VCE Community Advisory Committee Meeting – August 24, 2023

Item 6 – Energy Markets update and Procurement Direction

PUBLIC COMMENTS

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CALIFORNIA RPS PRODUCT CONTENT CATEGORIES & COMPLIANCE

AUGUST 2023

RECOMMENDATION

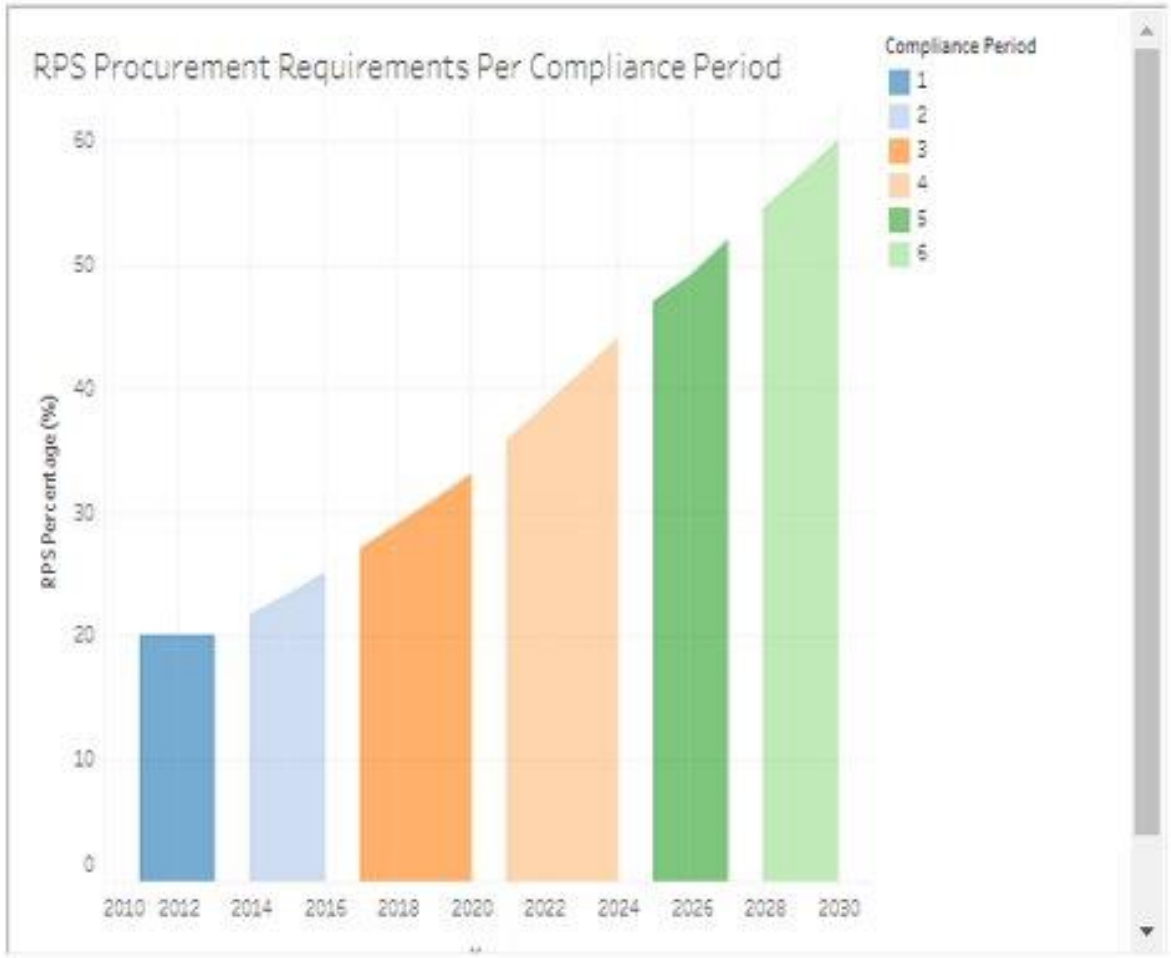
1. Receive presentation and provide feedback on Compliance Period 4 (CP4) short term Renewable Energy Credit (RECs) procurement.

2. Based on current market conditions, maximize the 10% allowance of Product Content Category (PCC) 3 RECs.

WHAT IS THE RENEWABLE PORTFOLIO STANDARD?

- California requires entities that serve retail electric load to procure a minimum percentage of eligible renewable energy
- There are multiple bills that have shaped this program, but most recently SB 100 increased the RPS target to 60% by 2030
- There are multiple types of fuel types that can be eligible renewable: wind, solar, biomass, small hydro, etc
- An instrument called a Renewable Energy Credit (REC) is used to capture this eligibility, and is "retired" to show compliance
  - A REC contains the "Green Attributes" of a unit of energy, and represents that the energy was generated with an eligible renewable fuel type
- VCE's power purchase agreements are all with eligible renewable resources

WHAT ARE THE TARGETS?



- RPS compliance happens over multi-year periods- “Compliance Period X”
- Right now, it is still Compliance Period 4, which goes from 2021-2024
- VCE’s total RPS requirement during CP4 is about 40% of its retail load
- Targets increase over time, and compliance periods shorten to three years starting in 2025 (CP5)

HOW DOES VCE ACQUIRE RENEWABLE ENERGY CREDITS?

- VCE can acquire RECs through:
  - Long-term power purchase agreements that also include RECs
    - Example: Aquamarine Solar
  - Long-term REC purchase agreements
    - Example: VCE *could* buy a fixed volume of RECs per year from a supplier, for 10 years via contract
  - Short-term REC purchase agreements
    - Example: VCE *could* buy a fixed volume of RECs, once, from a supplier

ARE ALL RECs EXACTLY THE SAME?

- Each state with an RPS program writes the rules a little different from each other

- California has “Product Content Categories” (PCC) of RECs defined in state law:
  - PCC 1: Eligible renewable resources directly connected to California’s grid
  - PCC 2: Out of state eligible renewable resources imported into California’s grid
  - PCC 3: Eligible renewable resources not brought to California’s grid (REC Only)

- There are nuances to the definitions above, but those are the basic distinctions

HOW DOES VCE COMPLY WITH THE RPS?

- VCE must retire RECs equivalent to ~40% of its load over 2021-2024
  - VCE does this annually based on the amount of RECs it has acquired each year
- Almost all of VCE's RECs come from its long-term power purchase agreements, which all qualify as PCC1 because they are located in the state of California
  - VCE has purchased some short-term PCC1 RECs earlier in the Compliance Period
- California has requirements within the RPS program regarding how much of each Product Content Category shall be used

PCC & CONTRACTING REQUIREMENTS IN THE RPS

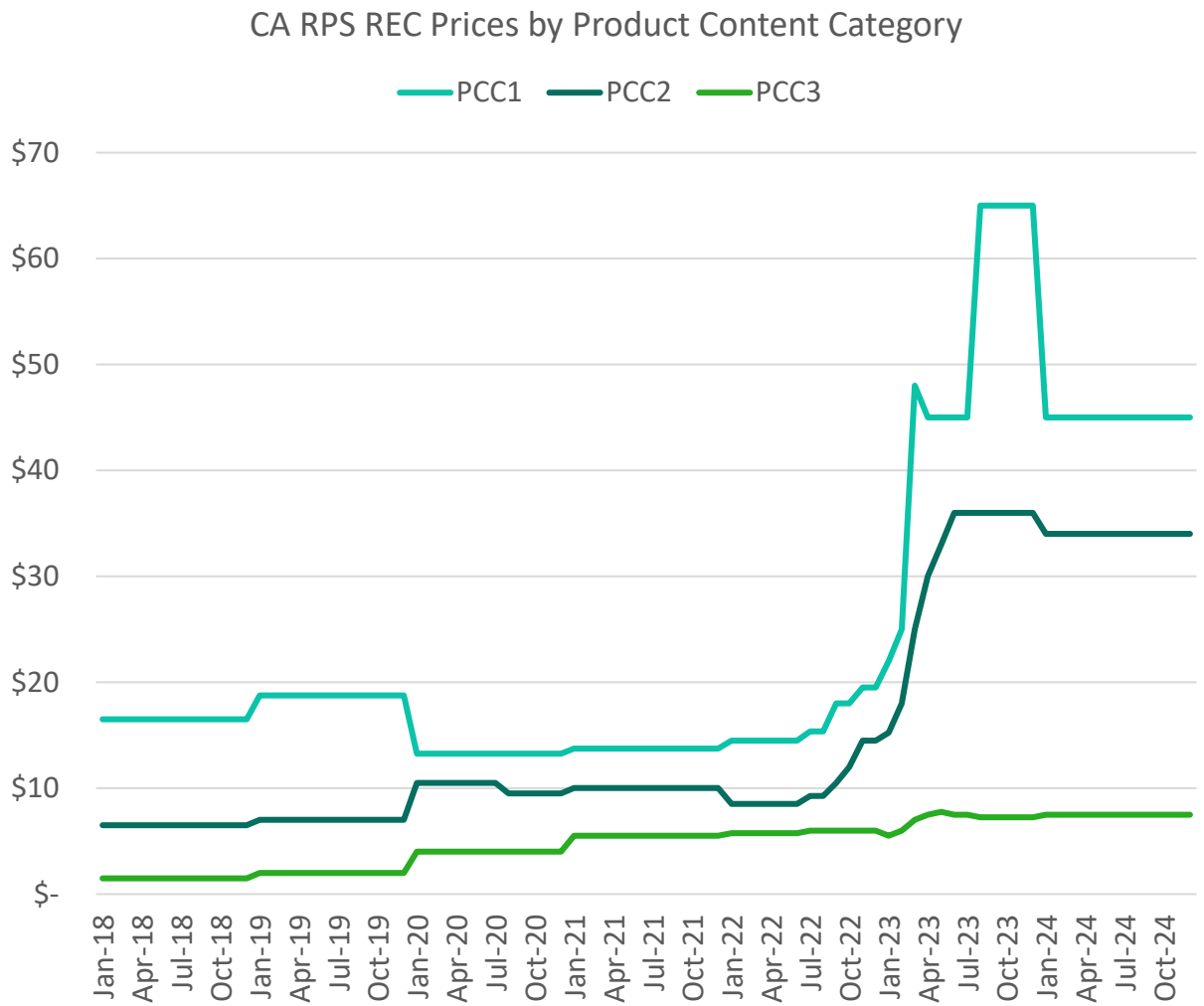
- Beginning in Compliance Period 4, as a percentage of VCE's RPS requirement:
  - 75% of RECs used must be from PCC1
  - 65% of RECs used must be from contracts of at least 10 years in duration (Long-Term)
  - No more than 10% of RECs used can be from PCC3

- VCE has not used any PCC3 thus far in CP4, and has its entire 10% limit available
  - 10% of 40% is 4%, so VCE can essentially use 4% of its load's worth of PCC3

DIFFERENT TYPES OF RECs HAVE DIFFERENT PRICES

Product Content Category	2018 Average Price	2023 Average Price	2024 Forward Price
PCC 1	$16.50/REC	$50.00/REC	$45.00/REC
PCC 2	$6.50/REC	$31.00/REC	$34.00/REC
PCC 3	$1.50/REC	$7.00/REC	$7.50/REC

- REC prices have risen dramatically since VCE's launch
- All types have increased, but PCC 1 and 2 have risen the most
- The penalty for any shortfall is $50 for each "missing" REC
- PCC 1 has traded as high as $65/REC this year



VCE's CP4 LONG-TERM RENEWABLE CONTRACTS

VCE's has signed seven renewable PPAs consisting of photovoltaic (PV), hybrid (PV + storage) and geothermal of which four of the PPAs will impact CP4

Long Term PPAs	Actual or Expected COD	Capacity*
Resurgence Solar I	8/3/2023	90 MW PV, 75 MW BESS (250,000 MWhs)
Aquamarine Solar	9/22/2021	50 MW PV (130,000 MWhs)
Putah Creek Energy Farm	10/15/2022	3 MW PV, 3 MW BESS (7,600 MWhs)
Willy 9 Chap 2**	12/31/2023	72 MW PV, 36 MW BESS (210,000 MWhs)

*** All BESS are 4-hour duration, except the Gibson Solar project is a 5-hour battery system. Approx annual MWhs shown.**
**** Formerly Willow Springs Solar 3. Name changed at the request of the CAISO.**

VCE HAS MULTIPLE ROUTES TO COMPLIANCE

- Example: Assume VCE needs 100,000 Short-Term RECs in 2024 to meet the CP4 target

- Option A – Purchase all PCC1s: 100,000 RECs * $45.00/REC = $4.5 million in expenses
- Option B – Purchase all PCC3s: 100,000 RECs * $7.50/REC = $750 thousand in expenses
- Option C – Purchase 50/50 PCC1s and PCC3s: $2.625 million in expenses

Note: Based on load variations and PPA performance, it is anticipated that VCE will need to procure 100,000-150,000 RECS

WHAT ABOUT THE POWER CONTENT LABEL?

- Example: 100,000 MWh of load, 80,000 MWh of a Solar PPA (PCC1), 10,000 MWh of Short-Term Solar PCC1

Option A	Adjusted Net Procured (MWh)	Percent of Total Retail Sales
Renewable Procurements	90,000	90.0%
Biomass & Biowaste	-	0.0%
Geothermal	-	0.0%
Eligible Hydroelectric	-	0.0%
Solar	90,000	90.0%
Wind	-	0.0%
Coal	-	0.0%
Large Hydroelectric	-	0.0%
Natural gas	-	0.0%
Nuclear	-	0.0%
Other	-	0.0%
Unspecified Power	10,000	10.0%
Total	**100,000**	**100.0%**

Total Retail Sales (MWh)	**100,000**
GHG Emissions Intensity (converted to lbs CO_2e/MWh)	**94**
Percentage of Retail Sales Covered by Retired Unbundled RECs	**0.0%**

- Example: 100,000 MWh of load, 80,000 MWh of a Solar PPA (PCC1), 10,000 MWh of Short-Term Solar PCC3

Option B	Adjusted Net Procured (MWh)	Percent of Total Retail Sales
Renewable Procurements	80,000	80.0%
Biomass & Biowaste	-	0.0%
Geothermal	-	0.0%
Eligible Hydroelectric	-	0.0%
Solar	80,000	80.0%
Wind	-	0.0%
Coal	-	0.0%
Large Hydroelectric	-	0.0%
Natural gas	-	0.0%
Nuclear	-	0.0%
Other	-	0.0%
Unspecified Power	20,000	20.0%
Total	**100,000**	**100.0%**

Total Retail Sales (MWh)	**100,000**
GHG Emissions Intensity (converted to lbs CO_2e/MWh)	**189**
Percentage of Retail Sales Covered by Retired Unbundled RECs	**10.0%**

EMISSIONS AND RECs

- RECs are meant to capture the “Green Attributes” of a unit of power generation
- In theory, a unit of power generated by a renewable resource is one less unit of power generated by an emitting resource
- In practice, that sort of depends on the timing, but it has some truth to it, regardless of whether it is generated in the state of California or not
- The Power Content Label only considers PCC 1 to be emission-free as a baseline, even though PCC 2 and 3 are eligible renewable energy credit types under state law

CONCLUSION

- Staff believes it is prudent to utilize PCC1 as well as the maximum permissible amount of PCC3 in order to meet CP4 target.
- For two reasons staff believes all options should be used to satisfy the CP4 requirement:
  - 1) the costs are material dollars and need to be a factor in the decision,
  - 2) staff recognizes that there are perceived emission intensity differences that are identified on a PCL, but also realizes these are product of the tool that has been created and not a reflection on what truly is occurring in the broader environment

VCE Community Advisory Committee Meeting – August 24, 2023

Item 7 - VCE Strategic Plan Minor Update and Extension through 2025

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Item 7 - 2021-23 Strategic Plan Minor Update : Overview

Overview

Present the minor update of the 2021-2023 Strategic Plan and extended current end of the planning period to the end of 2025 for CAC recommendation that the VCE Board of Directors.

This presentation will provide:

- Strategic Plan Guidelines (Recap)
- Strategic Plan Minor Update and Extension through 2025
- Summary and Recommendation

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Item 7 - 2021-23 Strategic Plan Minor Update : Guidelines Recap

Strategic Plan Guidelines

VCE's Strategic plan guidelines set out the process and timeline for Plan updates. The Guidelines included a proposed timeline for extending the 2021-23 plan through 2025 with a minor update as part of that process.

Extension of 2021-2023 Plan			Strategic Plan				Strategic Plan			
2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
Minor Update		Major Update		Minor Update		Major Update		Minor Update		Major Update
	IRP WORK		IRP WORK		IRP WORK		IRP WORK		IRP WORK	

2021-2023 Minor Update

The minor update is a relatively high-level review/update to existing goals and objectives performed by Staff to incorporate plan adjustments associated with changing legislative, regulatory, customer, and economic requirements, as well as plan milestones achieved.

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Item 7 - 2021-23 Strategic Plan Minor Update : Update & Extension

2021-2023 Strategic Plan Draft Minor Update & Extension through 2025

- General update replacing “VCEA” with “VCE”
- Investment Grade Credit Rating (Objective 1.2) – From 2024 to 2028 (COVID-19 pandemic)
- Manage Customer Rates (Objective 1.4) – Lowering customer costs.
- Long Range Financial Model (Objective 1.5) – Long-Range Financial Model focused on VCE’s financial health (Reserves) and rate stability.
- Renewables Update (Goal 2 / Objective 2.1) – Increase the renewable goal to 100% and procurement of local storage resources.
- Customers and Community (Goal 3) –Updated to include implementation during the extension period.

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Item 7 - 2021-23 Strategic Plan Minor Update : Recommendation

Summary

Staff believes the recommended 2021-2023 strategic plan minor update represent a balanced approach for extending the 2021-23 plan through 2025. As outlined in the strategic plan guidelines, Staff will continue to review and update the Plan on an annual basis to ensure that VCE remains on track and course corrects if necessary.

Recommendation

Staff is seeking a CAC recommendation that the VCE Board of Directors approve the 2021-2023 strategic plan minor update and extension of the plan through 2025.

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VCE Community Advisory Committee Meeting – August 24, 2023

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Item 8 – Phase 2 of VCE's Electric Vehicle (EV) Rebate Pilot Program

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Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

VCE's Strategic Plan (*Nov 2020*):

Goal 3) Prioritize VCE's community benefits and increase customer satisfaction and retention

Goal 4) Promote and deploy local decarbonization and grid innovation programs to improve grid stability, reliability, community energy resilience, and safety

VCE's 3-Year Programs Plan (*June 2021*):

1) Promote the **electrification of transportation**, residential and commercial buildings, and agricultural operations.
2) Encourage and incentivize energy efficiency, demand response flexibility, and resiliency.

Active VCE Programs:

1) Energy efficiency and Electrification ME+O
2) SACOG Grant– Electric vehicle charging infrastructure
3) AgFIT – Automation; dynamic prices
4) OhmConnect

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Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

Requested Action: Review and recommend Board approval of Phase 2 of VCE's Electric Vehicle Rebate Pilot Program

Successes of Phase 1:

- Provided a total of 41 rebates or $120,000 dollars in EV incentives
- 10 rebates went to low-income residents, or $40,000 in incentives
- Nearly 50 customers have joined our EV rebate waitlist since late June

VCE's rebate program was featured on Yolo-Solano Air Quality Management District's website, as well as **Plug-In America**

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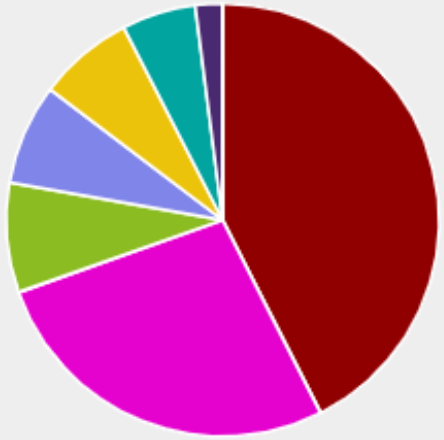
Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

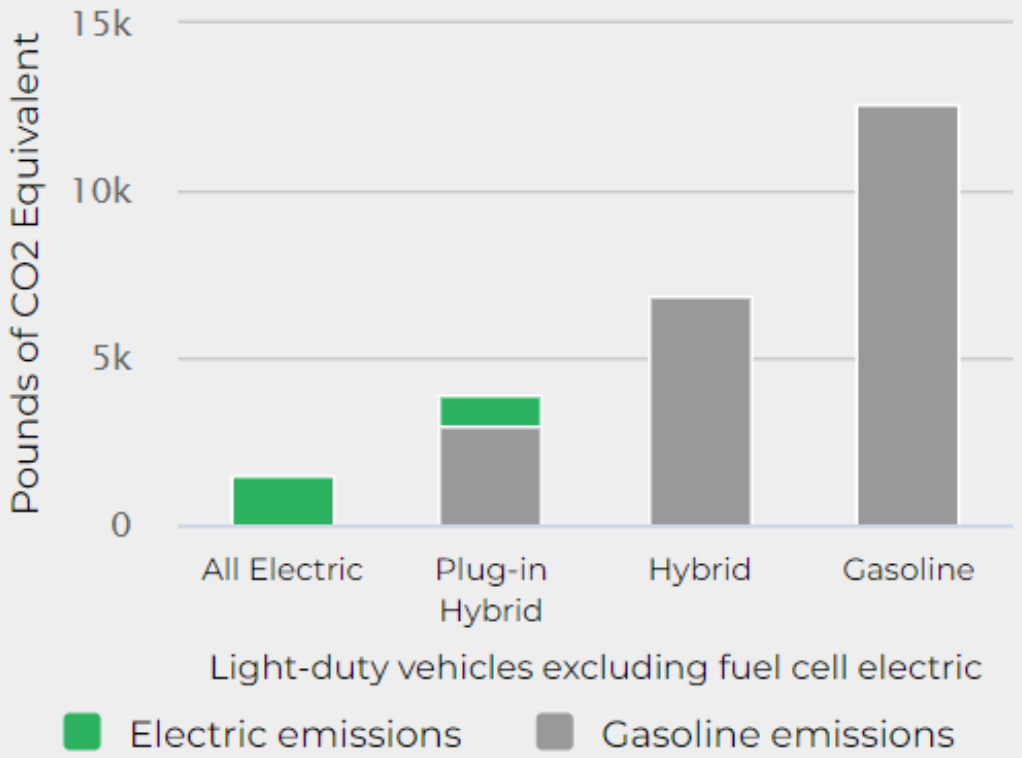
State Averages for California

Electricity Sources



- **Natural Gas**: 42.52%
- **Solar**: 27.06%
- **Nuclear**: 8.19%
- **Wind**: 7.54%
- **Hydro**: 7.13%
- **Geothermal**: 5.53%
- **Biomass**: 2.00%
- **Oil**: 0.02%

Annual Emissions per Vehicle



Helping reduce emissions by about 10,000 lbs of CO_2 equivalent annually per EV, that's over 410,000 lbs of carbon emissions – U.S. DOE

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Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

Recommended Approach:

Reduce Electric Vehicle Rebate Amount

- Low Income (BEV or PHEV) $3000, Standard BEV $2000, Standard PHEV $1500

Introduce Other EV Related Incentives

- Home charging equipment up to $500
- Residential panel upgrades up to $500
- Multi-family housing charging $3000 per charger, up to $21,000 per property

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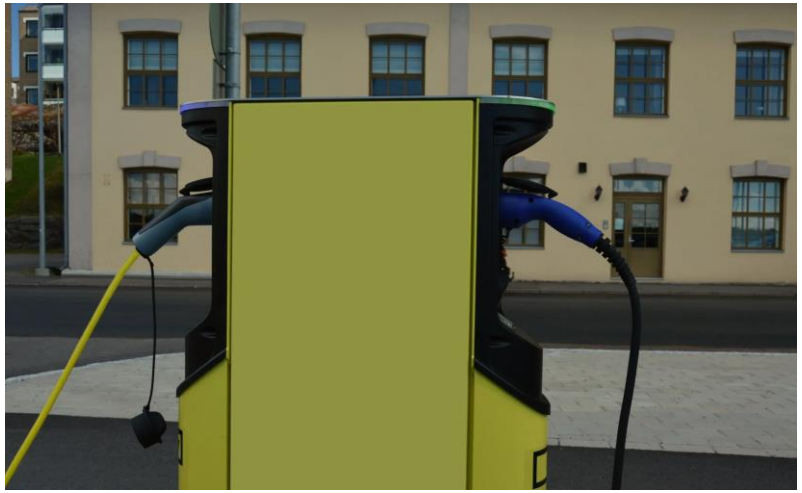
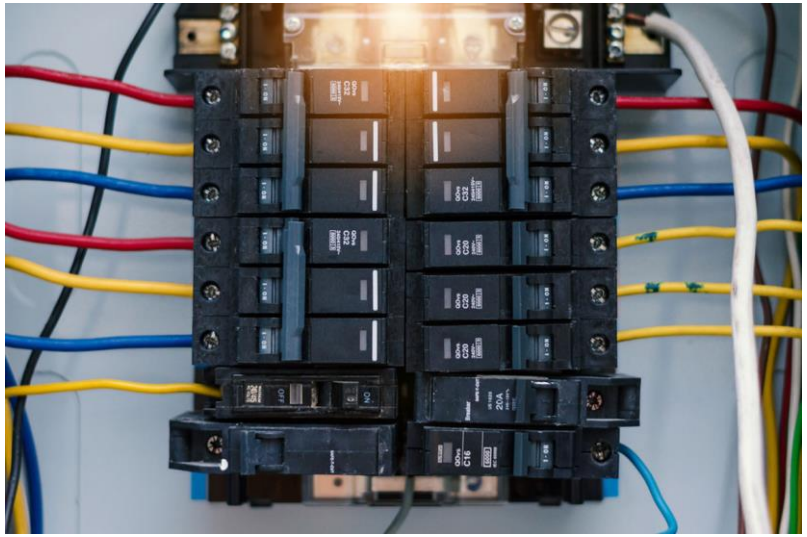
Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

Program Design:

- Continue providing EV rebates at an adjusted amount – same terms and conditions as phase 1
- Include in-home residential charging installations and panel upgrades.
- Customers would be able to stack the incentives for charging and panel upgrades.
- Charging availability in multi-family housing, as EVs are sometimes inaccessible for customers who do not own their home or have easy access to charging.





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Item 8– Electric Vehicle Rebate Pilot Program Phase 2

Program Equity: Ensuring that income-qualified customers have equitable access to rebates

Staff is recommending to continue with:

1. Income-qualified customer applications are given priority and processed before standard applications.
2. Income-qualified applicants fill out a VCE rebate interest form and VCE would consider these rebate funds "on hold" for a period of time, providing time for their 3rd party application(s) to be processed.
3. Allocate 25% of EV rebate funds, as well as the panel upgrade and home charger funds in Phase 2 for income-qualified applicants. 6 months after program launch, the funds would be released for all applications.

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Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

Proposed Budget:

Proposed Incentive	Proposed Amount	Proposed Budget
EV Rebates	$3,000 (low-income BEV or plug-in hybrid); $2,000 (BEV); $1,500 (plug-in hybrid)	$120,000
In-home residential charging	$500	$40,000
In-home panel upgrades	$500	
Multi-family housing charging	$3,000 each, up to $21,000/property	$75,000
Program Contingency	---	$20,000
Total	---	**$255,000**

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Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

Customer insight coming soon from our EV Survey!

Asking questions to get at the heart of what customers need/value when purchasing an EV

- Fast home charging
- Public/workplace charging
- Home panel upgrades
- Etc.

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Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

We estimate to provide 55 EV rebates to our customers

- Assuming 25% of funds go to income qualified applicants - $3,000 rebate
- Assuming all standard applicants purchased BEVs - $2,000 rebate

Other incentives are estimated to provide

- 80 panel upgrades and/or residential EV chargers
- 25 multi-family chargers

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Item 8 – Electric Vehicle Rebate Pilot Program Phase 2

Requested Action: Review and recommend Board approval of Phase 2 of VCE's Electric Vehicle Rebate Pilot Program

Next Steps:

- Take to the Board for Approval
- Develop full list of eligibility criteria with terms and conditions
- Outline and establish customer application process
- Implement program

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