to ensure awarded project meet Program requirements

# Pennies

- **Identify** grants, utility incentive programs, financing options, match funding opportunities etc.
- **GK12 Funding Options:**
  - OBF Non-Incentive
  - Incentive-Only
  - Incentive + OBF

## CASE STUDY

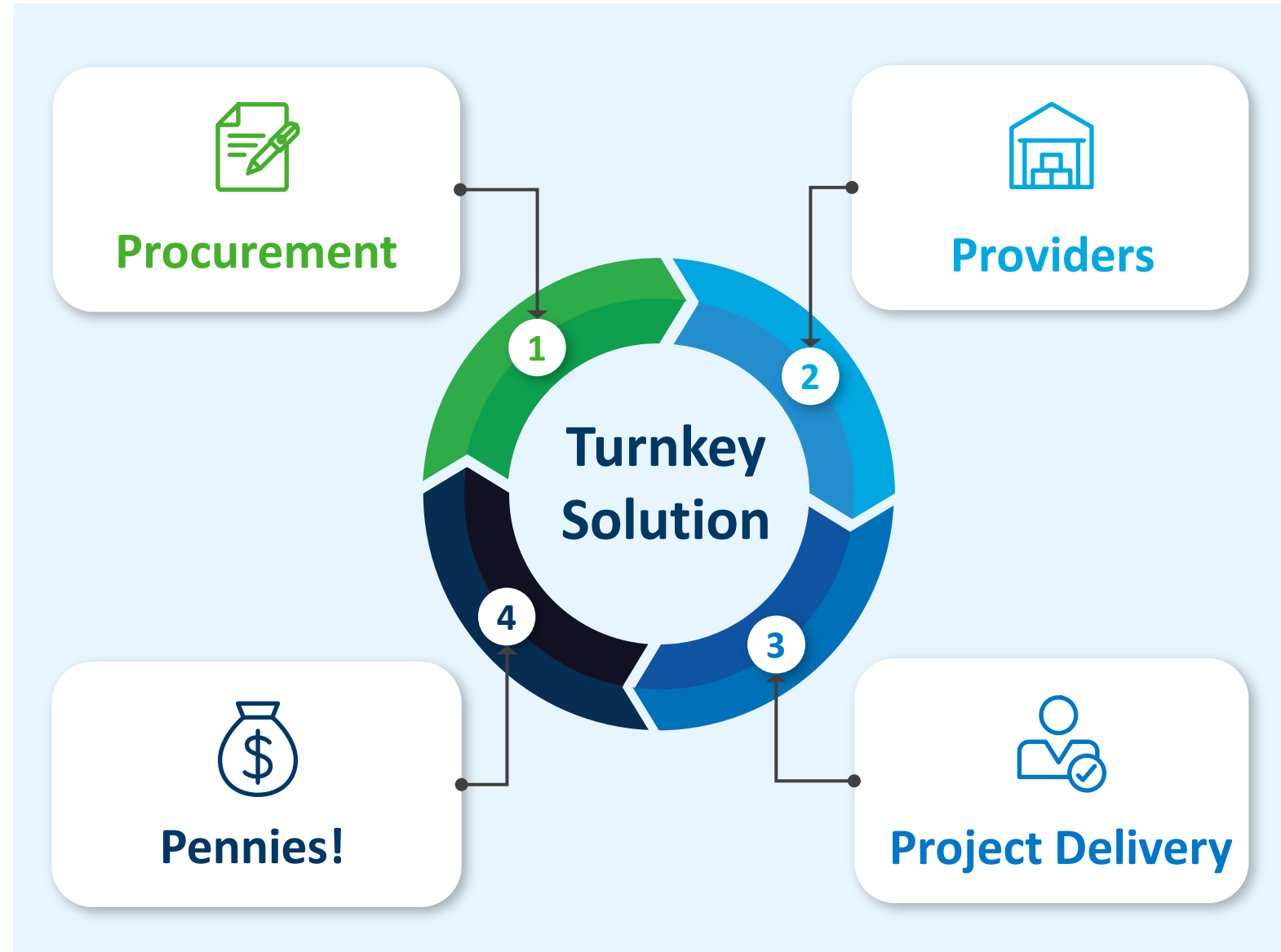


## City of Arvin

- **Project:** Park LED Lighting
- Originally chose Incentive + OBF
- City found funds and changed pathway to Incentive-Only
- Allowed City to realize bill savings immediately

# Conclusion

- Anticipate customer barriers to project implementation and identify solutions to each of the **four Ps**:
- **Be flexible**
  - No two cities are alike
- **Ask for help!**
  - Work with market-actors like SJVCEO that understand your audience and can help identify solutions



# Thank You!

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Questions?