

# “Energizing” Contra Costa County Fire Protection District



OPTERRA  
ENERGY SERVICES



Board Presentation  
January 17, 2017

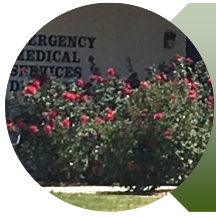
# Today's Agenda



- Partnership Vision
- Facilities Challenge
- Energy Use, Savings
- Project Benefits
- Energy Measures by Site
- Solar PV Layouts
- Community Outreach
- Climate Action Plan Alignment
- Next Steps



# Program Vision and Objectives: “Energizing” CCCFPD



Improve CCCFPD facility equipment;  
address deferred maintenance needs



Demonstrate fiscally responsible environmental  
stewardship; leverage utility rate structures



Engage / educate community;  
Conduct public outreach meetings



Align with Contra Costa County  
Climate Action Plan (CAP)

# District-wide Fire Stations Heating & Cooling Deferred Maintenance Challenge



*48-year-old boiler at Fire District Headquarters  
has far exceeded operational life expectancy*

## **Challenge:**

End-of-life heating and cooling equipment at 12 sites; lack of funds

## **Solution:**

Project's utility savings pay for otherwise-capital-intensive equipment at all 12 sites

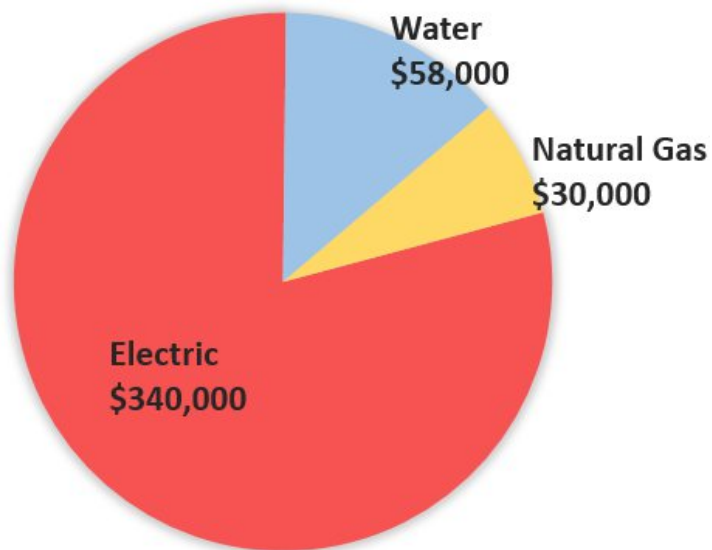
# Utility Costs and Project Savings



BEFORE

AFTER

**CURRENT UTILITY EXPENDITURE:  
\$428,000 / YEAR**



**ANNUAL UTILITY SAVINGS:**

- **Electric:**  
\$192,000
- **Water:**  
\$600
- **Natural Gas:**  
\$1,200



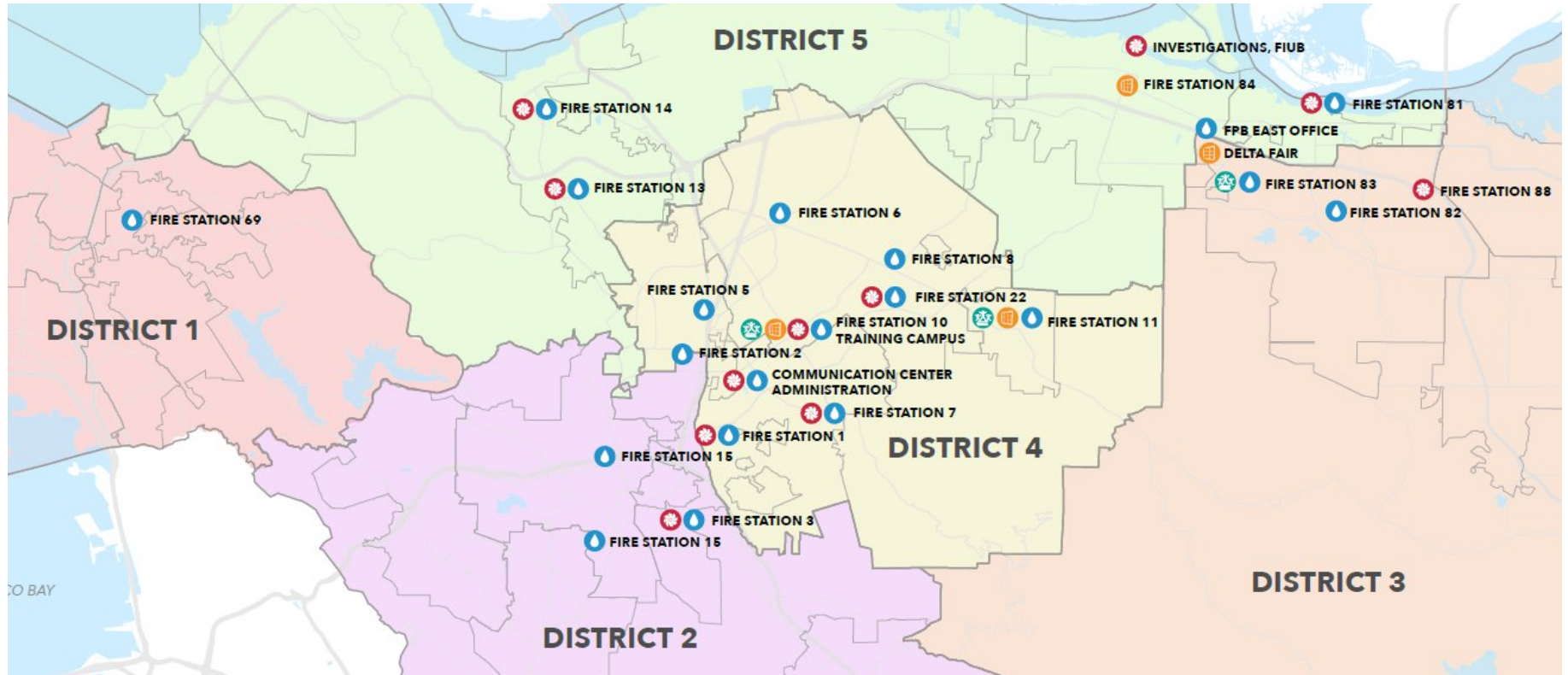
# Project Benefits

- \$6.8 million savings over life of project *over and above* capital improvements
- Utility savings guaranteed
- Annual resource conservation savings
  - 1.1 MWh electricity
  - 132,000 gallons water
  - 1,100 therms natural gas
- GHG emissions reductions
  - 214 Metric Tons CO<sub>2</sub> equivalent\*
  - Equal to 500 barrels of oil\*\*

\* PGE calculator (gas + electric)

\*\* EPA equivalences (per pg 41 CAP)

# Sites and Work Scopes



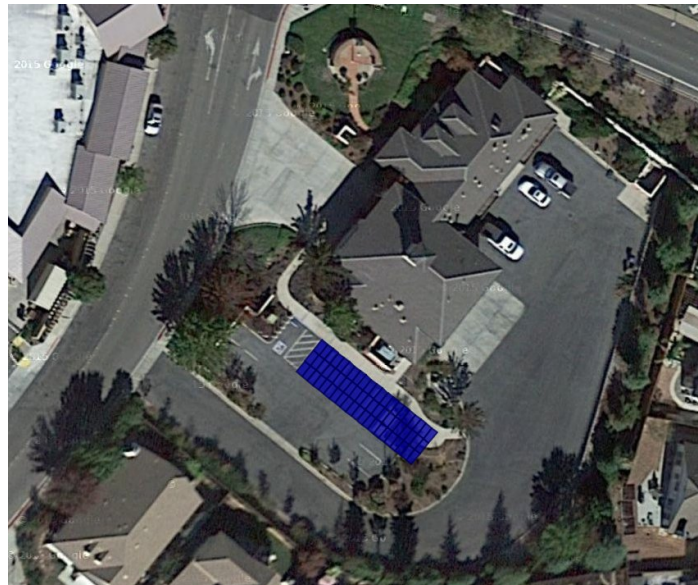
# Renewable Energy / Solar Sites



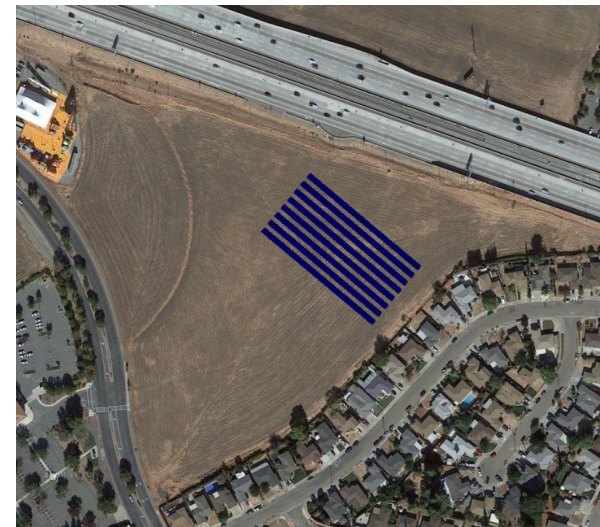
**Fire Station 10 &  
Training Campus  
Concord  
135 kW**



**Fire Station 84  
Pittsburg  
33 kW**



**Fire Station 11  
Clayton  
121 kW**



**Delta Fair Site  
Antioch  
562 kW**



# Training Center Public/Staff Parking Area



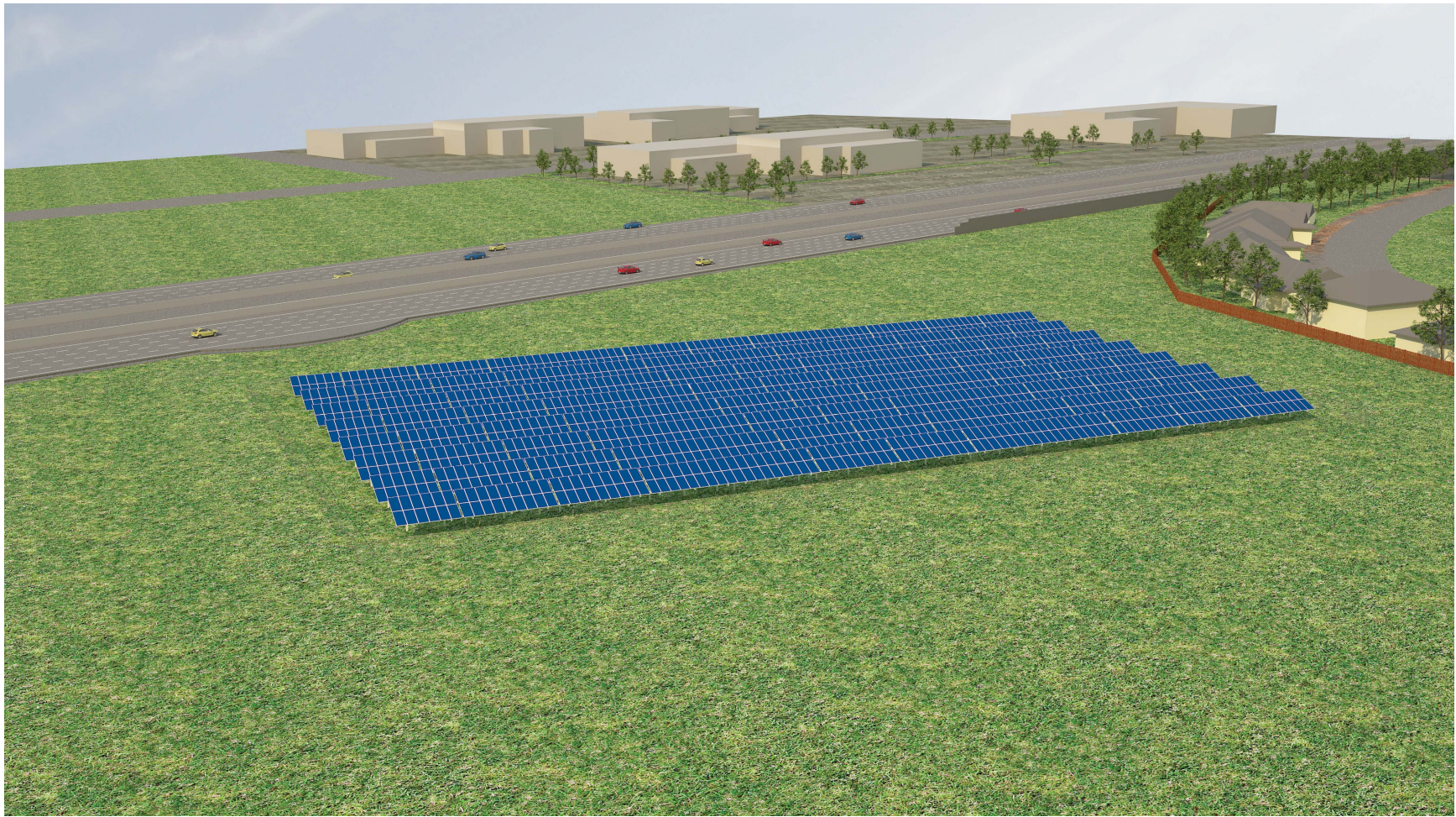
# Training Center Apparatus Storage Area



# Fire Station 11



# Delta Fair



# Fire Station 84



# Community Outreach Activities

- Jan 2017 public outreach meetings
  - Concord, Clayton, and Pittsburg public meetings
  - Displayed renderings of solar installations
  - Presented program’s fiscal and environmental benefits
- 2017 program groundbreaking and ribbon cutting
- 2016 Confire Open House – Solar Education



*60 local youth explore solar kits*



*Well over 100 families visit Confire Open House October 29*

*Junior firefighter experiments with solar panels under table drape*



# Alignment with County's Climate Action Plan Goals and Measures



Climate Action Plan* Alignment	
GOALS	MEASURES
GOAL 1: Energy Efficiency	EE2: Energy Efficient Retrofits – Nonresidential
	EE3: Energy Conservation Awareness
	EE5: Energy Efficiency Capacity Building
GOAL 2: Renewable Energy	RE2 Renewable Energy Facilities on Public Lands
	RE3: Renewable Energy Financing – Lower Barriers
GOAL 5: Water Conservation	WE1: Water Conservation / Efficiency
GOAL 6: Government Operations	GO2: Energy Efficiency
	GO3: Water Conservation

\* Contra Costa County Climate Action Plan adopted 12/15/2015

# Final Steps to Realizing Vision



Development Activity	Complete?	Date(s)
Feasibility Assessment	✓	2015
Board Approval of Program Development Agreement	✓	May 2016
Site walks and existing condition audits	✓	May-July 2016
Update Board	✓	July 2016
Competitive Procurement Process: OpTerra/CCCYPD staff run transparent, competitive RFP-based procurement with multiple contractors on installation, equipment	✓	July 2016
Working Group Scope Review and Feedback	✓	August 2016
Issue Competitive RFP for Financing	✓	September 2016
CCCYPD Approval of Funding Plan & Implementation Contract		Today
Groundbreaking Ceremony		Feb 2017
Construction/Implementation		Winter - Spring 2017



# Questions / Comments

