

"Energizing" Contra Costa County Fire Protection District



OPTERRA
ENERGY SERVICES



District Directors' Update
Martinez, CA
July 19, 2016

Today's Agenda



- Partnership Vision
- Energy Consumption, Savings
- Conservation Measures Summary
- Preliminary Solar PV Layouts
- Media and Community Engagement Plan
- Roadmap and Next Steps



Program Vision and Objectives: “Energizing” CCCFPD



Improve operations and performance of CCCFPD facility assets; address deferred maintenance needs



Model fiscally responsible environmental stewardship in the region



Create local jobs for County residents and engage community

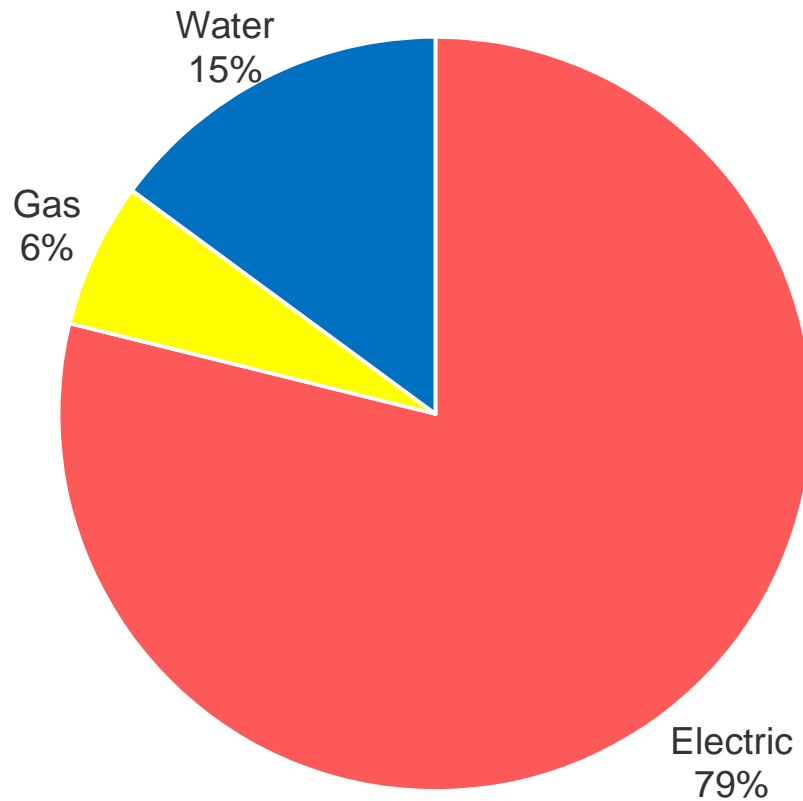


Leverage PG&E incentives, rebates and grants

Energy Consumption and Savings Potential



CCCFPD Annual Utility Spend: \$438,000/year



Estimated amount of electricity saved upon project completion: **60-70%**

Contra Costa County Fire Protection District

Energy Summary Matrix



Site	Solar Photovoltaic	Indoor Lighting	Outdoor Lighting	HVAC Improvements	Water Conservation
FS 1		○	○	○	○
FS 2, Admin and Comm Center		○	○	○	○
FS 3		○	○	○	○
FS 5		○	○		○
FS 6		○	○		○
FS 7		○	○	○	○
FS 8		○	○		○
FS 10 and Training Center	○	○	○	○	○
FS 11	○	○	○		○
FS 13		○	○	○	○
FS 14	○	○	○	○	○
FS 15		○	○		○
FS 17		○	○		○
FS 22	○	○	○	○	○
FS 69		○	○		○
FS 81		○	○	○	○
FS 82	○	○	○		○
FS 83		○	○		○
FS 84	○	○	○		
FS 85 and FPB East	○	○	○		○ (FPB only)
FS 87		○	○		
FS 88		○	○	○	
Investigations		○	○	○	
Delta Fair Property	RES-BCT				

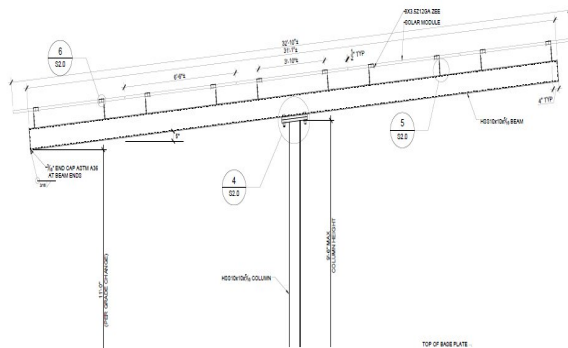
Solar Design Principles



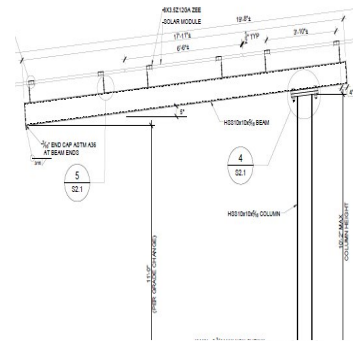
- Aim to offset 80-90% of planned electric load by site
- Locate close to main electrical service
- SW ideal orientation
- Avoid shade from buildings and trees
- Prioritize areas that provide valuable shade for staff and public
- Align designs with future plans & upgrades
- Avoid hazards to the panels (baseballs, etc.)
- Avoid hazards to building users (truck traffic, etc.)



Solar Design Types



“T” Structure



“L” Structure



“Ground-Mount”



“Roof-Mount”

Fire Station 85 & FPB East Office



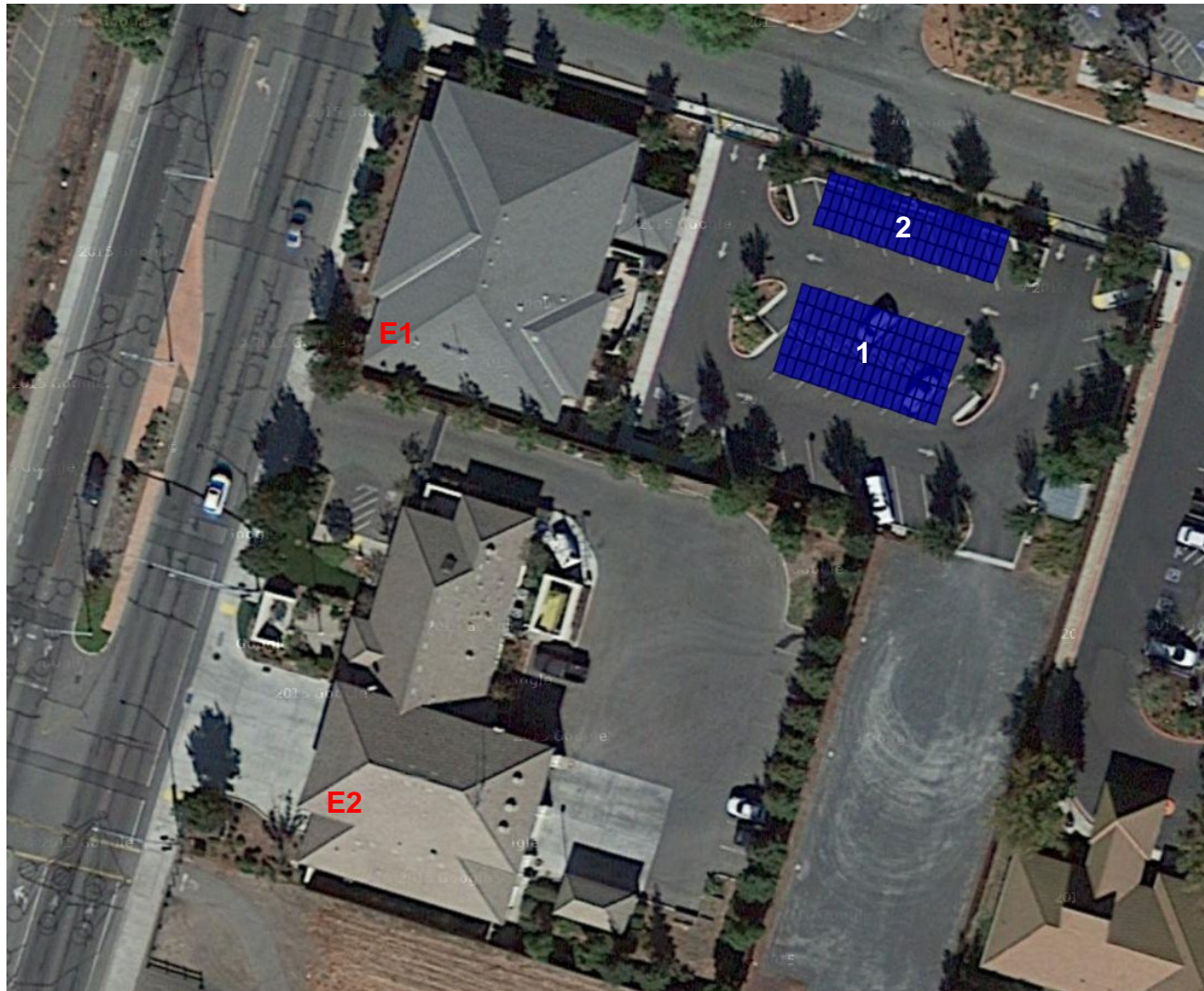
Project Description

2331 LOVERIDGE ROAD,
PITTSBURG, 94565

Array 1 (T): 30.6W

Array 2 (L): 20.4kW

E = Meter Location



Delta Fair Blvd RESBCT site



Project Description

DELTA FAIR PROPERTY,
ANTIOCH, CA

Array 1 (GM) : 691 kW

E = Proposed Meter Location

Community Impact



- Collaborate with District on media and community outreach
- Presentations alongside FPD Battalion Chiefs to District-area City Councils on program's fiscal and environmental benefits
- Program groundbreaking and ribbon cutting celebrations



Next Steps to Realizing Vision



Development Activity	Complete?	Date(s)
Feasibility Assessment	✓	2015
Board Approval of Program Development Agreement	✓	5/10
Site walks and existing condition audits	✓	5/26 – 7/8
Update Board		7/19
Competitive Procurement Process: OpTerra/CCCYPD staff run transparent, competitive RFP-based procurement with multiple contractors on installation, equipment		7/11-7/22
Working Group Scope Review and Feedback		7/20-8/3
Issue Competitive Finance RFP		7/27
CCCYPD Approval of Funding Plan & Implementation Contract		9/13
Groundbreaking Ceremony		11/3
Construction/Implementation		November 2016 – Spring 2017

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