Peninsula Clean Energy Board of Directors Meeting

January 23, 2020

PENINSULA CLEAN ENERGY

Agenda

- Call to order / Roll call
- Public Comment
- Action to set the agenda and approve consent items

Regular Agenda

1. Chair Report (Discussion)

Regular Agenda

2. CEO Report (Discussion)

Staffing Update

Welcome to Sara Maatta!

- Sara Maatta, Renewable Energy Analyst, started January 9

Other hires:

- We have extended an offer for a Digital Marketing Specialist who is expected to start soon
- We have extended an offer for a Senior Renewable Energy Analyst who is expected to start in March

PCE Strategic Plan Status

- Strategic Planning Retreat, January 11
  - Thank you for your excellent participation!
- Business Customer Interviews underway now
- Senior Staff Strategic Planning Retreat, February 5
- Draft plan review by Strategic Planning Subcommittee late Feb
- Board review of Strategic Plan in March

Resilient Solar for Critical Facilities

- Q3 2018: Peninsula Clean Energy, in partnership with EBCE, was awarded a $300k, 12-month BAAQMD grant to identify critical facilities in Alameda and San Mateo County and do preliminary assessments for backup power from solar + storage
- Q2 2019: PCE outreach to cities and county to identify potential facilities for assessment
  - May 2019: PCE presented this program at RICAPS meeting
  - June 2019 – August 2019: Outreach directly to city representatives to gather a list of prospective facilities throughout the County
- 11 cities responded to this request by identifying 118 prospective critical facility sites:
  - Belmont, Brisbane, Colma, Foster City, Half Moon Bay, Hillsborough, Millbrae, Pacifica, Redwood City, San Carlos, San Mateo

5/2019 – 8/2019	9/2019 – 11/2019	12/2019 – 1/2020	1/2020	2/2020	Q2 2020
• Outreach to cities to identify critical facilities	• Preliminary Assessment	• Review Preliminary Assessments by City *Current Step*	• Evaluate financing and rate design options	• Review financing & procurement options by City	• Collective Procurement

Preliminary Assessment

- Program technical consultant (ARUP) completed a facility screening process
- Each facility was scored according to 4 screening criteria
  - *Hazard Score:* Accounts for the range and severity of hazards faced by each site according to its location
  - *Service Score:* Ranks facilities based on number of people served in the immediate area
  - *Priority Zone Score:* Additional recognition for sites located within either Disadvantaged Communities (DAC) zones, Low Income zones, or both
  - *Solar Feasibility:* High-level analysis of solar photovoltaic (PV) feasibility based on roof area and shading using Google's Project Sunroof tool
- Based on this preliminary assessment, staff recommend filtering the list of sites from 118 to 90; these sites will be further studied for financial viability
- For cities that did not participate in the initial request to identify sites, please contact us to express your interest. There may be opportunities to participate in a joint procurement or a future round of scoping and analysis.

PCE Staff will be reaching out to city representatives at each of the 10 cities to schedule a meeting to review city-specific results of the initial assessment and staff recommendations for next steps.
Staff's goal is to complete these meetings by end of January.

Power Procurement Update

Wright Solar Commercial Operation Date: January 3
Press release issued yesterday

Existing Renewables RFP for 2-8 year terms

- Proposals received on December 16
- Received bids from 9 firms
- Evaluation underway
- Review with Board Procurement Subcommittee
- Expected final decisions in February

Long-Term PPA for Solar + Storage

- Review with Board Procurement Subcommittee
- Expect to bring to board for approval in February

San Mateo County Status

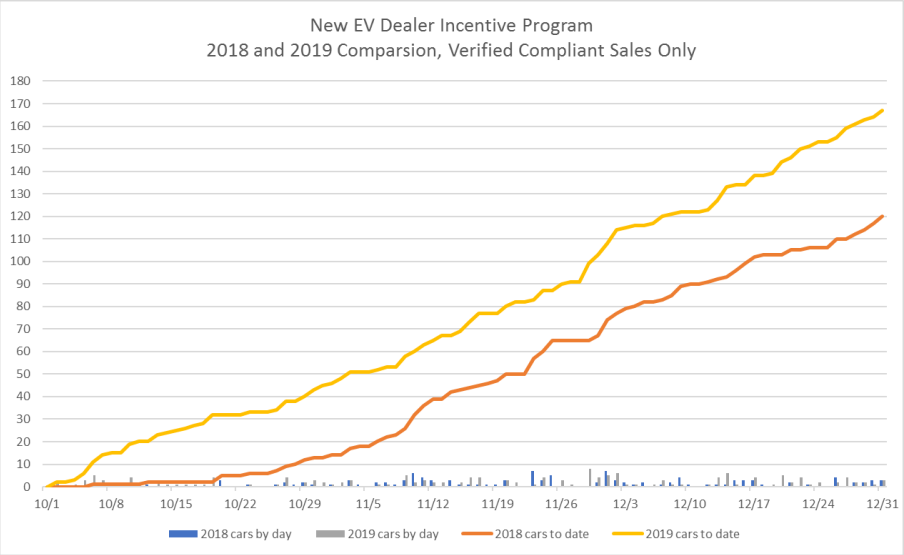
Member Agency	Reach Code Status	Building (proposed)	EV
Brisbane	Adopted	Electric w/ exceptions	MUD 1xL2/ unit
Menlo Park	Adopted	Electric w/ exceptions	(existing EV code)
Pacifica	Adopted	Electric w/ exceptions	(existing EV code)
San Mateo	Adopted	Electric preferred	Increase EV capable
San Carlos	Adopted	Pre-wiring on single-family homes	
County of San Mateo	1st reading Jan 28	(Electric w/ exceptions + possible ban)	PCE model code
Portola Valley	1st reading Feb 12	(Electric preferred)	(existing EV code)
Redwood City	Study Session Jan 13	(Electric w/ exceptions)	PCE model code
East Palo Alto	Study Session TBD	(Electric w/ exceptions)	PCE model code
Belmont	Council Briefing		
Burlingame, Colma, Daly City, Hillsborough	Letter of Intent, Council Briefing		
Millbrae, San Bruno	Letter of Intent		
Foster City, Half Moon Bay	Council Briefing		
South SF	No Action		
Atherton, Woodside	Declined		

Santa Clara County
Adopted: 10
In-Progress: 6

EV Incentive Program Updates

New Dealer Incentive Program results

- **Sold**: 167 vehicles (+3 pending)
- **CO2**: 6,500 tons over 10 years
- **Savings**: $210,000+/year total
- **Forthcoming:** Community impact assmt
- **Issues**: GM supply issues, phase out of GM Volt, GM loss of incentives, lower overall car sales



DriveForward Electric Used EV Program

- Results as of 1/20:
  - **Sold**: 30 vehicles, +13 pending
  - **CO2**: 1,200 tons over 10 years
  - **Savings**: $37,500+/year total

Merced Update

- We will provide a verbal report

Legislative/Regulatory Update

- D.20-01-030 issued January 21, 2020 (PCIA Applications for Rehearing)

PG&E Bankruptcy Update

- PG&E issued press release on 1/22 stating that the bondholders have joined in with PG&E's plan of reorganization.
- Governor filed objection at the bankruptcy court about current plan not being compliant with AB 1054
- Public option is still possibly in play

Meetings with Board Members

- Some cities may still be in the process of making appointments, but if your city appointments have been made, please check your calendars sign-up for a date in February
- Dates Jan is available:
  - February 3, 6, 12, 13, 17, 18, 21, 24, 26, 27, 28

Gridshift Hackathon – Jan 31/Feb 1

- SVCE hosting and PCE sponsoring along with EBCE, SJCE, City of Palo Alto and Powerhouse
- https://gridshift.splashthat.com/
- The challenges will focus on resiliency, equity, access to clean energy, and electric transportation
- Jeff Aalfs will be a judge
- Saturday, February 1 in San Francisco
  - 6:00-6:30pm Dinner
  - 6:30-8:45pm Pitches to Judges - 3 min per team and 30 sec Q&A
  - 8:45-9:15pm Happy Hour (Judges Deliberate)
  - 9:15-9:30pm Winners Announced

Upcoming Meetings

- Executive Committee:
  - February 10 at 8:00 a.m.

- Audit & Finance Committee:
  - February 10 at 10:00 a.m.

- Citizens Advisory Committee:
  - February 13 at 6:30 p.m.

- Board of Directors:
  - February 27 at 6:30 p.m.

- Intro/Review Training “201”:
  - Saturday February 29 (time TBA)

Regular Agenda

3. Citizens Advisory Committee Report (Discussion)

Regular Agenda

4. Approve Peninsula Clean Energy Policy regarding potential PG&E allocation of GHG-free (Large Hydro and Nuclear) resources to CCAs (Community Choice Aggregators) (Action)

PG&E Allocation of GHG Free

January 23, 2020

PENINSULA CLEAN ENERGY

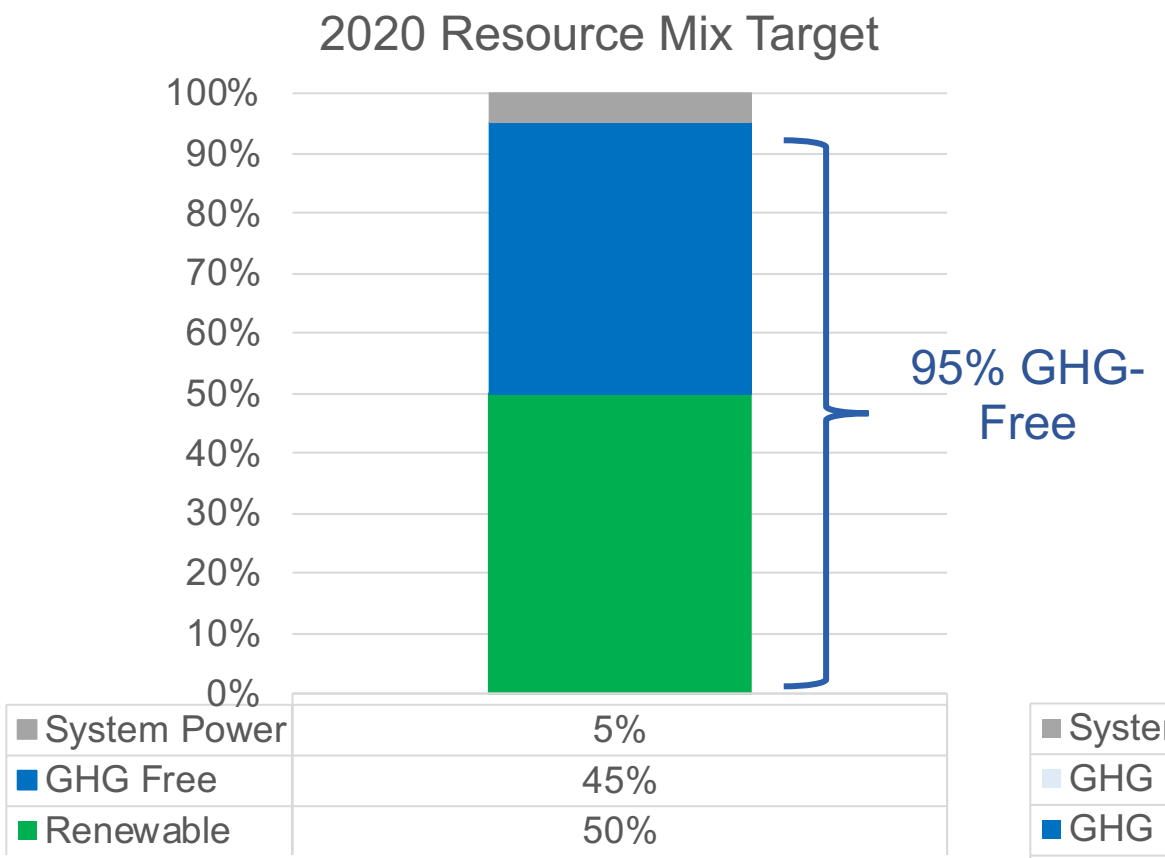
Agenda

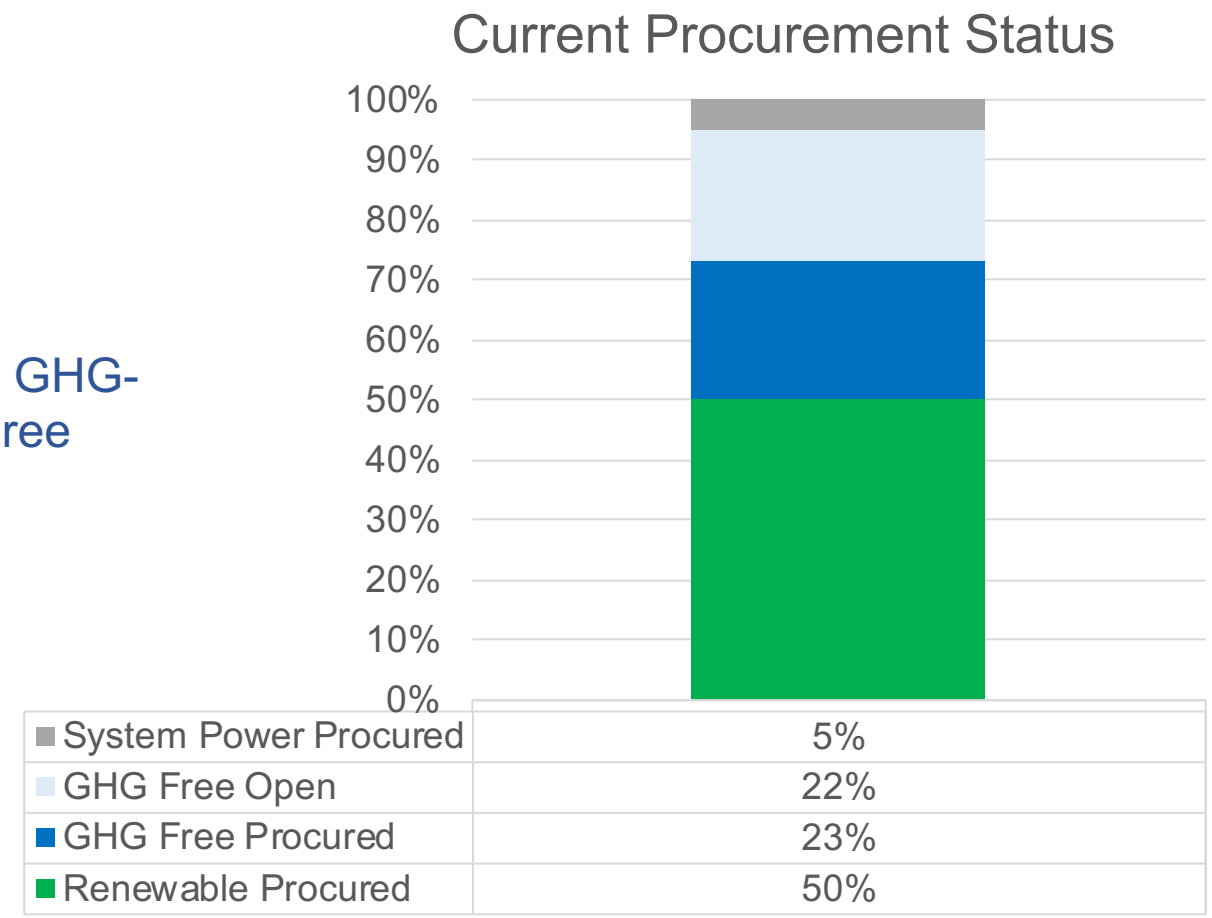
- Recommendation
- GHG Free Goals and Status
- Background
- PG&E Allocation
- Goals and Status
- Cost Impact

Recommendation

- Direct Peninsula Clean Energy staff to accept the large hydro allocations from PG&E, but not to accept the nuclear allocations.

Goals and Status





Background

- PG&E owns or contracts for GHG free energy including large hydro and nuclear from Diablo Canyon
- PG&E is counting these resources to meet or exceed their IRP GHG-free targets
- CCA customers pay for these resources through the PCIA
- CCAs are not currently able to claim and count the benefit of these resources for their customers on Power Content Labels or in connection with other GHG reporting

PG&E Power Content 2017 and 2018

PG&E's 2018 Power Content Label as reported to the California Energy Commission.[1]

ENERGY RESOURCES	PG&E 2018 POWER MIX			2018 CA POWER MIX[2] (For Comparison)
	Base Plan	100% Solar Choice	50% Solar Choice	
Eligible Renewable:	**39%**	**100%**	**69%**	**31%**
• Biomass and waste	4%	0%	2%	2%
• Geothermal	4%	0%	2%	5%
• Small hydroelectric	3%	0%	1%	2%
• Solar	18%	100%	59%	11%
• Wind	10%	0%	5%	11%
Coal	**0%**	**0%**	**0%**	**3%**
Large Hydroelectric[3]	**13%**	**0%**	**6%**	**11%**
Natural Gas	**15%**	**0%**	**7%**	**35%**
Nuclear	**34%**	**0%**	**17%**	**9%**
Other	**0%**	**0%**	**0%**	**<1%**
Unspecified[4]	**0%**	**0%**	**0%**	**11%**
TOTAL	**100%**	**100%**	**100%**	**100%**

[1] The figures above may not sum to 100 percent due to rounding.

[2] Percentages are estimated annually by the California Energy Commission based on the electricity generated in California and net imports as reported to the Quarterly Fuel and Energy Report database and the Power Source Disclosure program.

[3] A significant amount of energy generated by PG&E comes from clean, large hydroelectric power stations which do not qualify as an eligible renewable resource under California law.

[4] "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

Actual 2017 Power Content Label for PG&E, as reported to the California Energy Commission.[1]

ENERGY RESOURCES	PG&E 2017 POWER MIX (Actual)	2017 CA POWER MIX[2] (For Comparison)
Eligible Renewable:	**33%**	**29%**
• Biomass and waste	4%	2%
• Geothermal	5%	4%
• Small hydroelectric	3%	3%
• Solar	13%	10%
• Wind	8%	10%
Coal	**0%**	**4%**
Large Hydroelectric[3]	**18%**	**15%**
Natural Gas	**20%**	**34%**
Nuclear	**27%**	**9%**
Other	**0%**	**<1%**
Unspecified[4]	**2%**	**9%**
TOTAL	**100%**	**100%**

[1] The figures above may not sum to 100 percent due to rounding.

[2] Percentages are estimated annually by the California Energy Commission based on electricity sold to California consumers during the previous year.

[3] A significant amount of energy generated by PG&E comes from clean, large hydroelectric power stations which do not qualify as an eligible renewable resource under California law.

[4] Beginning in 2010, transactions not specifically traceable to specific generation sources are designated as "unspecified" in accordance with Public Utilities Code Section 398.2 (d).

Interim Approach

- PG&E will allocate large hydro and nuclear to all load serving entities (LSEs) in PG&E's territory based on a load ratio share
- Each LSE has the option to accept each resource allocation separately
  - i.e. can accept allocation of large hydro but not nuclear, or can accept nuclear but not large hydro, or can accept both
- Volume of resource allocation is established based on actual generation
  - Rejecting a resource allocation does not impact the volumes you receive for the resource you accept
- CCA has 30 days to accept allocation
- Over the longer term, this will be addressed through the PCIA proceeding – expected in 2021

Interim Approach

- Limited in time to 2020
- Limited in the resources to which it applies:
  - In-state
  - Large hydroelectric
  - Nuclear
- Only available to retail suppliers whose customers pay PCIA with large hydroelectric and nuclear in their PCIA vintage
- Requires that the CPUC approve Advice Letter for the allocation of such generation
- No payment required

Scenarios to Consider

- PCE accounts for approximately 4% of PG&E's share. Staff estimates that the allocation PG&E offers to Peninsula Clean Energy may contain the following:
  - 300 GWh of large hydroelectric power
  - 700 GWh of nuclear power

✓ Scenario A - Peninsula Clean Energy rejects allocations from both resource pools and procures the remaining carbon-free energy in the market.

✓ Scenario B - Peninsula Clean Energy accepts only the large hydro portion of the allocations, amounting to ~300GWh, and procures the remaining carbon-free energy in the market.

✓ Scenario C - Peninsula Clean Energy accepts all carbon-free allocations – both hydro pool and nuclear pool.

Peninsula Power Content

Version: July 2019

2018 POWER CONTENT LABEL

Peninsula Clean Energy Authority

https://www.peninsulacleanenergy.com/energy-sources/

ENERGY RESOURCES	ECOplus	ECO100	2018 CA Power Mix**
Eligible Renewable	**51%**	**100%**	**31%**
Biomass & Biowaste	5%	0%	2%
Geothermal	2%	0%	5%
Eligible Hydroelectric	5%	0%	2%
Solar	7%	50%	11%
Wind	33%	50%	11%
Coal	**0%**	**0%**	**3%**
Large Hydroelectric	**35%**	**0%**	**11%**
Natural Gas	**0%**	**0%**	**35%**
Nuclear	**0%**	**0%**	**9%**
Other	**0%**	**0%**	**<1%**
Unspecified sources of power*	**14%**	**0%**	**11%**
TOTAL	**100%**	**100%**	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources.

** Percentages are estimated annually by the California Energy Commission based on the electricity generated in California and net imports as reported to the Quarterly Fuel and Energy Report database and the Power Source Disclosure program.

For specific information about this electricity product, contact:	**Peninsula Clean Energy Authority** **1-866-966-0110**
For general information about the Power Content Label, please visit:	http://www.energy.ca.gov/pcl/
For additional questions, please contact the California Energy Commission at:	Toll-free in California: 844-454-2906 Outside California: 916-653-0237

For 2020, our goal is to be 95% GHG- free. In all scenarios, Eligible Renewable will be at least 50% and Unspecified sources of power will be 5% or less.

Scenarios A & B: Large hydroelectric will show 45%; nuclear will show 0%.

Scenario C: Large hydroelectric will show 24% and nuclear will show 21% for a total GHG free target of 45%.

Cost Impact

By accepting an allocation of carbon free energy from PG&E, PCE will decrease the volume of GHG-free energy we need to procure in 2020 to meet our 95% GHG-free target

Scenario	Allocated GHG- Free Resources	Accepted GHG-Free Resources	Effective Cost to PCE	Effective Savings for PCE
Scenario A	1,000 GWh	0 GWh	$8.0 MM	$0
Scenario B	1,000 GWh	300 GWh	$5.6 MM	$2.4 MM
Scenario C	1,000 GWh	1,000 GWh	$0	$8.0 MM

Recommendation

- Peninsula Clean Energy staff recommend that the Board adopt Scenario B.
- On January 13, 2020, Executive Committee members discussed and agreed to accept the large hydro allocation but were split regarding accepting the nuclear allocation.

Recommendation Reasoning

- Potential reputational risk from accepting the nuclear allocation is greater than the potential savings.
- PCE has sufficient resources in the budget for procuring GHG-free resources without accepting nuclear allocation.
- Accepting this allocation could send a market signal that the output from Diablo Canyon nuclear plant is valued and the 2024/2025 scheduled shutdown should not occur.
- Proposed nuclear allocation applies only to 2020, and only to generation from the existing Diablo Canyon plant. This does not reflect staff's view on considering future 21st century nuclear energy resources as part of PCE's future resource mix.
- Staff reached out to stakeholders including members of the CAC, local state elected officials and other CCAs considering the issue.
    - Responses were mixed but generally landed on not accepting the nuclear power because it was not seen as consistent with PCE's goal to be 100% renewable energy powered and because nuclear is not considered a clean fuel source.

Regular Agenda

5. Approve Resiliency Strategy (Action)

ENERGY RESILIENCY STRATEGY

January 23, 2020

PENINSULA CLEAN ENERGY

Agenda

- Background
- Resiliency Issues
- Priorities
- Solutions

Recommendation

- Approve Peninsula Clean Energy's 3-year $10 MM Resiliency Strategy

Background

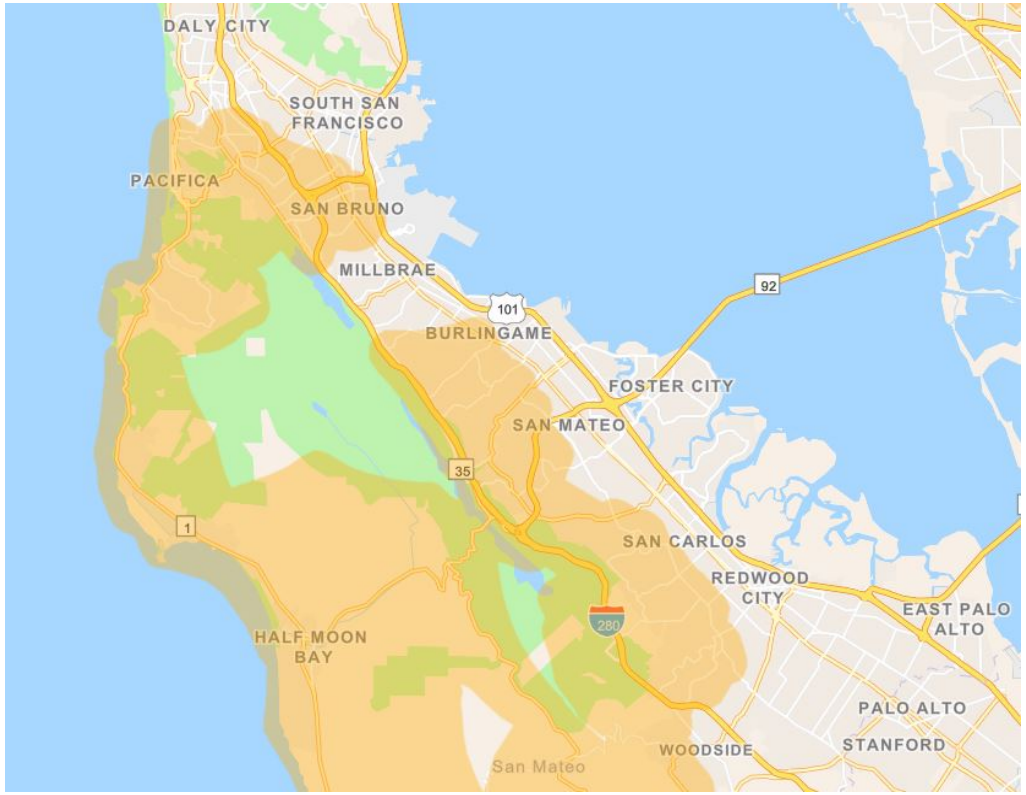
- Spring 2019: PG&E announced that it would expand its Public Safety Power Shutoff (PSPS) program to prevent wildfires
- San Mateo County experienced its first PSPS event 10/9-10/12
- At the October 2019 Board meeting, staff recommended committing up to $10 MM over 3 years to develop programs to address the problems created by PSPS and other resiliency events
- Board requested detail on programs, budget and strategy to meet resiliency needs
- Plan to present this detailed strategy to full Board in January

San Mateo County Resiliency Issues

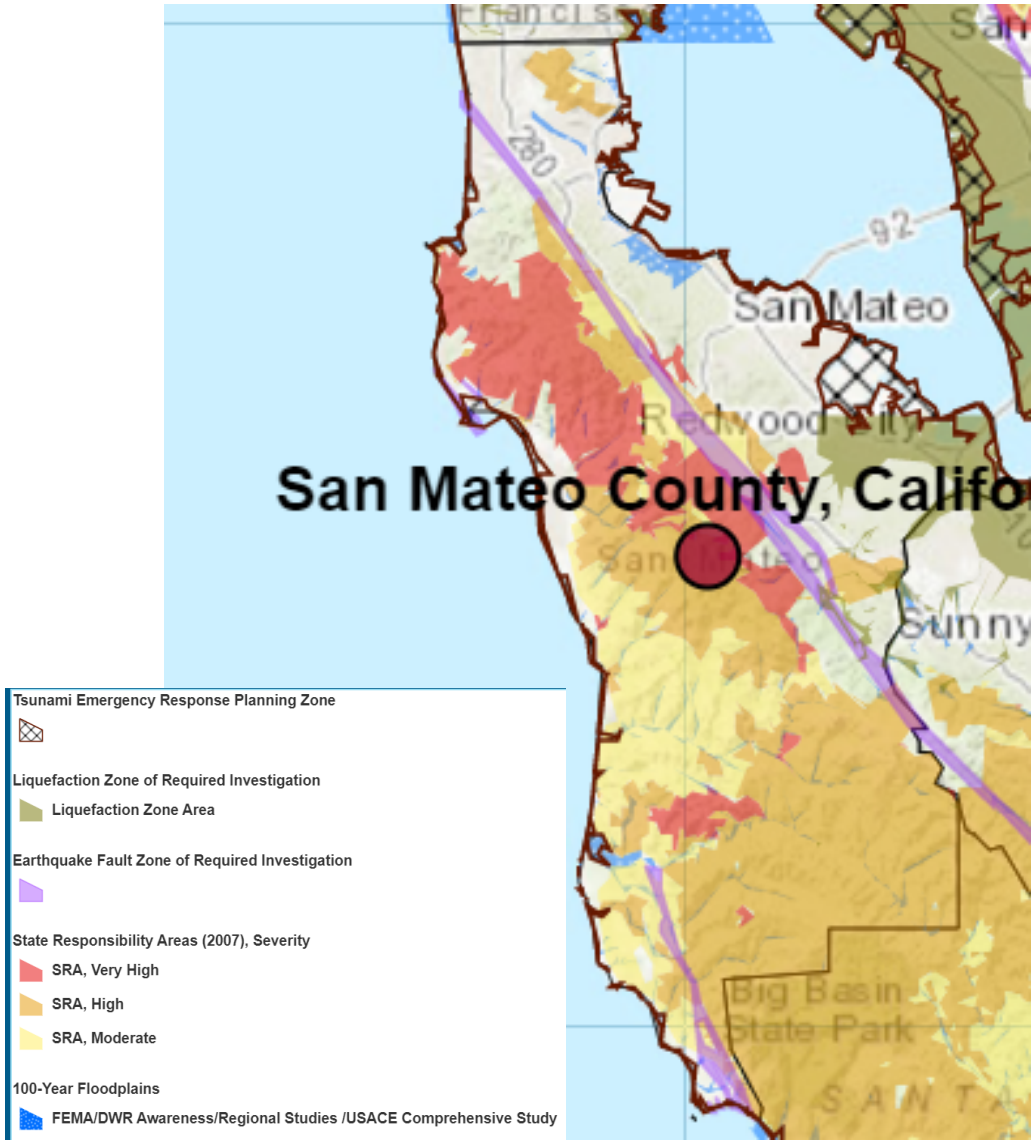
San Mateo County PSPS Impact

- Occurs when PG&E decides it is necessary to turn off power because dry and windy conditions create a fire risk
- The largest PSPS event affecting Peninsula Clean Energy's customers occurred on 10/26 – 10/28
- This map shows the areas in San Mateo County that were affected by this event
- 57,000 Peninsula Clean Energy customers were impacted

October 26th PSPS Event



Resiliency Threats



- PSPS Events
- Tsunami
- Flooding and Storms
- Wildfire
- Earthquakes
- Liquefaction
- Earthquake-Induced Landslides
- Sea Level Rise

Clean Backup Power Challenges

- The most common electricity backup is a diesel generator. However, these generators pose several problems.
- The alternative clean solution is solar + storage. However, deploying these technologies for backup power and resiliency is still new and can require up-front capital.
- We can deploy programs to overcome the hurdles to broader deployment of clean technology for resiliency.

Diesel Generators

- Greenhouse-gas emissions including CO2 and NOX
- Particulate matter emissions locally which can lead to asthma
- Nitrogen oxide which can form ozone
- Requires refueling if power outage duration is long
- Fire Risk

Clean Energy Hurdles

- High upfront cost
- Financing mechanisms require strong credit score
- Access to clean energy systems is significantly reduced if you do not own your property

Priorities

Strategic Objectives

1. Address the needs of our most medically threatened customers before next fire season
2. Leverage resiliency programs towards Peninsula Clean Energy's goal to source 100% renewable energy on a time-coincident basis
3. Establish a platform for long-term energy resiliency business models
4. Identify opportunities to create a paradigm shift towards pervasive resiliency built into complementary efforts

Priority Program Areas

1

Medically fragile residential customers

2

Community-scale emergency response centers

3

Critical facilities, services, and infrastructure

Metrics of Success

Metric	Description
New energy deployments	#MW deployed (will primarily be in solar and storage)
Number of customers impacted	Impact can be direct, such as new energy on one's home, or indirect, such as powering a fire department that serves a broad community
Program target volume	Number of customer accounts targeted through a specific program
Program participation volume	Number of customer accounts participating in Peninsula Clean Energy's programs
Quality of Outreach	Survey results indicating quality level from our outreach partners

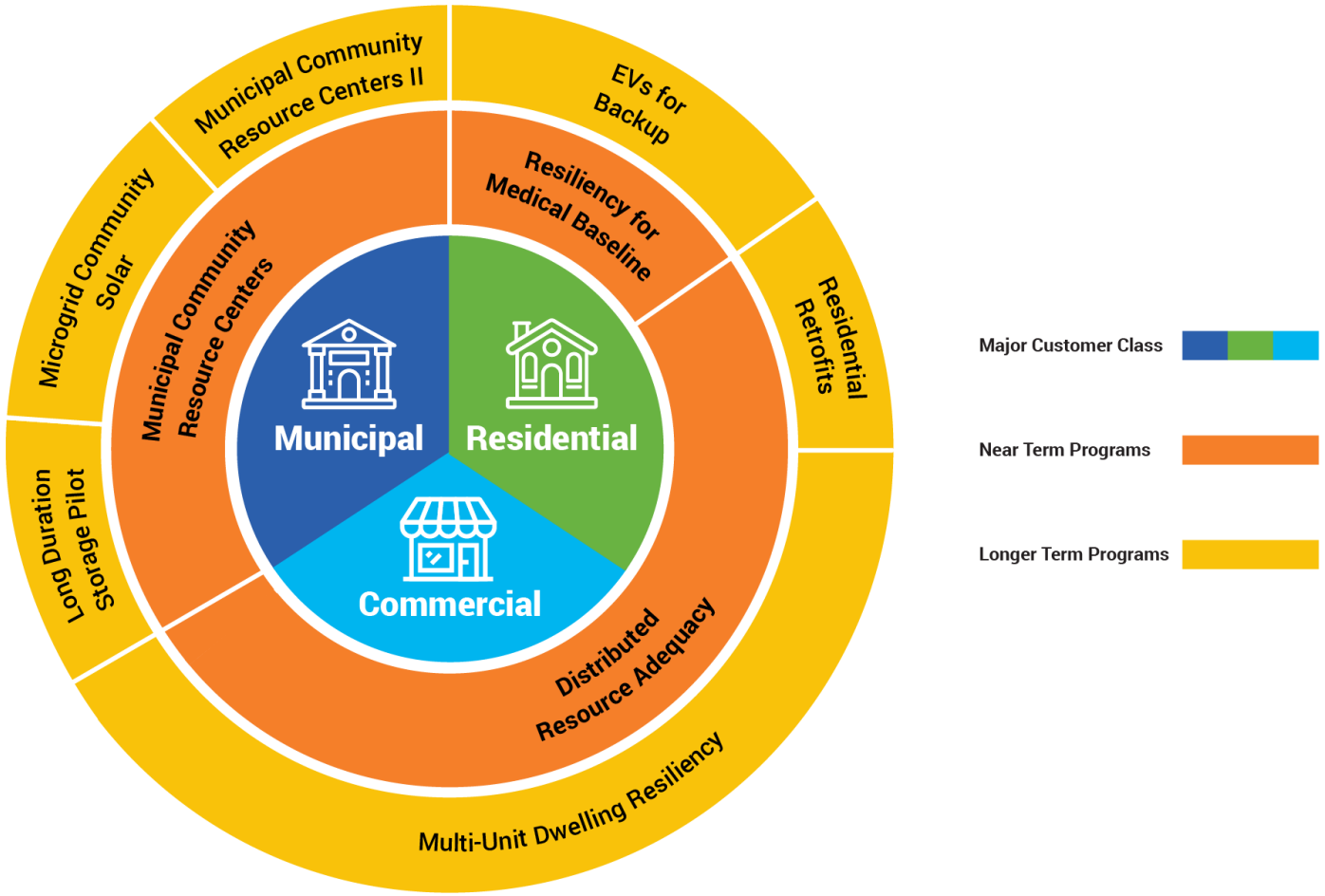
Tools for Implementing Resiliency

Tool	Description
Incentives	Provide upfront or volumetric (per unit of energy generated) incentives
Power Purchase Agreement	Execute contract to buy energy generated by energy system
RA Procurement	Purchase RA from new energy systems
Wholesale Market Participation	Facilitate participation in wholesale energy markets
On-Bill Financing	Provide zero or low-interest loans that are re-paid through energy bills
Credit Support	Provide credit support to customers with low or no credit scores
Energy Rates	Create tariffs to incentivize participation in resiliency programs
Outreach Grants	Grant to public agencies or non-profits for outreach to hard-to-reach communities
Educational Materials	Educational materials on options for backup power generation

Overview of Solutions

Program Summary

PENINSULA CLEAN ENERGY
MAJOR RESILIENCE PROGRAMS BY CUSTOMER CLASS



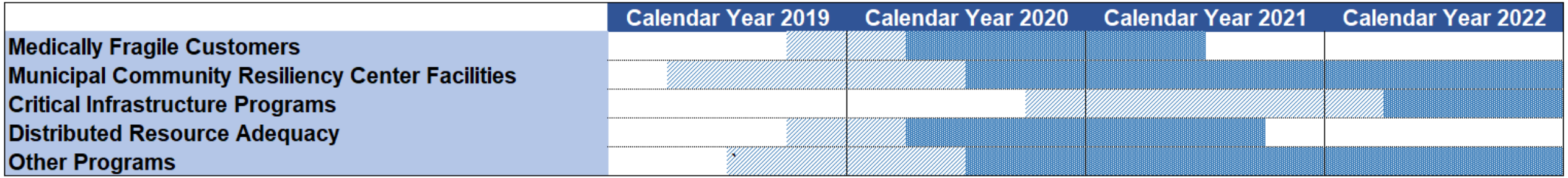
Program Descriptions

Program	Summary
Medically Fragile Customers	Microgrids for customers who are medically threatened and live in high fire threat districts; Hospital partnerships to identify customers with medical needs (coordinate with EBCE)
Municipal CRCs	Scope and deploy clean backup power for community resiliency centers (CRCs) (Resilient Facilities program with EBCE)
Critical Infrastructure	Identify and catalog the existing critical facilities in our service territory to inform future resiliency programs
Distributed RA	Microgrids for residential and commercial customers; RA procurement for Peninsula Clean Energy

Program Overview

Program	MW	Customers	Tools	Partners
Medically Fragile Customers	4 MW Solar / 16 MWh Storage	675	RA, Outreach Grants, Incentives, Cost of Acquisition	CCAs, Hospitals, Public Heath Agencies, Non-Profits
Municipal CRCs	5.8 MW Solar / 23 MWh Storage	9,000 – 18,000	Education, RA, Cost of Acquisition, PPA	EBCE, BAAQMD, Arup, Cities, County
Critical Infrastructure	TBD	TBD	Education, Research	Cities, County
Distributed RA	40 MWh Storage	900	RA, Cost of Acquisition	EBCE, SVCE, SVP, Optony

Program Timeline



Program planning phase:
Program execution phase:

Budget by Program

- These are high level budget expectations by program area
- Actual expenditures would need to be approved by the Board in accordance with our policies
- Actual budget numbers may shift as we move into program planning phases
- We will leverage third party funding sources to further the impact of the programs

	FY-2020	FY-2021	FY-2022	Totals
Medically Fragile Customers	$ 500,000	$ 1,010,000	$ 1,040,000	$ 2,550,000
Municipal CRCs	$ 150,000	$ 1,150,000	$ 1,240,000	$ 2,540,000
Distributed Resource Adequacy	$ 120,000	$ 900,000	$ 800,000	$ 1,820,000
Critical Infrastructure Programs		$ 200,000	$ 300,000	$ 500,000
Customer Education	$ 30,000	$ 50,000	$ 30,000	$ 110,000
Future Programs		$ 860,000	$ 1,880,000	$ 2,740,000
FY Totals	*$ 800,000*	*$ 4,170,000*	*$ 5,290,000*	***$ 10,260,000***

Budget Allocation

- For FY 2020, the budget will be allocated from unused portions of the Programs budget
- In future fiscal years, the budget will come from various areas including marketing and outreach and power procurement
- For procurement, this would partially offset the need to purchase energy from other sources

	FY-2020	FY-2021	FY-2022	Totals
Marketing and Outreach	$ 380,000	$ 400,000	$ 330,000	$ 1,110,000
Program Administration	$ 420,000	$ 750,000	$ 700,000	$ 1,870,000
Power Procurement	$ -	$ 2,160,000	$ 2,380,000	$ 4,540,000
Other	$ -	$ 860,000	$ 1,880,000	$ 2,740,000
FY Totals	*$ 800,000*	*$ 4,170,000*	*$ 5,290,000*	***$ 10,260,000***

Budget Allocation

Medically Fragile Customers	FY-2020	FY-2021	FY-2022	Totals
Marketing and Outreach	$ 300,000	$ 300,000	$ 300,000	$ 900,000
Program Administration	$ 200,000	$ 200,000	$ 200,000	$ 600,000
Power Procurement	$ -	$ 510,000	$ 540,000	$ 1,050,000
FY Totals	*$ 500,000*	*$ 1,010,000*	*$ 1,040,000*	***$ 2,550,000***

Distributed Resource Adequacy	FY-2020	FY-2021	FY-2022	Totals
Marketing and Outreach	$ 50,000	$ 50,000	$ -	$ 100,000
Program Administration	$ 70,000	$ 150,000	$ 100,000	$ 320,000
Power Procurement	$ -	$ 700,000	$ 700,000	$ 1,400,000
FY Totals	*$ 120,000*	*$ 900,000*	*$ 800,000*	***$ 1,820,000***

Community Resiliency Centers	FY-2020	FY-2021	FY-2022	Totals
Program Administration	$ 150,000	$ 200,000	$ 100,000	$ 450,000
Power Procurement	$ -	$ 950,000	$ 1,140,000	$ 2,090,000
FY Totals	*$ 150,000*	*$ 1,150,000*	*$ 1,240,000*	***$ 2,540,000***

Future Programs	FY-2020	FY-2021	FY-2022	Totals
Research	$ -	$ 270,000	$ 650,000	$ 920,000
Technical Grid Study	$ -	$ 100,000	$ -	$ 100,000
Electric Vehicle Resiliency	$ -	$ 30,000	$ 700,000	$ 730,000
Retrofits for Resiliency	$ -	$ 130,000	$ 270,000	$ 400,000
MUDs	$ -	$ 330,000	$ 260,000	$ 590,000
FY Totals	*$ -*	*$ 860,000*	*$ 1,880,000*	***$ 2,740,000***

Discussion

- **Recommendation:** Approve Peninsula Clean Energy's 3-year $10 MM Resiliency Strategy

Appendix

Action by Other CCAs

CCA	Commitment Description	Budget
CPA	Solar marketplace to connect customers to solar installers Backup power for critical facilities	TBD
EBCE	Better understand Medical Baseline / electricity dependent customers, assess customers needs and develop solutions to mitigate critical impacts	$500,000
Lancaster Choice	ZNE Microgrid Communities: CEC EPIC grant with ZNE Alliance – 2 residential developments deployed as microgrid communities	N/A
MBCP	Backup power for critical facilities; Backup power for residential energy resiliency (CARE/FERA, Medical Baseline) in High Threat Fire Districts	$25,000,00; $1,000,000
MCE	Support development of clean energy resiliency projects at strategic customer sites (low-income, DAC, medically vulnerable, emergency shelters)	$3,000,000
RCEA	Airport microgrid project – the first multi-customer, front of the meter microgrid in PG&E territory	$6,000,000
SCP	Advanced Energy Rebuild: Rebuilding Homes destroyed in wildfires with high energy efficiency, make net zero more easily achievable	$6,000,000

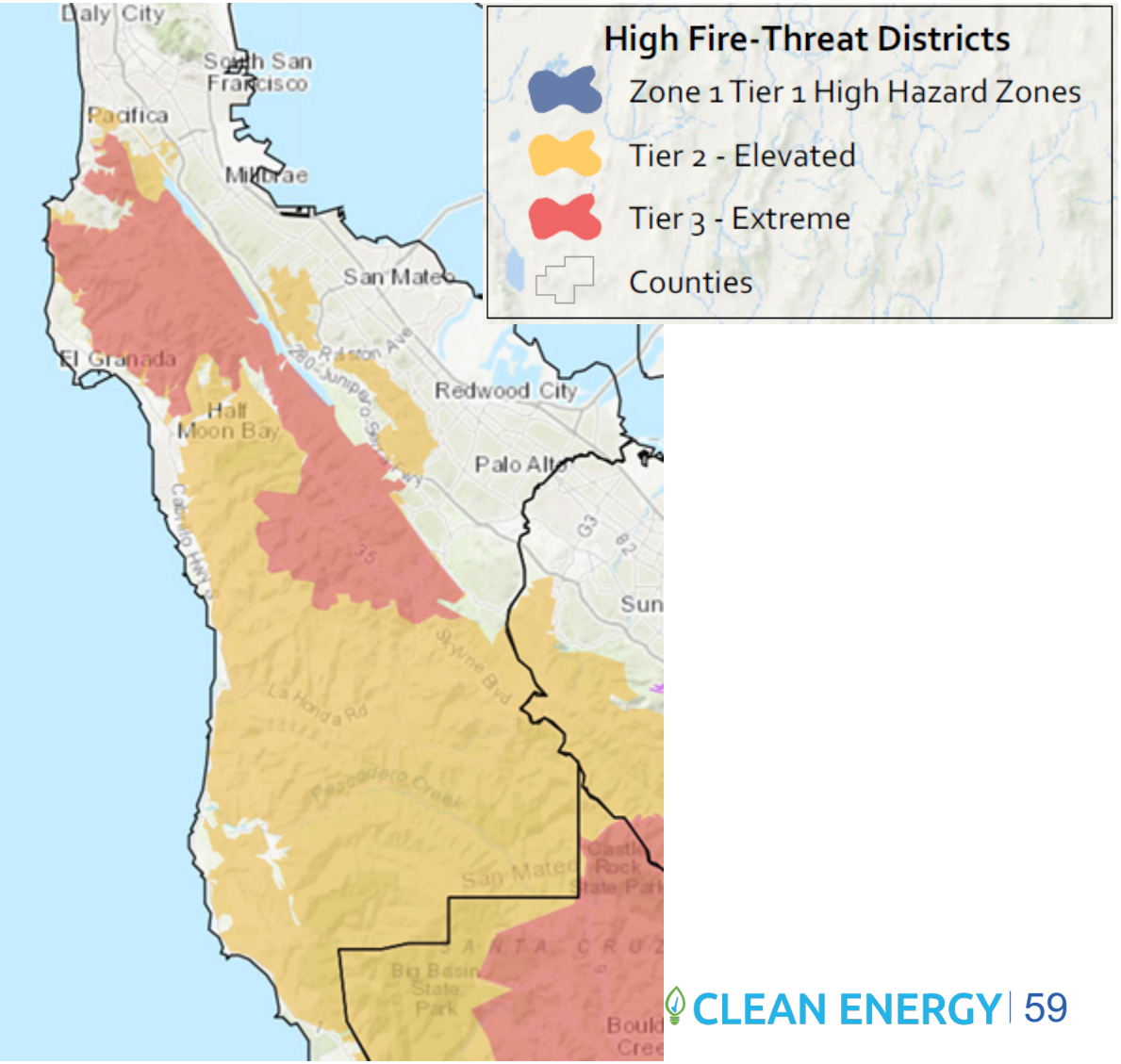
More info on other CCA activities: https://cal-cca.org/wp-content/uploads/2019/11/CCA-Resilience-Initiatives-December-2019-1.pdf

San Mateo County 2019 PSPS Events

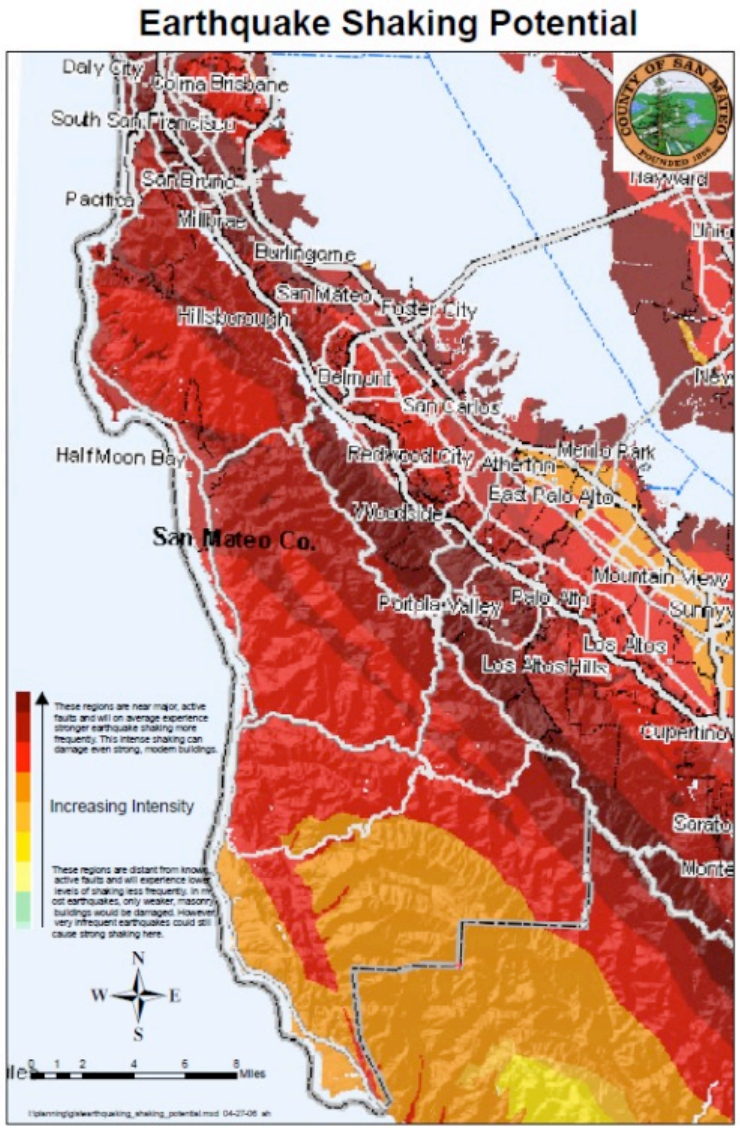
Event Dates	Peninsula Clean Energy Customers Impacted	Peninsula Clean Energy Medical Baseline Customers Affected	Total Californians Affected	SMC Communities Affected	Outage Times
10/9 – 10/12	15,000 (5% of customer base)	270	730,000	• Half Moon Bay • Menlo Park • Pacifica • Portola Valley • Redwood City • San Mateo • Unincorporated areas	17 – 38 hours
10/23 – 10/25	1,100 (0.3% of customer base)	23	177,000	• Half Moon Bay • Woodside • Unincorporated areas	13 - 14 hours
10/26 – 10/28	57,000 (20% of customer base)	1,000	941,000	• Half Moon Bay • Pacifica • Portola Valley • Redwood City • San Carlos • San Mateo • Woodside • Unincorporated areas	44 – 92 hours

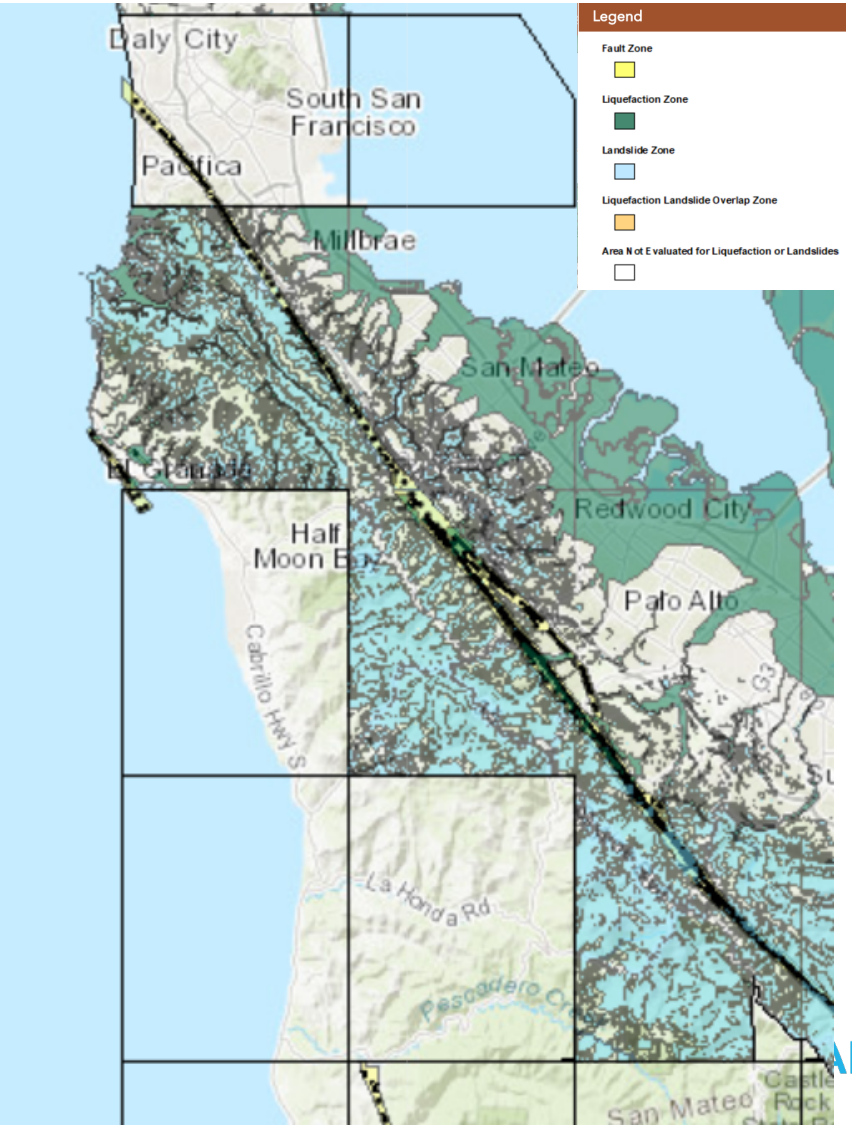
High Fire Threat Districts

- Developed by CPUC to identify areas where:
  - (1) there is an elevated risk for destructive power line fires, and
  - (2) where stricter fire-safety regulations should apply



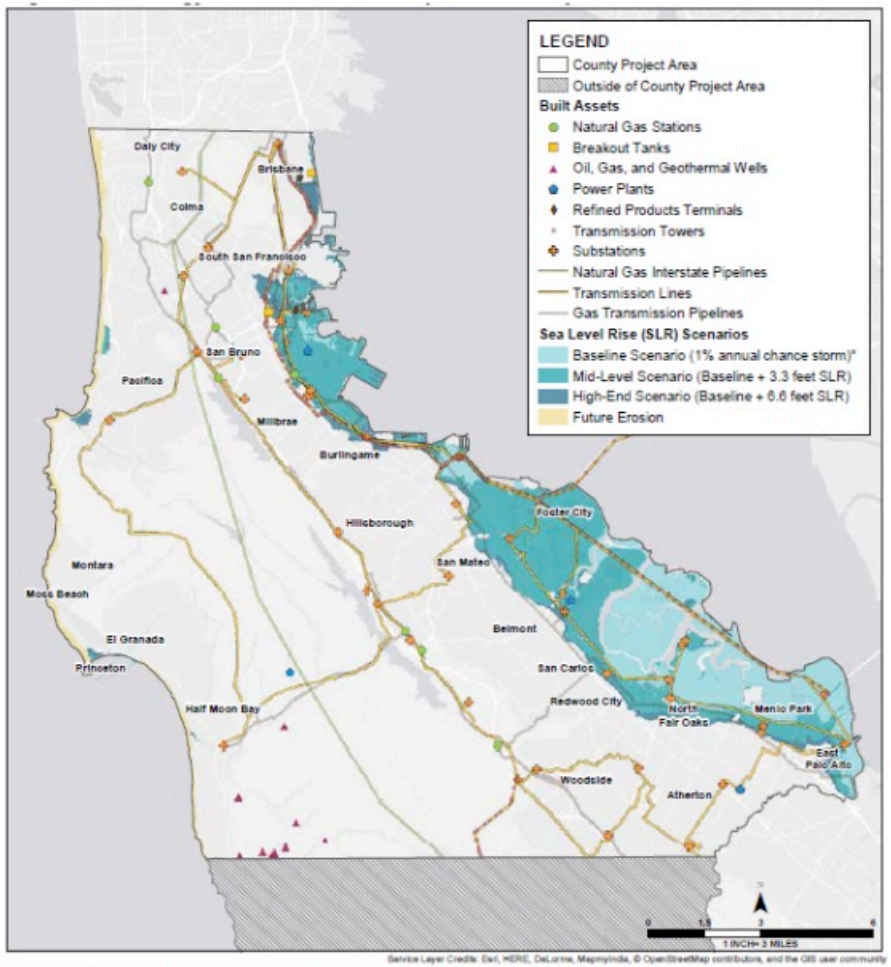
Earthquake Risks





Sea Level Rise Risks

Figure 3B.9 Energy Infrastructure and Pipelines in Project Area



Service Layer Credits: Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

Data source: National Pipeline Mapping System 2015; California Energy Commission 2015; California Energy Commission 2014;County of San Mateo 2015; Federal Communications Commission 2010; Wireless Telecommunications Bureau 2010

This map is intended to improve sea level rise awareness and preparedness by providing a regional-scale illustration of inundation and coastal flooding due to specific sea level rise and storm surge scenarios. This map is not detailed to the parcel-scale and should not be used for navigation, permitting, regulatory, or other legal uses.

*1% annual chance storm is a storm that has a 1 in 100 chance of occurring in any given year, and on the Bayside generally results in about a 42 inch increase of total water levels. On the Coastside, the water level increase could be greater due to wave action.

Note on erosion modeling: Erosion modeling used in this study does not consider shoreline armoring due to a lack of information on the condition and life expectancy of existing structures. The 2009 Philip Williams and Associates study recognizes that future shoreline protection is likely in general but could not predict where and how these would appear. In this case, developing predictive erosional models is impractical and exceedingly difficult.

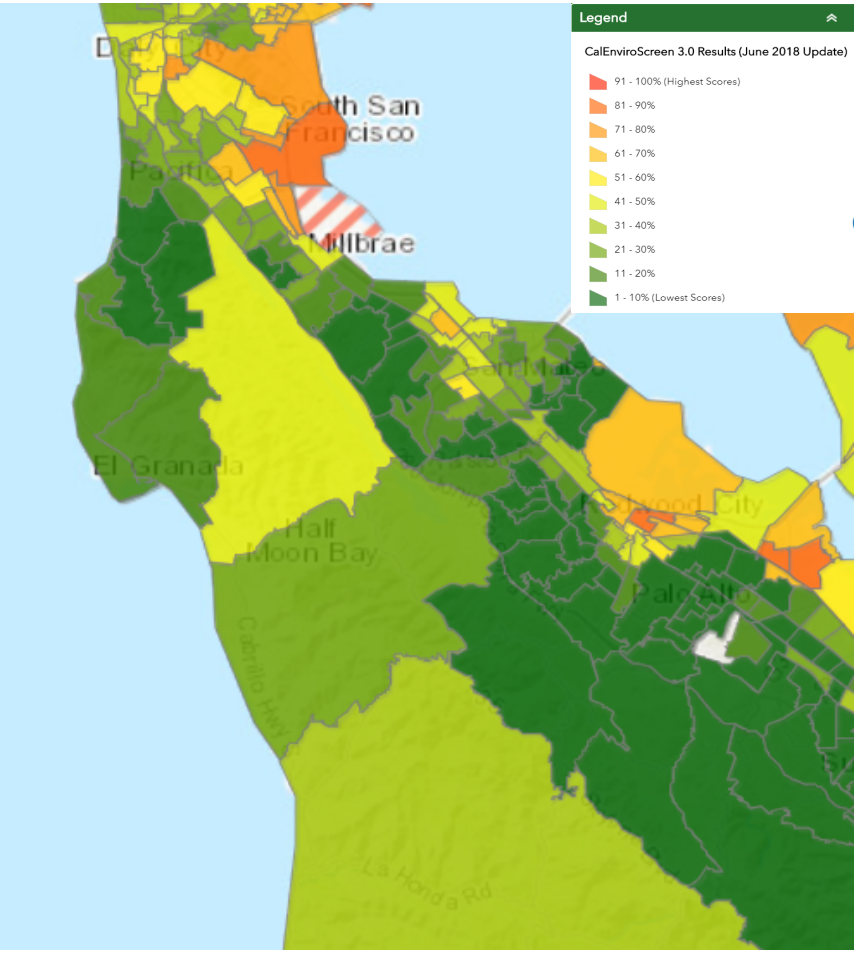
Sensitive Communities

- Certain vulnerable communities may be more severely impacted by power outages
- Goal to design programs to prioritize these communities
- Various ways to identify communities
- As part of the Resiliency Strategy, we will coalesce around a definition for sensitive communities

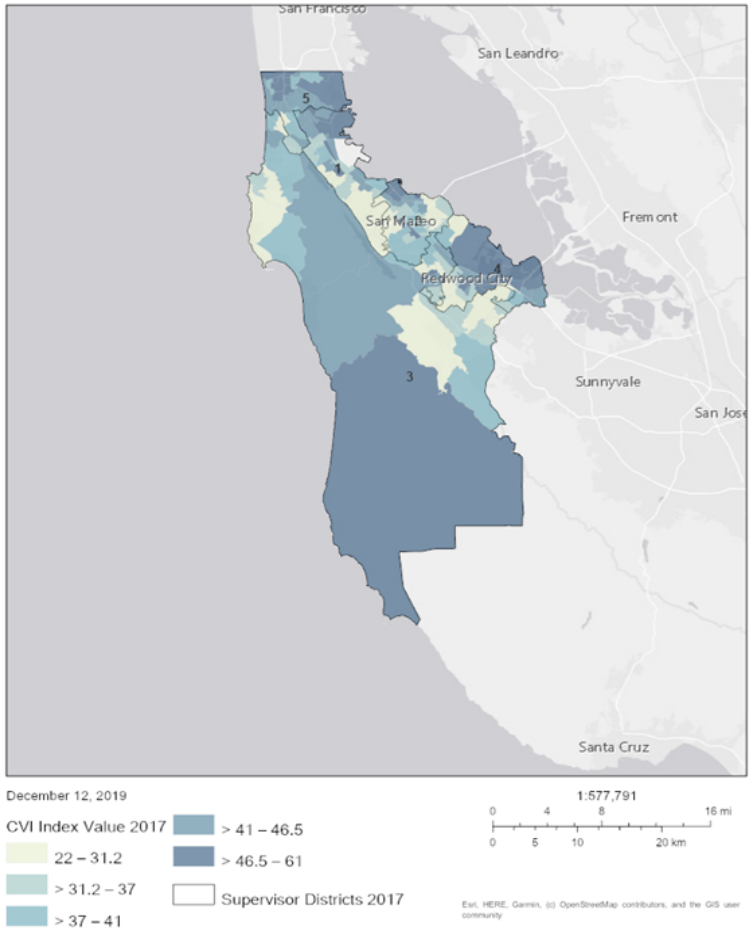
Measure for Sensitive Communities	Description	Factors
CalEnviroScreen 3.0	Identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution	• Socioeconomic factors • Contact with pollution • Adverse environmental conditions • Sensitive populations
Community Vulnerability Index	Initiative of the SM County Manager's Office; aims to demonstrate the geographical distribution of the overall vulnerability of the residents of the county. Indicators have been standardized and combined to create dimension scores, on a scale from zero to 100 highest score representing most vulnerable	• Health Insurance Coverage • Educational attainment • Supplemental security income • Gross rent as % of income • Poverty • Unemployment • Disability status
Income level	Income level at or below 80% of County median	• Income level
Medically threatened	Customers that rely on electricity due to health	• Reliance on electricity for medical need

Sensitive Communities Mapped

CalEnviroScreen 3.0



Community Vulnerability Index
Vulnerable = Darkest blue



Third Party Funding Sources

Governing Body	Source	Funding Amount	Purpose
CPUC	SGIP Equity Budget	$400M	Economic and workforce development to DACs, gas generation reduction in DACs, energy storage for LMI customers, non-profits, and the public sector
CPUC	SGIP Critical Resiliency Needs Budget	$100M (25% carve-out of Equity Budget)	Energy storage for residential customers in T2 or T3 HFTDs who are also eligible for the equity budget, medical baseline, or have a life-threatening condition if electricity is disconnected.
State of California	CA General Fund appropriation	$75M	Securing equipment, fuel storage, backup energy for critical facilities, communications equipment, developing and conducting plans for PSPS preparation, risk assessment, public access resource centers.
CEC	Energy Storage Demonstration Grant	$20M	Demonstrate long-duration (10h+) storage for critical operations, community facilities, and other relevant services in DAC/LMI communities
CPUC	Heat Pump Water Heaters	$4M	HPWHs for residences (few additional details at this time)
BAAQMD	Climate Tech Finance Budget	TBD	Climate Tech Finance has expressed interest in funding resiliency solutions
PG&E	TBD	TBD	Governor Newsom has called for PG&E to compensate communities affected by PSPS events. Cities are currently undergoing the cost accounting.
California Alternative Energy and Advances Transportation Financing Authority (CAEATFA)	Small Business Financing Program (SBF)	$10,000 - $5M per project	Helps small businesses access more attractive financing terms for energy efficiency retrofits by extending a credit enhancement to finance companies, which helps them mitigate risk.

Community Outreach – Public Agencies

Outreach Partner	Communities Served
SMC Health	Aging and Adult Services, California Children's Services, mental health and substance abuse communities, and emergency medical services
SMC and City Fire Chiefs	Fire stations, firefighters, medically fragile customers
SMC and City Police Chiefs	Police officers
SMC Sheriff	Law enforcement stakeholders, Latino community through CARON program
Medical Health Operation Area Coordinator (MHOAC)	24/7 point of contact for 17 different foundations; representatives from 13 health divisions and the healthcare coalition (comprised of 60+ healthcare facilities)
Emergency Managers Association (EMA)	City emergency managers, Red Cross
SMC Office of Emergency Services	Managers of critical infrastructure
Community Emergency Managers Association (CERT)	Community volunteers, first responders

Community Outreach – Non-Profits / Other

Outreach Partner	Communities Served
Medical Equipment Providers	Healthcare providers, hospitals, patients with medical appliances
Red Cross	Donors, volunteers, at-risk communities, communities in a disaster, military
Faith Institutions	Faith communities, homeless
SMC Healthcare Coalition	Various external partners: hospitals, skilled nursing facilities, home health, hospices, dialysis centers, Red Cross, ombudsman
Private Healthcare Providers	Patients, Medical professionals, insurance providers
California Foundation for Independent Living Centers	Residents with disabilities
Center for Accessible Technologies	Residents with disabilities, seniors
Center for Independence of Individuals with Disabilities	Residents with disabilities

Policy Considerations

- Identify regulatory or legislative barriers to deploying DERs for energy resiliency
- Educate policymakers
- Engage in policy processes
- Currently involved in two processes that will have a direct impact on this strategy

Microgrids

- Interconnection and technical standards
- Microgrids as a business model
- Microgrids docket

Resource Adequacy

- RA from hybrid and BTM resources
- RA in the wholesale market

Regular Agenda

6. Approve Reach Code Assistance Extension and Consumer Building Electrification Awareness Program (Action)

Reach Code Assistance Extension and Consumer Awareness Program

Board of Directors, January 23, 2020

PENINSULA CLEAN ENERGY

Reach Codes & Electrification: Request

Program: Reach Code Assistance Extension and Consumer Awareness Program

Requests: Approve:

- Extension of current reach code assistance program offerings through 2021, and
- Authorize a 3-year customer awareness program.

Amount: Up to $650,000

Summary of Reach Code Effort

- **Partners**
  - Silicon Valley Clean Energy, TRC Engineers, County Office of Sustainability
- **Support delivered**
  - Developed Building and EV model reach codes
  - Technical assistance to municipal staff and developers
  - Presentations, facilitation 8+ dedicated workshops
  - $10k grants (14 municipalities participated)
  - Numerous round-tables, study sessions, 1-1 meetings and calls
- **Timeline**
  - Original contract with TRC Engineers from Jan 2019 – Jun 2020 (Total $300k)
  - Current funds expected to be utilized by end of Feb 2020

San Mateo County Status

Member Agency	Reach Code Status	Building (proposed)	EV
Brisbane	Adopted	Electric w/ exceptions	MUD 1xL2/ unit
Menlo Park	Adopted	Electric w/ exceptions	(existing EV code)
Pacifica	Adopted	Electric w/ exceptions	(existing EV code)
San Mateo	Adopted	Electric preferred	Increase EV capable
San Carlos	Adopted	Pre-wiring on single-family homes	
County of San Mateo	1st reading Jan 28	(Electric w/ exceptions + possible ban)	PCE model code
Portola Valley	1st reading Feb 12	(Electric preferred)	(existing EV code)
Redwood City	Study Session Jan 13	(Electric w/ exceptions)	PCE model code
East Palo Alto	Study Session TBD	(Electric w/ exceptions)	PCE model code
Belmont	Council Briefing		
Burlingame, Colma, Daly City, Hillsborough	Letter of Intent, Council Briefing		
Millbrae, San Bruno	Letter of Intent		
Foster City, Half Moon Bay	Council Briefing		
South SF	No Action		
Atherton, Woodside	Declined		

Santa Clara County
Adopted: 10
In-Progress: 6

Key Learnings

1. Deeper stakeholder engagement – longer timeline in some jurisdictions

2. Developers' concerns are highly technical and specific

3. Some issues require developer and contractor education and training

4. Desire for gas stoves reflect consumers preference and lack of awareness

The two proposed programs are meant to address these issues.

I. Extended Reach Code Assistance & Technical Training

1. **Municipal Code Assistance**
   - Support cities still considering reach codes
   - Increase uniformity of code adoption
2. **Develop Financial and Technical Materials**
   - Technical guides
   - Case studies along with first and lifetime costs
3. **Designer and Builder Guidance**
   - Developer “Hotline”
   - Support on design strategies, equipment info, etc.
   - Deeper assistance for affordable housing & small developers
4. **Contractor Trainings**
   - Technical trainings on all-electric installation and maintenance

Contact Us

II. Building Electrification Awareness and Education

1. **Showcase all-electric buildings and technologies**
   - Showcase electric buildings and techniques in SMC
2. **Recognize designers and builders**
   - Awards for designer and builder leadership
3. **Engage consumers on induction cooking**
   - Test-kitchen events for customers to try induction cooktops
   - Explore partnerships with suppliers and dealers
   - Induction cooktops to check-out and try at home
4. **Marketing campaign & action**
   - PCE specific event promotions
   - Connecting customers to available resources

Budget

Program	Total Budget	Term & Results
Reach Code Assistance & Technical Training*	$ 250,000	2 Years. Up to 7 addl. cities & trained designers, contractors
Customer Awareness	$ 400,000	3 Years. 30-40 events.
Total 3-YR PCE Cost	**$ 650,000**	Net cost to PCE

* Reach Code Assistance & Technical Training is proposed as a contract extension with TRC Engineers and in partnership with Silicon Valley Clean Energy which is anticipated to cover up to an additional $200,000 in services for total TRC contract of $450,000.

Reach Codes & Electrification: Request

Program: Reach Code Assistance Extension and Consumer Awareness Program

Requests: Approve:

- Extension of current reach code assistance program offerings through 2021, and
- Authorize a 3-year customer awareness program.

Amount: Up to $650,000

Regular Agenda

7. Approve Amendment to Energy Supply Procurement Authority Policy 15 (Action)

Energy Supply Procurement Authority Amendment

Board Meeting January 23, 2020

PENINSULA CLEAN ENERGY

Background

- The Board adopted the current Energy Supply Procurement Authority in Dec. 2017
- Applies to all contracts for energy-related products: energy, capacity, energy efficiency, distributed energy resources, demand response, and storage
- Procurement Authority

Agreements < 1 year	Agreements 1 – 5 years	Agreements > 5 years
CEO has authority to execute	CEO seeks consultation from Board Chair and General Counsel prior to executing	Requires Board approval

Local Resource Adequacy Changes

	Previous	New - For 2020
Reporting Requirement: (Oct. 31 Prior Year)	1-year forward	3-year forward
Obligation:	100% of PUC mandated procurement	100% for years 1 - 2 50% for year 3
Local Areas:	• Bay Area • PG&E Other	• Bay Area • PG&E disaggregated into 6 Areas: ○ Humboldt ○ North Coast North Bay ○ Sierra ○ Stockton ○ Fresno ○ Kern

Recent Experiences

- **Competitive Market:** High demand for RA in certain local areas
- **Limited Supply:** Few suppliers in certain local areas
- **# of Contracts:**

  2018 – executed 39 contracts

  2019 – executed 91 contracts

  - Contracts executed for small volumes

    Ex: 0.39 MW, w/ term > 12 months, contract value $36,000
- **Term of Contracts:** Often > 1 year to meet new requirements - required staff to seek approvals for small contract values

Competitive market requires that we react quickly to secure contracts for local RA

Staff Recommendation

Revise Procurement Authority for Short-term transactions

1) For Local RA Only - Request to modify the CEO's authority to execute contracts up to 3-years in term length to remain consistent with the current RA rules

2) For RA Only - In the event the CEO is unavailable to sign an RA contract, and with prior written approval from the CEO, allow CFO to sign RA contracts up to 1 year

Clarify Procurement Authority for Amendments

3) Amendments to Agreements: CEO, in consultation with General Counsel and the Board Chair, or Board Vice Chair in the event the Board Chair is unavailable, has authority to execute amendments to energy procurement contracts that were previously approved by the Board.

Appendix

Comparison of Procurement Authority

CCA	Length Authority Restrictions	Amount Authority Restrictions
Peninsula Clean Energy	• CEO can procure up to one (1) year or under five (5) years with Board Chair & General Counsel consultation	None
Monterey Bay Community Power	• CEO authority up to three (3) years • Director of Power Resources up to two (2) years	• CEO - $40MM • Director of Power Resources - $30MM
Silicon Valley Clean Energy	• CEO can procure up to one (1) year and up to five (5) years for Board-approved Master Agreements • CEO can procure RA contracts up to five (5) years	None
East Bay Community Energy	In accordance with Risk Mgmt Policy • CEO no restriction • COO up to two (2) years • Director of Power Resources up to one (1) year	In accordance with Risk Mgmt Policy • CEO - none • COO - $10MM • Director of Power Resources - $2MM • With dual signatures, COO, Director of Power Resources have equivalent authority to CEO
MCE Clean Energy	• CEO can procure up to one (1) year • Discussion with Technical Committee or Ad Hoc Committee for contracts up to five (5) years • Technical Committee or Board approval required for contracts over five (5) years.	None
Sonoma Clean Power	Board Chair and Vice Chair approval required for contracts over 10 years	No Board approval needed if: • The contract cost is less than $5MM with term less than (3) years; or • The contract cost is less than $250MM with term less than ten (10) years

Regular Agenda

8. Board Members' Reports (Discussion)

Regular Agenda

Adjourn