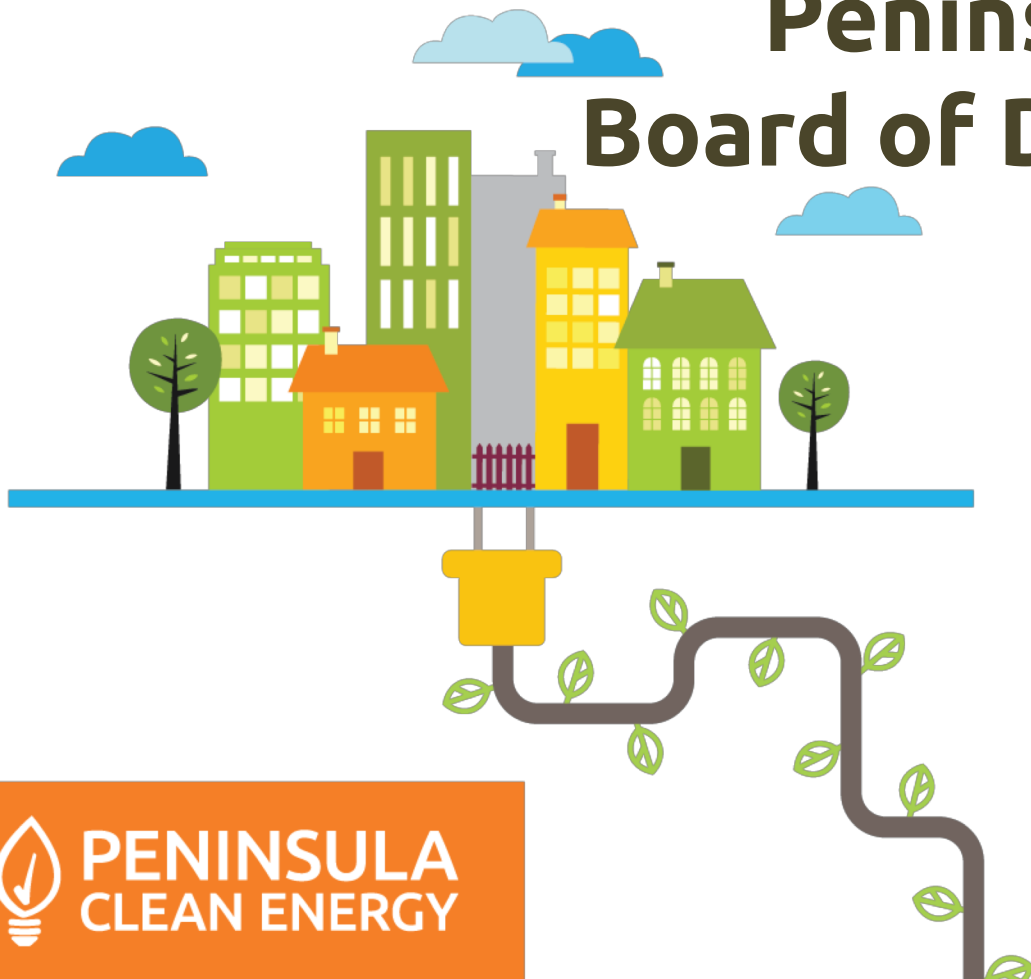


Peninsula Clean Energy Board of Directors Meeting

March 28, 2019



**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)

Personnel Update

Welcome Doug Karpa as PCE's
Senior Regulatory Analyst!



Continuing searches for:

- Manager of Distributed Energy Resources (DER) Strategy
- Senior Financial Analyst
- EV Program Specialist

REACH Codes

PCE staff has conducted multiple meetings with city building officials on March 19, 20 and 27.

*** Focus: New building electrification and electric vehicle infrastructure codes in the new 2020 building codes.

*** Please - - - encourage:

- 1) Your city staff to consider these REACH codes when adopting your new building codes.
- 2) Your city council to adopt these REACH codes.

PCE will provide \$10,000 to each city in support.

CalCCA Update

- CalCCA Lobby Day in Sacramento: April 3
 - Confirm Board members joining PCE staff
- CalCCA launching “Bright Energy Future Campaign” on April 1
 - Brightenergyfutureca.org
 - Provides opportunity for individuals and groups to sign on to coalition platform



Other regulatory / legislative updates

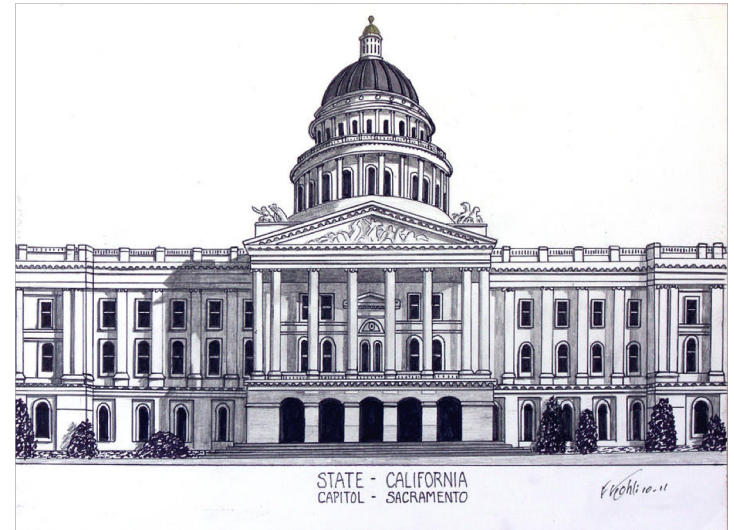
- SB 237 (Direct Access) implementation proceeding underway at CPUC
- Proposed decision on IRP - CalCCA and PCE actively engaged
- Also actively engaged in RA, PCIA / ERRRA, Transportation Electrification, PG&E Wildfire Mitigation Plan

❖ Thank you to PCE Legislative Ad Hoc Committee who met today:

Rick DeGolia

Catherine Mahanpour

Daniel Yost



PCE Outreach to Merced County

- PCE held additional meetings in Merced County on March 21, with high interest expressed in the county. Thank you to Rick Bonilla and Rick DeGolia for accompanying PCE Staff.
- Next meetings scheduled for April 18.



Marketing Strategy RFP

- Eight proposals received.
- Top 3 proposers interviewed.
- “Cyclops” selected; contract negotiation underway.
- Marketing ad-hoc committee to meet with PCE staff and contractor on April 12.



Upcoming Events

- Sustainable San Mateo County, April 4, 5:30 pm, CSM
- Acterra Party for the Planet, April 6, 6 pm, San Mateo County History Museum
- SVLG Energy and Sustainability Summit, June 14, Oracle
- Business of Local Energy Conference, June 20 - 21, Irvine
- Silicon Valley Energy Summit, June 21, Stanford
- CalCCA annual conference, Nov 6-7, Los Angeles
- Plus many Earth Day events!



Regular Agenda

3. Citizens Advisory Committee Report (Discussion)

Regular Agenda

4. Appointments to the Executive Committee and other Standing Committees (Action)

Regular Agenda

5. Approve Amendment to the JPA (Joint Powers Authority) Agreement to allow the appointment of up to two “Directors Emeritus” to the PCE Board (Section 3.1.1), and to allow the CFO to act as Treasurer (Section 3.9.3) (Action)

Regular Agenda

6. Delegate authority to the Chief Executive Officer to execute an agreement with Energy Solutions to conduct the Multi-Unit Dwelling (MUD) Low Power Electric Vehicle Charging Pilot in an amount not to exceed \$400,000 over three years (Action)

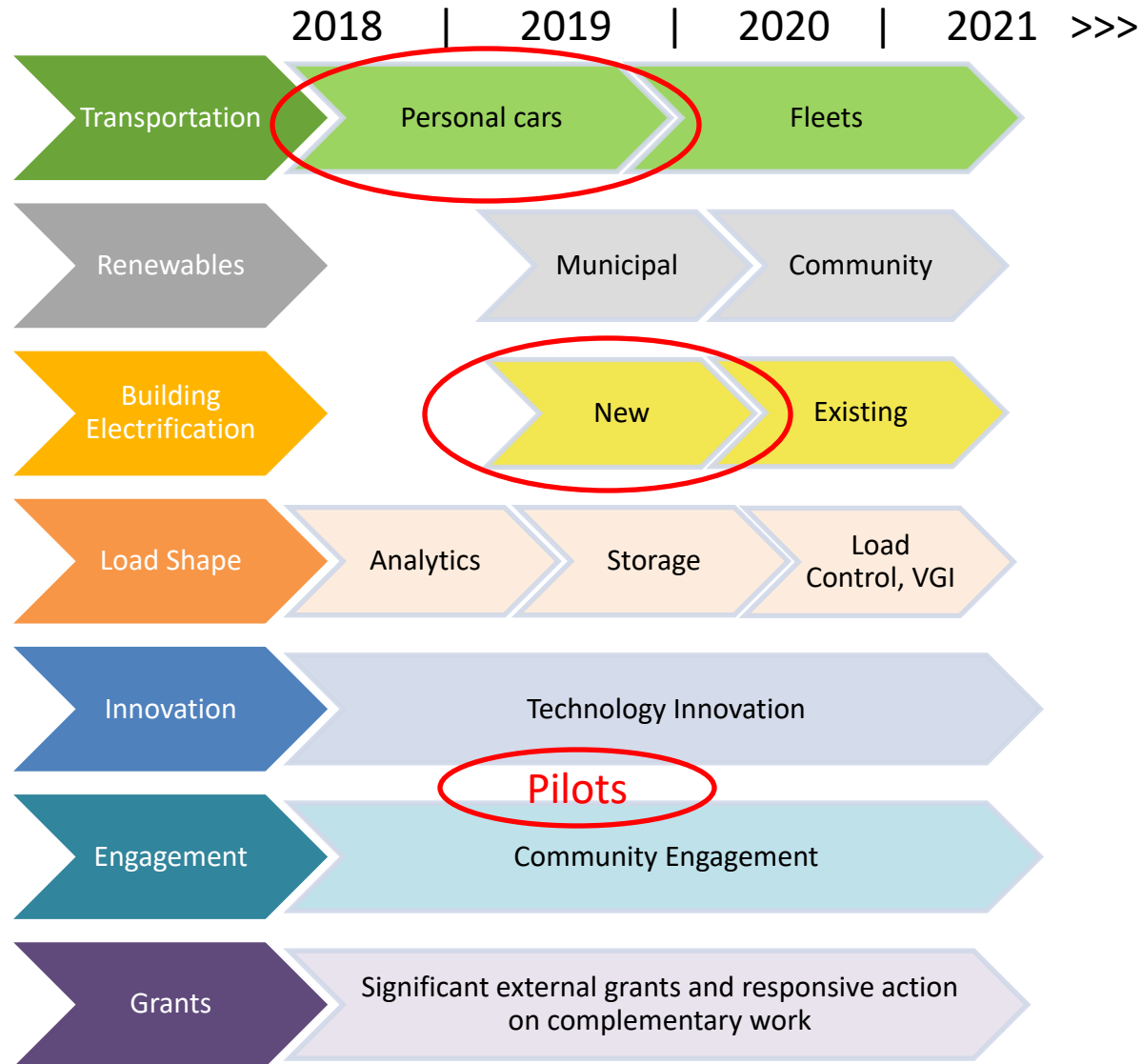
Low-Power EV Charging Pilot

March 28, 2019



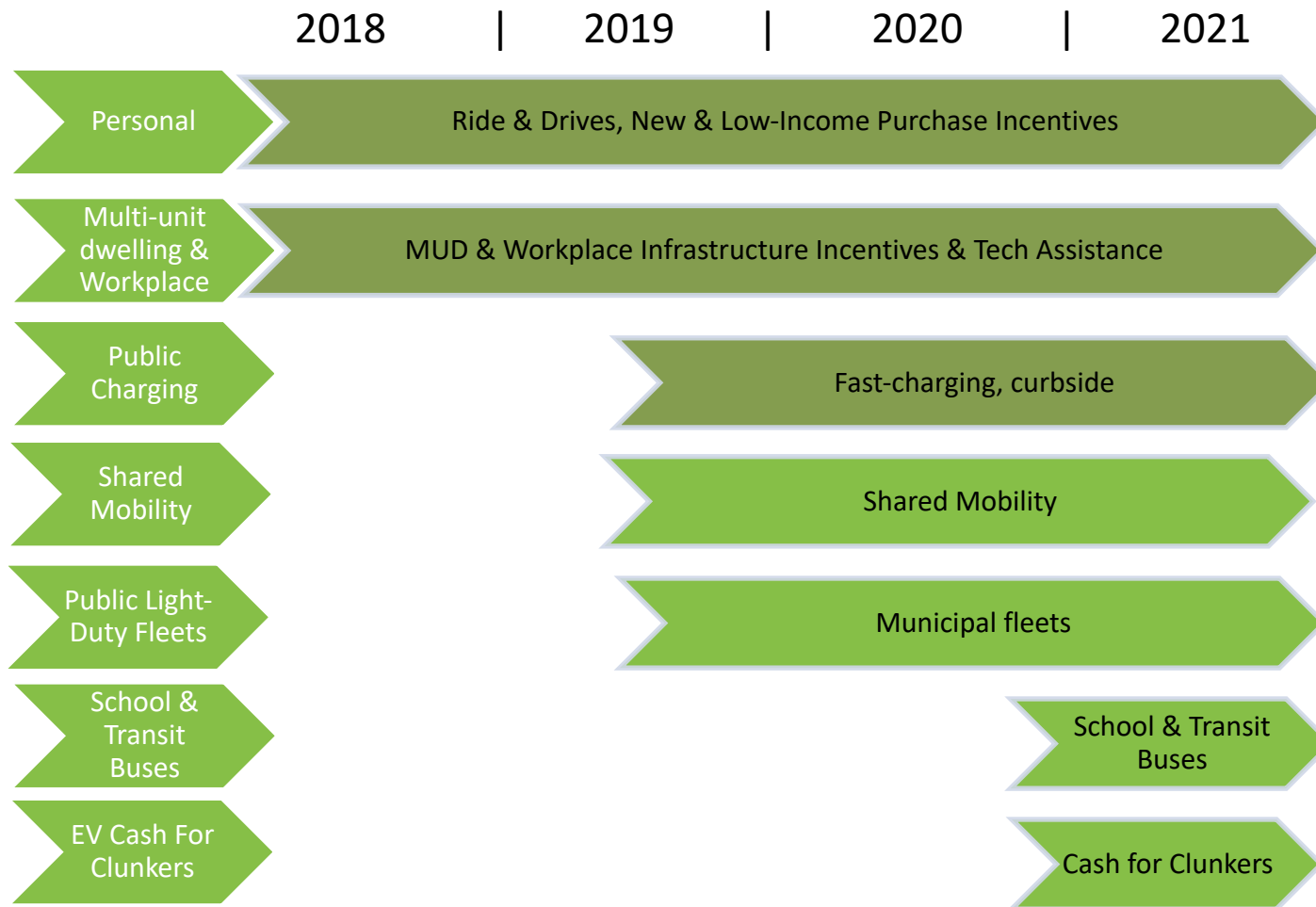
Programs Context

High-Level Roadmap



Transportation Detail

Transportation



Electric Vehicles in San Mateo County: 19,000 (out of 670,000)

State Goal by 2025: 45,544 EVs in San Mateo County

EV Sales, San Mateo County, 2018

Total vehicles sold in 2018	78,747
EVs sold 2018	6,643
Teslas sold 2018	3,903*
% EVs	8.4%
Total EVs in operation 2018	19,113
Total vehicles in operation 2018	670,000



EV sales
growth from
2017

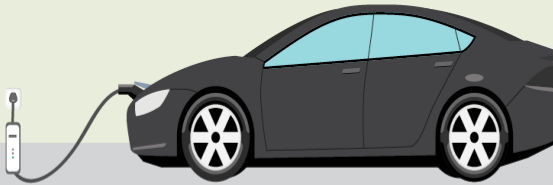
96%*

*Introduction of Model 3 created a spike due to pent-up demand. Not likely repeated in 2019

EV Infrastructure Background

EV Infrastructure Primer: Charging Types

AC Level One



VOLTAGE

120v 1-Phase AC

AMPS

12–16 Amps

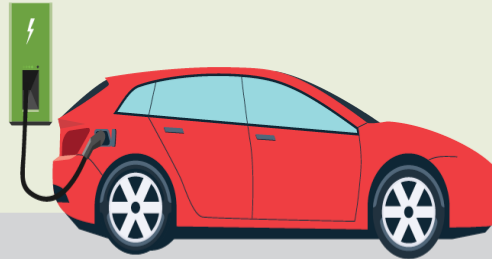
CHARGING LOADS

1.4 to 1.9 kW

CHARGE TIME FOR VEHICLE

3–5 Miles of Range Per Hour

AC Level Two



VOLTAGE

208V or 240V 1-Phase AC

AMPS

12–80 Amps (Typ. 32 Amps)

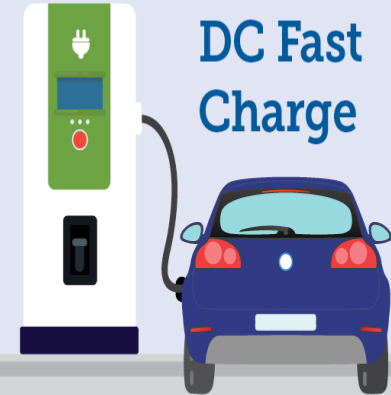
CHARGING LOADS

2.5 to 19.2 kW (Typ. 7 kW)

CHARGE TIME FOR VEHICLE

10–20 Miles of Range Per Hour

DC Fast Charge



VOLTAGE

208V or 480V 3-Phase AC

AMPS

<125 Amps (Typ. 60 Amps)

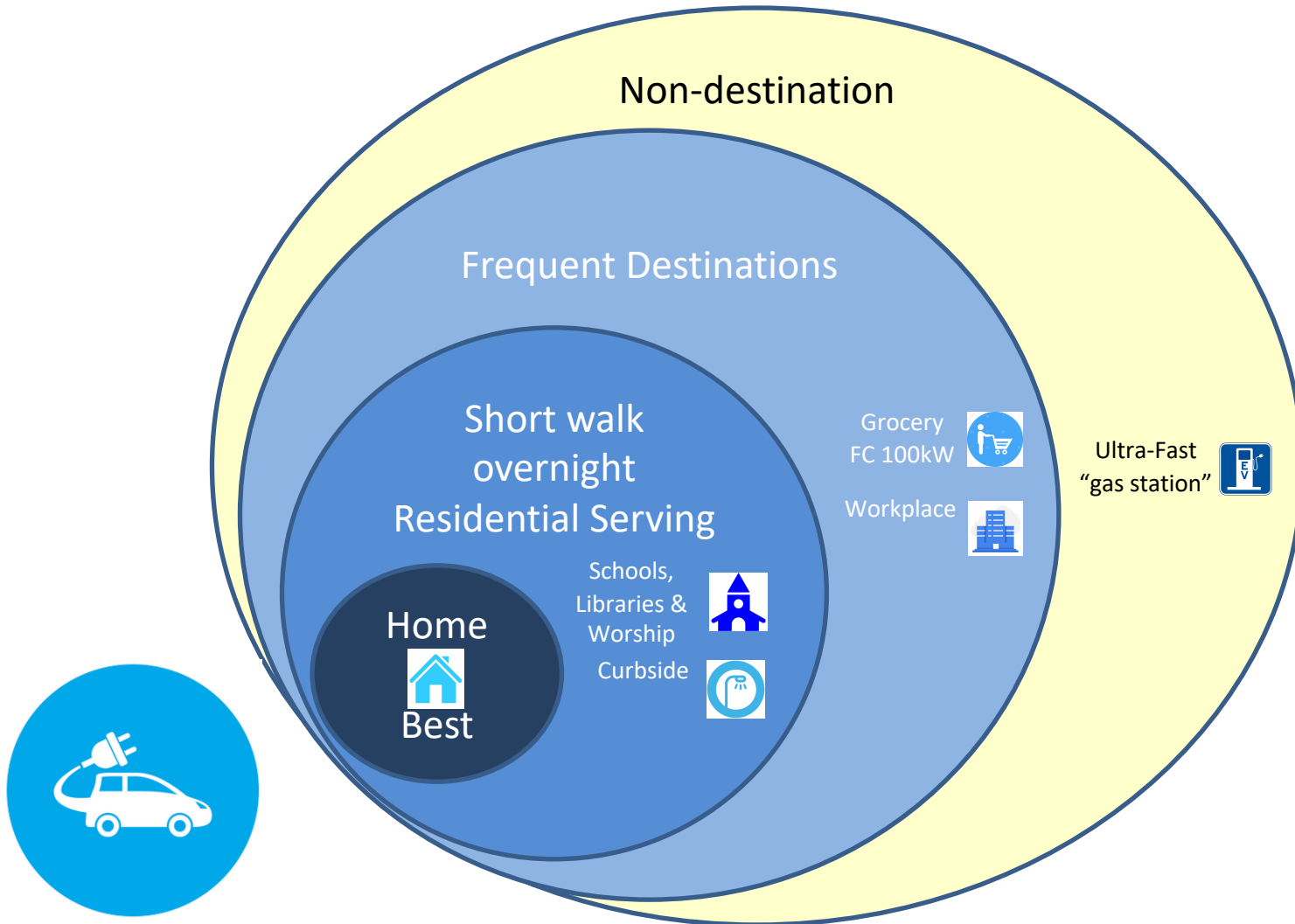
CHARGING LOADS

<90 kW (Typ. 50 kW)

CHARGE TIME FOR VEHICLE

80% Charge in 20–30 Minutes

Proximity = Convenience



Private EV Segments & Approach



Can charge
Can afford

Ride & Drives
New EV Incentives



Cannot charge
Can afford



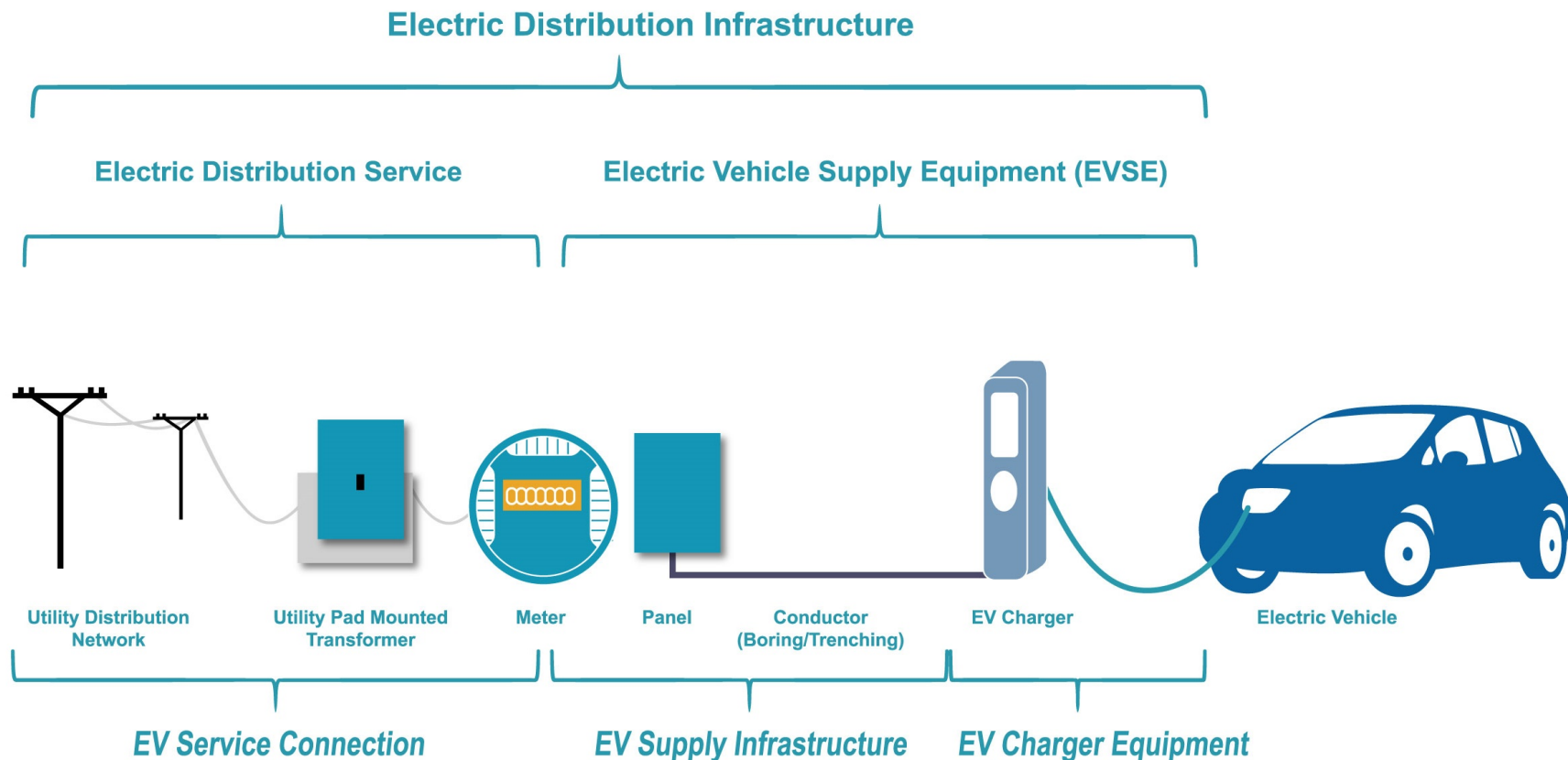
Can charge
Cannot afford

Low Income
Used EV Incentives

Cannot charge
Cannot afford

EV Infrastructure Incentives

Infrastructure Challenges



Level 1 or 2 Costs: \$6,000 - \$20,000 per port
Fast Charge: \$50,000 - \$80,000 per port



Low-Power EV Charging Pilot

Low-Power Pilot: Request

Request: Approval of Low-Power Pilot contract

Contractor: Energy Solutions

Amount: Up to \$400,000

Term: 3 years

Outcomes

1. Identify better technology for multi-family buildings
2. Pilot and evaluate technology

Problem

- Multi-unit dwellings (MUDs) are constrained on electrical capacity
- Level 1 (110 volt) charging can serve the needs of most drivers
 - Average daily mileage is 25 to 30 according to the Metropolitan Transportation Commission
 - Overnight Level 1 can provide over 50 miles in 10 hours
- Many MUDs will not install simple outlets due to lack of access control and billing management
- Current technology is disproportionately expensive (\$600 to \$3,500 per port for equipment)

Project Detail

Project Objective: Identify and pilot administrable and more affordable Level 1 charging technology

Project Process:

1. Business Needs Assessment & Requirements
2. Solution/Technology Research & Acquisition
3. Pilot Site Recruitment & Installation
4. Assessment and Final Report with Recommendations

Prior Board Direction: Approved project in June 2018 as the Curbside & MUD Pilot (Curbside portion forthcoming)

Energy Solutions & EV Charging Pros

- Competitive process
- 8 proposals received
- Energy Solutions + EV Charging Pros
 - Existing MUD relationships
 - Technology understanding
 - More cost effective



Budget: Programmed Funds

	Funds in Thousands				
	FY18 Actuals	FY19	FY20	FY21	FY22
Budget (June 2018 forecast)	\$ 4,000	\$ 6,000	\$ 8,000	\$ 10,000	\$ 12,000
Allocated Funds (below)	\$ 37	\$ 1,705	\$ 5,730	\$ 5,530	\$ 5,200
Remaining Balance	\$ 3,963	\$ 4,295	\$ 2,270	\$ 4,470	\$ 6,800
Program					
EV Infrastructure	\$ 15	\$ 95	\$ 4,000	\$ 4,000	\$ 4,000
Curbside/MUD EV Pilots	\$ 7	\$ 330	\$ 330	\$ 330	
New EV Incentives (assumed to repeat)		\$ 165	\$ 250	\$ 250	\$ 250
Ride & Drive EV Marketing	\$ 15	\$ 60	\$ 250	\$ 250	\$ 250
Low-Inc EV Incentive (assumed to repeat)		\$ 200	\$ 200	\$ 200	\$ 200
New Building Reach Codes & Climate Action Plans		\$ 375	\$ 200		
Community Pilots & Other (assumed to repeat)		\$ 480	\$ 500	\$ 500	\$ 500

Low-Power Pilot: Request

Request: Approval of Low-Power Pilot contract

Contractor: Energy Solutions

Amount: Up to \$400,000

Term: 3 years

Outcomes

1. Identify better technology for multi-family buildings
2. Pilot and evaluate technology

Regular Agenda

7. Briefing on San Mateo County Energy and Water Strategy (Discussion)

San Mateo County Energy and Water Strategy 2025

Peninsula Clean Energy
Board of Directors Meeting
March 28, 2019



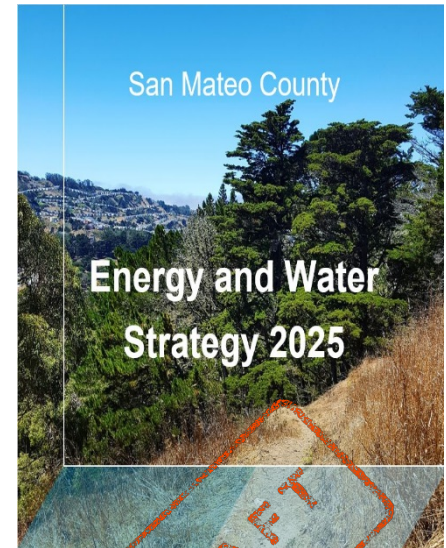
Background

Original Energy Strategy

- Written by USTF committee and consultant
- Final Draft adopted by BOS in December 2008
- Adopted by every city/town in 2009

RMCP – CY 2018 and 2019

- March – presentation of work plan
- April – guiding principles, stakeholders, content
- June – presented stakeholder list, consultant scope
- July/October – updates on content
- November/December – initial drafts






Stakeholders Groups

Energy Stakeholder Group

Seat	Organization	
Community Choice Aggregator	Peninsula Clean Energy	
County	County - OOS	
Nonprofit - Energy/ Microgrid	Clean Coalition	
Real Estate	Mynt Systems	
Vehicle/ Bus Manufacturer	Proterra	
Electric Utility	PG&E	
Community College	SMC CCD	
City/ Town Council	South San Francisco	
Energy Code	Consultant	
Public Works Fleet	City of San Mateo	
Health Care District	Kaiser	
Equity DAC	El Concilio	
Nonprofit - Energy/ Solar	SunRun	



Water Stakeholder Group

Seat	Organization	
Countywide Water	BAWSCA	
County	County - OOS	
Water Agency	Cal Water	
Waste Water Treatment	Silicon Valley Clean Water	
Health Department	County - EH	
RCD	RCD	
Water Code	Consultant	



Framework

Energy Goals:

- E1 - Optimize and Reduce
- E2 - Decarbonize and Shift to Clean Energy
- E3 - Modernize for Resilience



Water Goals:

- W1 - Enhance Efficiency
- W2 - Expand to Alternative Sources
- W3 - Support Systemic Improvements



Current Status

Preparing to circulate for comments

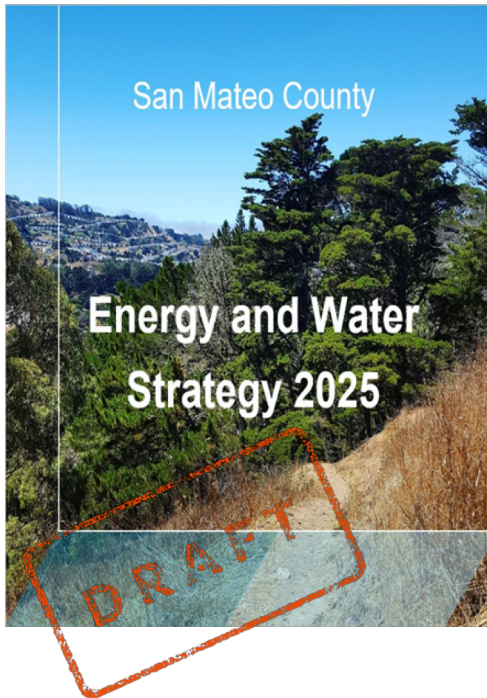
- language added on equity
- more on economic opportunity to be added
- Language added in water section from BAWSCA
- edits from PCE and PG&E (already incorporated)
 - looking for more

Next Steps

- Comments through May
 - elected officials, city staff, citizen groups/nonprofits, contractors
- Copy Edit and Graphics
- Presentation to (and approval by) C/CAG Board and PCE Board
- BOS Adoption
- Presentation for adoption by cities through the end of 2019



[Link to Draft San Mateo County Energy and Water Strategy 2025:](#)



Kim Springer
County of San Mateo
Office of Sustainability
kspringer@smcgov.org
(650) 599-1412



Regular Agenda

8. PCE Rate Change Update (Discussion)

PCE 2019 Rate Adjustment

March 28, 2019

Leslie Brown
Director of Customer Care



PCE 2019 Rate Adjustment

- PCE initially planned to wait until the 2019 ERRA rate adjustments to change rates
 - ERRA decision delay pushing PCIA adjustments for this year to at least July 1, 2019
- PG&E implemented a partial rate change on March 1, 2019, resulting in a larger than 5% generation discount for most customer classes
- PCE will adjust rates on May 1, 2019 to align with transition to Summer billing season and other non-gen PG&E rate changes
- PCE will have another rate adjustment when ERRA decision is implemented

PCE 2019 Rate Adjustment

- How Does PCE Currently Calculate Rates?
 - PG&E Generation Rate x 95%
 - Subtract PCIA
 - Subtract FFS
 - Result = PCE Rate

PCE Generation Savings = 5%

Regular Agenda

9. Default Time of Use (TOU) Rates Overview (Discussion)

Time of Use (TOU) Rates Overview

March 28, 2019

Leslie Brown
Director of Customer Care



Residential TOU Rate Transition

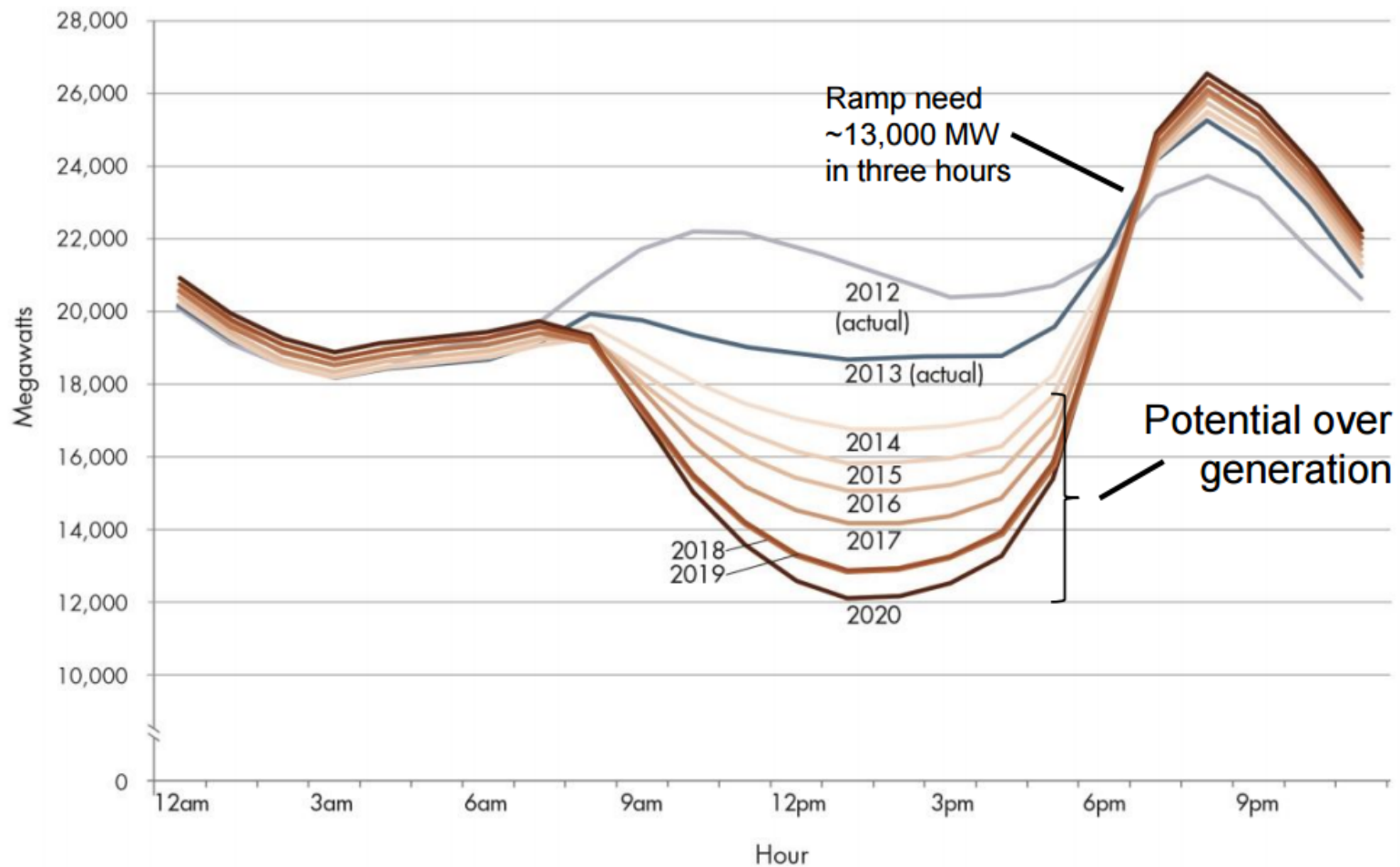
- Overview
 - Background
 - Timeline
 - PCE Participation Key Considerations
 - Bill Protection
 - Marketing, Education & Outreach (ME&O)

Residential TOU Rate Transition

California residential electric customers will begin transitioning to a new Time-of-Use (TOU) rate plan as approved by the CPUC starting in October 2020

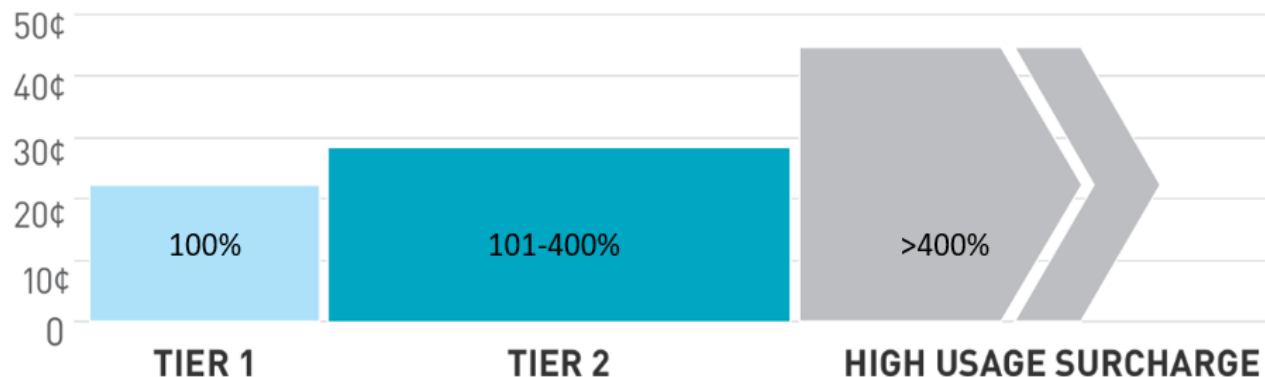
- Lower-priced power when demand is lower
- Address “Duck Curve” mis-match
- Path to a more reliable and sustainable energy future for California
- Removes penalty for strategic electrification

Duck Curve



Current E1 Rate Structure

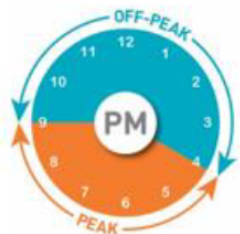
- ~261,000 PCE residential customers are on the tiered E-1 rate schedule
- Pricing based on volume
 - Baseline allotment by climate zone = Tier 1
 - Usage over baseline increases rate to Tier 2 and above
- Pricing signals intended to encourage overall usage reduction
- Ineffective in mitigating steep ramping demand between 4 p.m – 9 p.m



Note: PG&E Bundled Rates shown

New TOU-C Rate Schedule

- When you use electricity is as important as how much you use
 - Volumetric tiers eliminated
 - Electricity rates will be lowest 19 hours a day
 - Customers benefit from lower pricing when electricity usage is shifted to off-peak times



Check the hour before using power

The **Time-of-Use (Peak Pricing 4–9 p.m. Every Day)** rate plan has two time periods:



Lowest price (OFF-PEAK)
19 hours each day



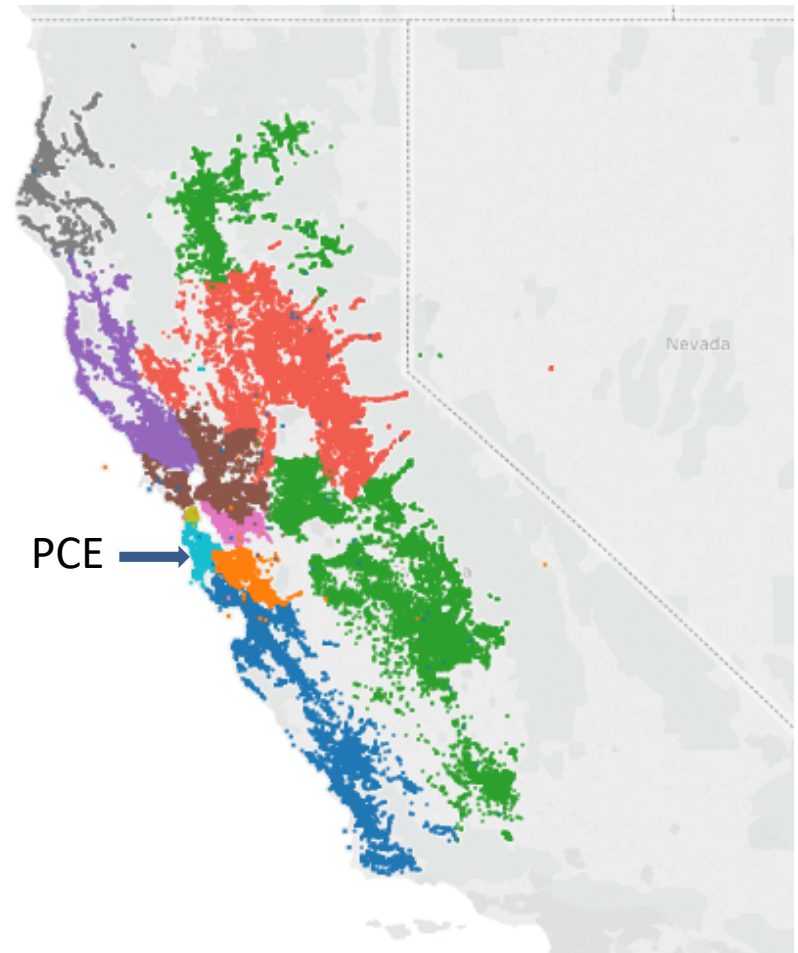
Highest price (PEAK)
5 hours each day

7 DAYS A WEEK



Implementation Timeline

- Transitions will start October 2020 and continue for 13 months
- PCE customers scheduled to transition in Sept 2021
- Customers can change their rate plan at anytime, before or after transition




TOU Transition Phase 1

- PG&E Phase 1 TOU transition pilot for 150,000 customers began April 1, 2018
- Included 18,000 MCE and Sonoma Clean Power customers, as well as ~7,500 SVCE Milpitas customers

Joint Communications

- PG&E worked with participating CCAs to collaborate on messaging and co-branded customer notifications



Time-of-Use (Peak Pricing 4–9 p.m. Every Day)
Information about your new rate plan
Visit pge.com/TOUeveryday

You may have recently received a letter regarding enrollment in Silicon Valley Clean Energy's (SVCE) electric generation service in June 2018. You will remain on the new Time-of-Use rate plan whether you enroll in SVCE or elect to continue generation service with PG&E, unless you take action to choose a different rate plan. If you have questions about your Time-of-Use rate plan, please visit pge.com/TOUeveryday or call 1-866-743-7945. For more information about SVCE enrollment, please call 1-844-474-7823.

On your new Time-of-Use rate plan, when you use energy matters

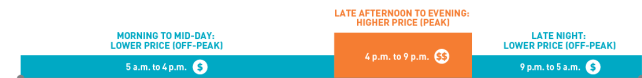
Get more out of your Time-of-Use rate plan by learning how to shift some electricity usage to times when costs are less and demand is lower. Always be sure to check the hour before using power. On your rate plan, 4 to 9 p.m. are **higher-priced (peak)** times. All other times are **lower-priced (off-peak)**. Prices are lower during cooler months (October–May) and higher during warmer months (June–September).

Small shifts can make a difference

Prices are lower on your new rate plan for 19 hours a day because that is when demand is lower and renewable resources, like solar power, are most plentiful. Changing when you use some electricity will help California make progress toward its clean energy goals.

Consider these simple tips to help you shift electricity use to times when demand and prices are lower

- ANYTIME | TURN IT OFF**
Turning lights, appliances, TVs and computers off while not in use is one of the easiest ways to conserve energy.
- MORNING TO MID-DAY | PRE-COOL YOUR HOME**
If you have an AC thermostat, run your air conditioning to cool your home during lower-priced times. Then, nudge it up to 78°F or higher (health permitting) at 4 p.m.
- LATE AFTERNOON TO EVENING | LOAD FIRST, RUN LATER**
During peak times, get your dishes loaded and your clothes ready to wash or dry, then wait until after 9 p.m. to run them.
- LATE NIGHT | PRESS THE START BUTTON**
After 9 p.m. when peak time ends, run your laundry or dishwasher overnight. It will be done when you wake up the next day.



Preliminary Results

- Early indication that customers have reduced load
 - Further analysis needed to determine if it was an overall reduction or usage shift
- 79% opted to participate in the transition
- 11% chose to switch to another TOU rate
- 10% of customers chose to remain on E-1 rate

Ongoing PG&E & CCA Collaboration

- PG&E and CCAs have ongoing meetings to work on joint communications strategies
- Implementing lessons learned and best practices from spring 2018 Phase 1 customers

TOU Bill Protection

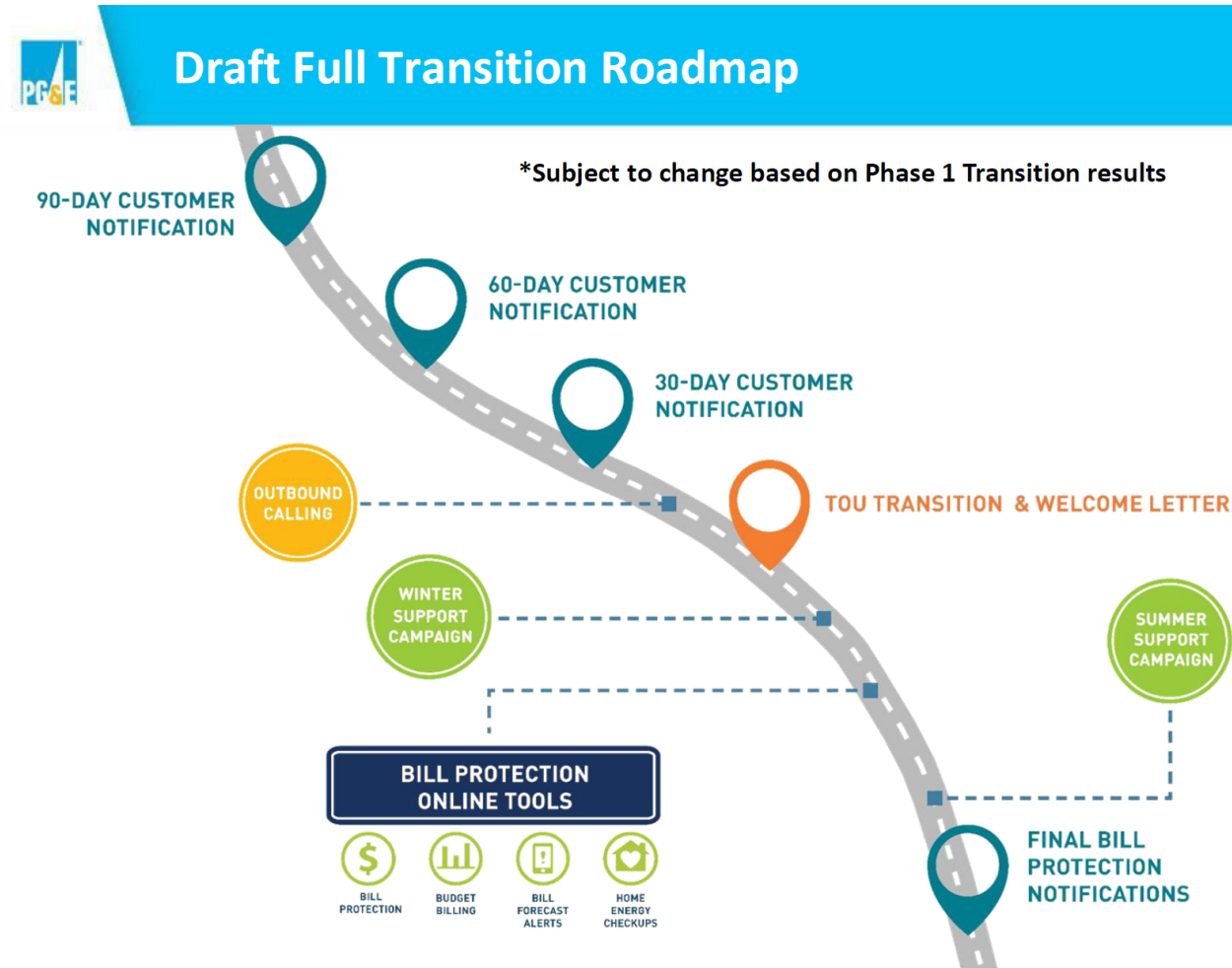
- CPUC requires IOUs offer bill protection for the first 12 months to allow customers to try new TOU rate risk-free
 - If customers pay more than they would have on their former rate plan, PG&E will credit them the difference
 - CCAs offered bill protection for TOU pilots
- Need financial impact analysis
 - CCAs still waiting on bill protection cost for phase 1 pilot customers
 - PG&E completed a projected Bill Protection analysis for PCE which we will share at the April Board meeting

Marketing Education & Outreach (ME&O)

- Customer Notifications
 - Customers are provided a rate comparison in the notification period
 - Customers may choose to-remain with tiered rate, or choose another TOU plan

ME&O Continued

- PCE Customer notification schedule and process
- 90 day notice June 2021
- 60 day notice July 2021
- 30 day notice Aug 2021
- TOU Transition/Welcome Letter September 2021
- *Subject to change*



ME&O Continued

- 60 day notification letter provides rate comparison, so customers are informed of their rate choices

Your Rate Plan Options	Current Rate Plan Tiered (E-1) Two pricing levels based on monthly usage. Price does not vary by hour of the day.	Transition Rate Plan Time-of-Use (Peak Pricing 4–9 p.m. Every Day) Higher prices 4–9 p.m. every day. Lower prices at all other times.	Optional Rate Plan Time-of-Use (Peak Pricing 4–9 p.m. Weekdays) Higher prices 4–9 p.m. on weekdays. Lower prices at all other times.
Total Electricity Costs*	\$3,064/year	\$3,164/year	\$3,217/year

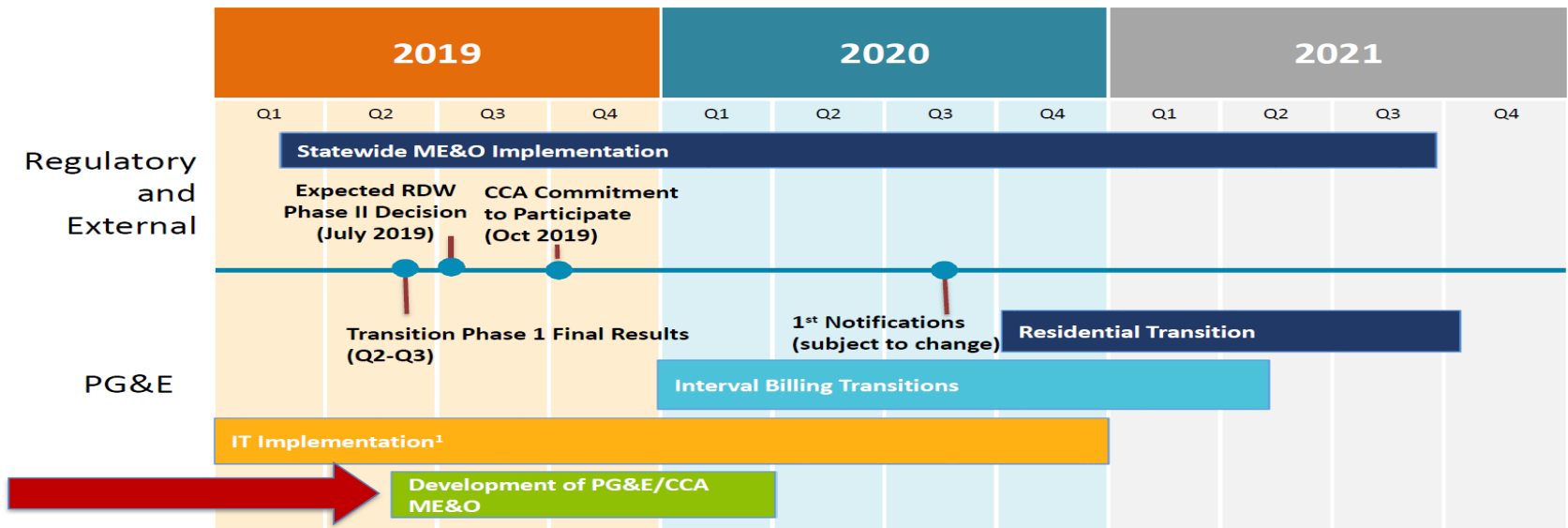
Your lowest cost rate plan is: **[NAME]**

* Estimates assume current PG&E prices and will not match your previous 12 months' bill.

ME&O Continued



Res TOU Phase 2 Transition Timeline: ME&O



1 Major TOU transition deliverables: notifications, default process, exclusions, online tools for rate comparison and bill protection, on-bill messages, rate build, etc.

- PG&E is hosting ongoing workshops with CCAs for partner communications

Next Steps

- Review PG&E Bill Protection Analysis for PCE (April 2019)
- PCE Board Action to confirm participation with PG&E for CPUC filings (July/Aug 2019)
 - Confirm PCE TOU transition, rate structure and timing
 - Confirm PCE will offer bill protection for first year

Regular Agenda

10. Board Members' Reports (Discussion)

Regular Agenda

Adjourn