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VCE Community Advisory Committee Meeting – October 23, 2025

Item 10 – Charge Your Ride: Electric Vehicle Rebate Pilot Phase 2



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Road Map

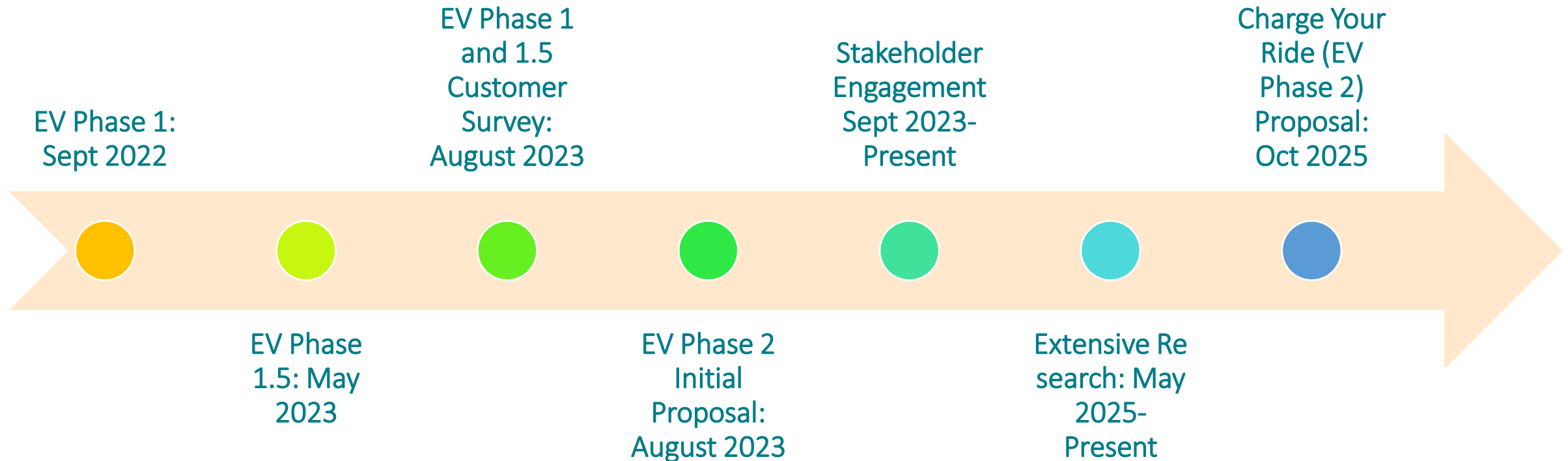
- **Background & Timeline**
 - EV Phase 1 and 1.5
- **Engagement Process**
 - Survey, Academic Research, Other CCA Programs, and Stakeholder Input
- **Pilot Program Goals and Design**
 - 3 Program Elements
- **Budget Options & Scenarios**
- **References**

Background & Timeline

Item 10 – Charge Your Ride: Background & Timeline

Key Numbers from Phases 1 & 1.5:

- 31 standard income EV rebates for new vehicles; 10 low-income EV rebates for new vehicles



Engagement Process

Item 10 – Charge Your Ride: Engagement Process

Extensive Customer & Stakeholder Engagement Summer 2023-Present

- Customer Survey: 572 responses
 - >50% responded with no plans to buy an EV in next 2 years. If they did recently purchase, they were seeking rebates
 - High level of concern re EV charging access
 - Reasonable to assume that affects EV purchasing decisions
- Academic Research
 - Articles; Discussions with UC Davis Researchers
- Other CCA Program Designs; PG&E Rebate Program
- Stakeholder Conversations (CBOs, etc.)

Pilot Program Goals and Design

Item 10 – Charge Your Ride Pilot Goals and Design

Pilot Goal: Transportation Electrification

- ***The "Why":*** As of 2022, 57% of transportation GHG emissions are from light-duty and passenger vehicles. Many customers, especially low-income and renters, are priced out of fuel switching and lack access to charging
- ***The "How":***
 - Remove barriers to access to Electric Vehicles (EVs) and EV charging, especially for those experiencing the highest barriers



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Item 10 – Charge Your Ride Pilot Goals and Design

Setting the Scene: Equitable, Strategic Electrification

- **Barriers** can include socioeconomic & systemic limitations preventing access to opportunities, such as transportation electrification
 - Historically disadvantaged communities see less EV adoption
- Investing in EVs and EV infrastructure as long-term, strategic goal
- VCE staff used the Culturally Responsive and Equitable Evaluation (CREE) framework for this program design
- Staff worked with UC Davis to hone design & incentive levels (academic research on EVs; EV infrastructure), 20+ publications
- **Two primary factors affecting EV adoption and buying decisions:**
 - Lack of access to charging
 - Purchase costs

Item 10 – Charge Your Ride Pilot Goals and Design

Pilot Design: Program Elements

- **Element 1:** Incentives for pre-owned EVs for low-income customers
 - Similar to Phases 1 and 1.5, eligibility determined by "proxy" program (PG&E's Pre-Owned EV Rebate)
- **Element 2:** Incentives for multi-family Level 1 (L1) and Level 2 (L2) charging outlets and stations
 - Not limited to low-income properties
- **Element 3:** "White glove" technical support provided by VCE to support multi-family property owners throughout the project lifecycle
 - Critical element for project success, as well as strengthens customer sat and builds relationships for future programs (e.g. home fuel-switching)

Item 10 – Charge Your Ride Pilot Goals and Design

Further Considerations

- Multi-family home access to charging is critical
- Infrastructure upgrades are key, pave the way for further electrification
- Transportation is the second-highest household cost
- Chicken or egg?
 - Chargers must come before EVs
- California currently only has 20% of the EV chargers needed by 2030

Budget Options & Scenarios

Item 10 - Charge Your Ride: Budget Options

Budget Option 1: EVs and Charging, Charging Maintenance, (no Tech Assistance)	Pilot Program Elements			Total project cost not to exceed \$35,000 per property
	Incentive Category		Cap	
	Pilot Program Element 1: EVs	Pre-Owned EV Rebate, low-income qualifying only	Up to \$3,500	
	Pilot Program Element 2: Charging	Charging Outlets + Readiness (L1)	Up to \$2,500 per outlet	
		Charging Stations + Readiness (L2)	Up to \$4,000 per station	
	All Pilot Program Elements	Program Admin & Contingency	Up to \$100,000	
		Budget Total	\$1,000,000	



When all other readiness options have been exhausted (e.g. circuit splitters/pausers), some customers may need panel upgrades. Eligible customers could receive up to \$5,000 for electrical panel upgrades.

Item 10 – Charge Your Ride: Budget Options

Budget Option 2: EVs and Charging, Charger Maintenance, Tech Assistance: Staff Recommendation	Pilot Program Elements	Project Incentive Category	Cap	Total project cost not to exceed \$35,000 per property
	Pilot Program Element 1: EVs	Pre-Owned EV Rebate, low-income qualifying only	Up to \$3,500	
	Pilot Program Element 2: Charging	Charger Maintenance	Up to \$500/charger	
		Charging Outlets + Readiness (L1)	Up to \$2,500/outlet	
		Charging Stations + Readiness (L2)	Up to \$4,000/station	
	Pilot Program Element 3: Tech Assistance	Program Admin & Contingency	Up to \$120,000	
	All Pilot Program Elements	Budget Total	\$1,000,000	



When all other readiness options have been exhausted (e.g. circuit splitters/pausers), some customers may need panel upgrades. Eligible customers could receive up to \$5,000 for electrical panel upgrades.

Item 10 – Charge Your Ride: Budget Options

<u>Budget Option 3:</u> Charging, Charger Maintenance, Tech Assistance, (No EVs)	Pilot Program Elements		Incentive Category	Cap	Total project cost not to exceed \$35,000 per property	
	Pilot Program Element 2: Charging		Charger Maintenance	Up to \$500		
			Charging Outlets + Readiness (L1)			Up to \$2,500
			Charging Stations + Readiness (L2)			Up to \$4,000
	Pilot Program Element 3: Tech Assistance		Program Admin & Contingency			Up to \$100,000
	All Pilot Program Elements		Budget Total			\$1,000,000



When all other readiness options have been exhausted (e.g. circuit splitters/pausers), some customers may need panel upgrades. Eligible customers could receive up to \$5,000 for electrical panel upgrades.

Item 10– Charge Your Ride: Budget Scenarios

Total
Proposed
budget for
each option:
\$1,000,000

*Please note that
these are sample
scenarios and
are not inclusive
of all project
costs/benefits*

	Budget Scenario 1	Budget Scenario 2	Budget Scenario 3
EV Car Rebates	70 cars	70 cars	N/A
Level 1 Projects/Chargers	13 projects; 1-10 chargers each (total chargers up to 130)	13 projects; 1-10 chargers each (total chargers up to 130)	15 Projects; 1-10 chargers each (total chargers up to 150)
AND Level 2 Projects/Chargers	12 projects; 1-6 chargers each (total up to 60 chargers)	12 projects; 1-6 chargers each (total up to 60 chargers)	12 Projects; 1- 10 chargers each (total up to 120 chargers)
Add'l	18 panel upgrades	25 charger maintenance, 10 panel upgrades	25 charger maintenance, 2 panel upgrades

Item 10 –Program Comparisons: EV & Charger Rebates

What are other CCAs/LSEs doing?

	Program Administrator	Description
EV Cars	PG&E: EV Pre-Owned Rebate	\$4,000 for low income; post-sale (title required to verify)
	PCE: Used EV Rebate	\$2,000 towards purchase of BEV or PHEV; Applicants must earn less than \$150k/year
	RCEA: EV Rebates	\$2,000 for BEVs only for residential or business applicants
	SVCE: EV Program	\$2,000 , depending on income level, for new or used BEV or PHEV
	3CE: Electrify Your Ride	\$2,000-\$4,000 , depending on income level, for new or used BEV, PHEV, or E-Motorcycles
	SBCE: Residential EV Program	\$1,000-\$4,000 , depending on income level, for new or used BEV or PHEV
EV Chargers	PG&E: Res. Charger Solutions	Offers 50% reimbursement on charger electrification projects
	PCE: EV Ready Program	Offers \$2,000-\$5,000 per port for residential and non-residential building types. Also, offers 0% financing for all-electric home conversion projects.
	SJCE: MF Charger Assistance	\$2,000-\$5,000 per L1 or L2 charger & panel rightsizing, do not exceed \$50,000/project
	SJCE: EcoHome Rebates	\$4,000-\$4,750 , offers panel upgrades, EV rewiring, circuit splitters, and pausers
	SVCE: MF Charging Incentives	Up to \$100,000 per MF property , \$1,000-\$5,000 per panel upgrade & chargers (L1 or L2)
	3CE: Electrify Your Ride	Up to \$700 for L2 charger rebates, up to \$4,000 in EV readiness rebates
	SBCE: EV Make Ready Rebate	\$2,000-\$4,000 , Depending on income

Item 10 – Charge Your Ride: Customer Profiles

Customer A:

- Renter
- Received both stackable EV Rebates, total of \$7,500
- Lives in an apartment that already has EV chargers
- Transitioned from ICE vehicle

Customer B:

- Multi-family property owner, 30-40 units (assigned parking)
- 12 Level 1 chargers installed with direct metering
- Went through whole process with tailored, expert guidance from an Electric Advisor-type case manager
- Advertised EV rebate to their tenants, attraction/retention of tenants; excited to participate in future home electrification pilots

Customer C:

- Renter
- Lives in Customer B's apartment complex
- Received both stackable EV rebates, total of \$7,500
- Charges on a Level 1 charger in their assigned parking spot
- Transitioned from ICE vehicle
- Future tenants have access to charging

Item 10 – Charge Your Ride Pilot Next Steps

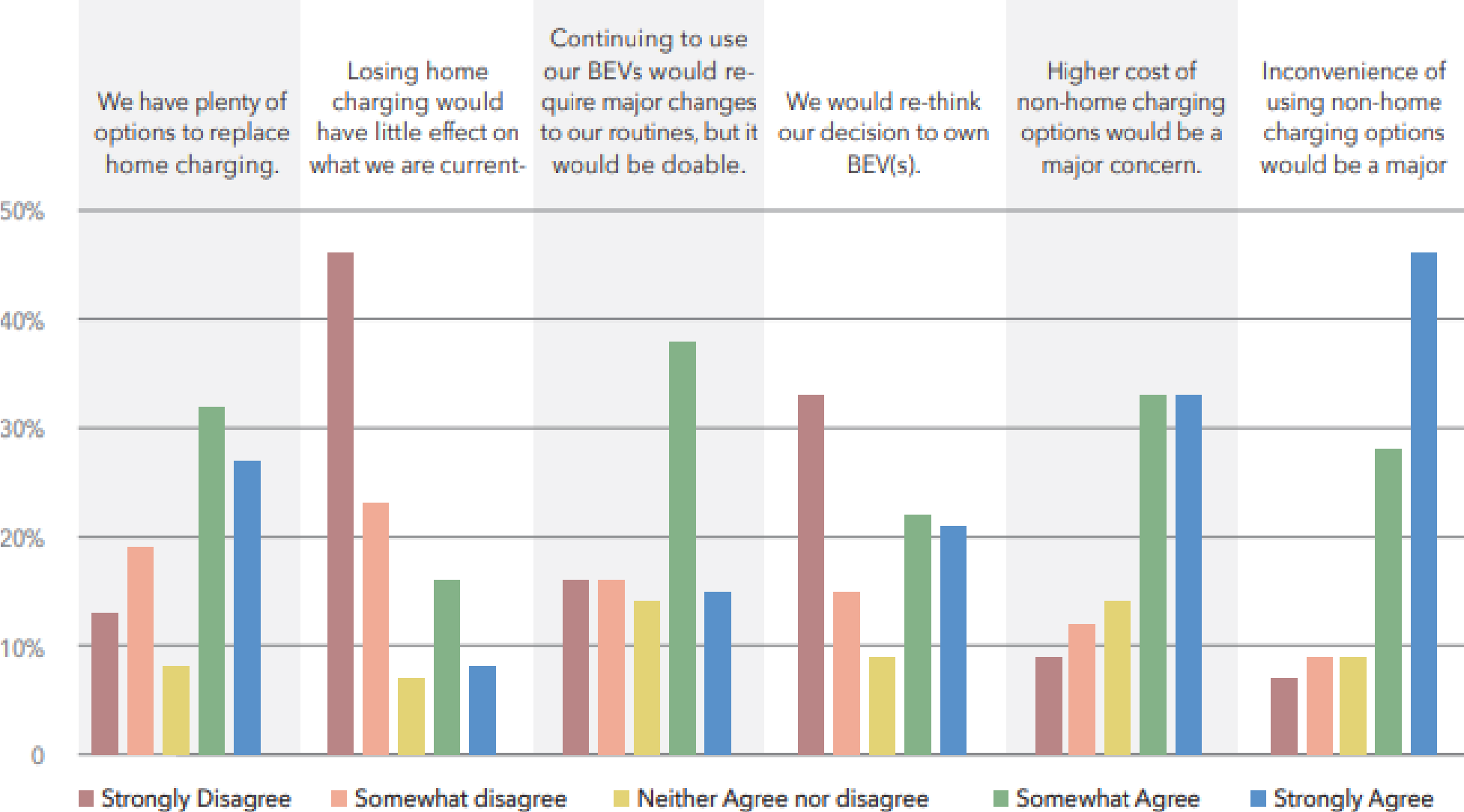
Next Steps

- Staff seeking recommendation for Board Adoption
 - POTG has reviewed and agrees with staff's recommendation
- Board presentation
- Refine T&Cs and budget
- Refine SOW with SMUD or other contractors
- Refine and deploy Marketing & Outreach Strategy
- Launch in Q1/Q2 2026 (if approved)
- 9-month geographic cap removed
- Midpoint program eval; final program eval

Reference Slides

Item 10 – Charge Your Ride: Importance of Charging

Perceptions of Charging Options in the Event Respondents Did Not Have Home Charging Access



Item 10 – Charge Your Ride: Multi-family Charging Scaling

Charging Projects		L1 Chargers	L2 Chargers
Number of Housing Units	Chargers Allowable	Max Funds Amount (\$)	Max Funds Amount (\$)
5 to 10	2	4000	8000
10 to 20	6	12000	24000
20 to 30	10	20000	40000
30 to 40	12	24000	48000
50 to 100	16	32000	64000
100+	17	34000	68000

Item 10 – Extra Slides: Key Research and Stakeholder Contacts

Key Data Points

- California Central Valley and Bay Area Research, along with nationwide research shows top 2 hindering factors to EV adoption: lack of access to charging, start-up costs to purchase an EV. (*Hardman et al., 2025*) and (*Pamidimukkala, 2023*).
- Higher-income households are more likely to have home charging access and more public chargers in their communities (*Hsu and Fingerman, 2024*).
- “...increasing PEV charging infrastructure-as a tool to promote PEV sales, especially to people who are not already PEV owners,” (*Hoogland et al., 2024*).
- Zero-emission vehicle adoption is highest in higher-income areas and in non-disadvantaged areas (*Sheldon, 2022*).
- Renters have the hardest time with EV adoption (*Hoogland et al., 2024*).
- While there is a need for DC fast charging and while it is publicly located, it also comes with higher costs for charging (*Hardman et al. 2024*).
- Circuit Splitters and Pausers: This has benefits in reducing overloading or overshooting loads. This will also provide infrastructure for other electrification projects in future that property owners or residents may take on. (*Walker and Less, Slide 20 to 25, 2022*).
- As of 2022, 57% of transportation GHG emissions are from light-duty and passenger vehicles. (*EPA, 2024*).
- Retention of EV owners is greatly increased when there is access to home charging (*Hardman, 2025*).

Stakeholder Contact List:

- POTG Presentations: 4 presentations at POTG meetings
- Staff Feedback: two, 1-hour sessions and 4+ side conversations
- SMUD Staff: 4 meetings about potential management
- Yolo County Climate Action and Sustainability
- Scott Hardman - University of California, Davis, Institute of Transportation Studies, Assistant Director and Associate Research Faculty
- Gil Tal – University of California, Davis, Institute of Transportation Studies, Adj. Associate Professor, Department of Environmental Science and Policy, Director for the Electric Vehicle Research Center, Director for the STEPS+ Research Group, Admission Advisor to the Graduate Group in Transportation Technology and Policy (TTP)
- Cori Jackson – University of California, Davis, California Lighting and Technology Center Program Manager
- Ben Finkelor – University of California, Davis Energy and Efficiency Institute Executive Director
- Ian Evans, Executive Director of the Yolo Housing Authority (YCHA)
- Phillip Kobernick, Peninsula Clean Energy, Transportation Programs Manager
- Josh Chanin, San Jose Clean Energy, Senior Decarbonization Program Specialist
- CalCCA Equity Committee
- CalCCA Programs Committee
- Cool Davis community members
- Cool Davis Transportation Task Force
- Cool Davis DEVA Task Force
- Property Owners in Yolo County
- Windemere Property Management (Formerly Lyon Estates)

Item 10 – Extra Slides: Anticipating Questions

Q: What did Charge Your Ride score on the Board-approved Programs Scoring Rubric?

A: 2.60 (out of 3.0; among the highest of all VCE pilots)

Q: Why so much per BEV? Why EVs?

A: Rebates for EVs are a type of retrofit for residential customers. Per EPA, the majority of transportation emissions are from light-duty passenger vehicles.

A: BEV only for max GHG reduction. Right-sizing EV transition to typical use cases.

Q: Why low-income?

A: Renters, low-income and disadvantaged communities have historically been cost- and access-excluded from EV adoption. Staff's conversation with YCHA heavily emphasized the importance of low-income, and EV cars, for Phase 2.

Q: Why not public fast charging?

A: While there is a need for DC fast charging and while it has public benefits, it also comes at higher costs to customers. DC Fast Chargers are often biased in location to higher-income areas (Gamage and Tal, 2023).

Q: Is this the most efficient, effective use of Programs funds?

A: Staff believes that incentivizing EVs for low-income, and charging for multi-family, to be high priorities for GHG emissions reductions, fuel switching, customer satisfaction, and equitable access to EVs and charging



Q: What do we do about individually versus master metered?

A: From GIS research, discussions with property owners and meetings and presentations with PCE, this is part of what will be handled in technical assistance.

Q: How will this be share equally among jurisdictions?

A: We recommend capping rebates geographically for the first 9 months of the program. Most other similar CCA programs are first-come, first-served.

Q: Why not workplace or single-family charging?

A: This is Phase 2 of a pilot program; there is room to do other focused in future phases or programs. The drafted program design is based on a significant body of research done primarily in the California Central Valley and Bay Area.

Q: Why not do rebates for heat pumps or similar items?

A: Heat pumps and other building electrification retrofits are very important for building electrification and staff is planning to address this in other pilot program designs.

Q: Why Level 1 not just Level 2?

A: Most cars can get 60+ miles with overnight charge. Avg. daily travel: ~30 miles, meets 96% of needs. Helps avoid service upgrades and is cheaper.

Item 10 – Extra Slides: Defining Terms

Electric Vehicle: An EV or electric vehicle runs on electricity. EVs are rapidly becoming the preferred car globally because of cost and environmental benefits. The three types of EVs are Battery Electric Vehicles (BEVs), Plug-In Hybrid Electric Vehicles (PHEVs) and Hybrids.

BEV (battery electric vehicle): A BEV is an EV that runs only on electricity. BEVs provide the greatest cost and environmental benefits.

ZEV (zero-emissions vehicle): Zero-emission vehicles are cars that emit no greenhouse gases. Full battery electric vehicles (BEVs) are Zero-Emission Vehicles.

PHEV (plug-in hybrid electric vehicle): PHEVs run on both gas engines and electric batteries. Some PHEVs first run on electricity and then switch to gas when electricity runs out. Others use both simultaneously. PHEVs are not as efficient as BEVs but offer more environmental and cost benefits than hybrids.

Greenhouse Gas Emissions: Greenhouse gas emissions such as carbon dioxide (CO₂) are generated by burning fossil fuels. ICE vehicles are a leading cause of GHG emissions. Switching to EVs significantly reduces GHG emissions.

Charging Station: A charging station refers to where you charge your EV both in public and at home.

Level 1 (L1): In North America, Level 1 (L1) AC charging is the slowest type of EV charging. Level 1 requires no special equipment and can connect to a standard wall outlet delivering AC power.

Level 2 (L2): Level 2 (L2) AC charging is the intermediate type of EV charging. Many EVs use Level 2 charging at home and in public.

Level 3 (L3): Level 3 (L3) DC charging is the fastest type of EV charging. EVs can use Level 3 charging in public when going long distances or when time is scarce.

Plug: Another term for an EV's connector.

Port: A port is where a station's connector plugs into an EV to charge on the EV itself. The different types of connectors plugs all have corresponding ports.

Outlet: The electrical receptacle that supplies power to the charger.

Adapter: An EV adapter allows an EV to connect to different types of EV chargers. For example, a Tesla can use adapters to connect to other types of EV chargers.

Kilowatt (kW): A kilowatt is a measure of power or the rate at which energy is used. Kilowatts influence the speed of EV charging.

Kilowatt-hour (kWh): A kilowatt-hour is a measure of energy use over time and is used to track the amount of energy added to an EV battery while charging. More kWh means more energy for an EV to run on.