Meeting of the Community Advisory Committee (CAC)
of Valley Clean Energy Alliance
Thursday, April 28, 2022 at 5:00 p.m.
Via Video/Teleconference

Pursuant to Assembly Bill 361 (AB 361), legislative bodies may meet remotely without listing the location of each remote attendee, posting agendas at each remote location, or allowing the public to access each location, with the adoption of certain findings. The Board of Directors found that the local health official recommended measures to promote social distancing and authorized the continuation of remote meetings for the foreseeable future. Any interested member of the public who wishes to listen in should join this meeting via teleconferencing as set forth below.

Please note that the numerical order of items is for convenience of reference. Items may be taken out of order on the request of any CAC member with the concurrence of the other members. The CAC may decide to make a recommendation to the VCE Board regarding any of the agenda items below. Staff recommendations are advisory to the CAC. The CAC may take any action it deems appropriate on any item on the agenda even if it varies from the staff recommendation.

Members of the public who wish to listen to the CAC Webinar meeting may do so with the teleconferencing call-in number and Webinar meeting ID code.

Join meeting via Zoom WEBINAR:

a. **From a PC, Mac, iPad, iPhone, or Android device with high-speed internet.**
(If your device does not have audio, please also join by phone.)
https://us02web.zoom.us/j/81424881328
Meeting ID: 814 2488 1328

b. **By phone**
One tap mobile:
+16699009128,,81424881328#
+12532158782,,81424881328#
Dial:
+1-669-900-9128
+1-253-215-8782
Meeting ID: 814 2488 1328

Public comments may be submitted electronically or during the meeting. Instructions on how to submit your public comments can be found in the PUBLIC PARTICIPATION note at the end of this agenda.

Committee Members: David Springer (Chair), Marsha Baird (Vice Chair), Yvonne Hunter, Christine Shewmaker, Cynthia Rodriguez, Gerry Braun, Mark Aulman, Lorenzo Kristov, Jennifer Rindahl

5:00 P.M. CALL TO ORDER

1. **Welcome**
2. **Approval of Agenda**
3. **Public Comment:** This item is reserved for persons wishing to address the CAC on any VCE-related matters that are not otherwise on this meeting agenda or are listed on the Consent portion of the

agenda. Public comments on matters listed on the Regular agenda shall be heard at the time the matter is called. As with all public comment, members of the public who wish to address the CAC are customarily limited to two minutes per speaker, electronically submitted comments should be limited to approximately 300 words. Comments that are longer than 300 words will only be read for two minutes. All electronically submitted comments, whether read in their entirety or not, will be posted to the VCE website within 24 hours of the conclusion of the meeting. See the information under **PUBLIC PARTICIPATION** at the conclusion of this agenda about how to provide your public comment.

4. **Brief VCEA Staff and Advisory Task Group Reports (≈ 15 minutes) -** Representatives of VCE staff and active Task Groups will provide updates on on-going staff and Task Group work. Task Group recommendations requiring Committee attention require a regular agenda item. Summaries of written reports received by the Committee in advance of the meeting will receive a time allocation of up to ten minutes. Otherwise, the time allocation will be five minutes, including questions and answers. The Committee may decide to allocate additional time at the end of the regular agenda.
   a) **Task Group Reports**
   b) **April 14, 2022 Board meeting update**
   c) **Staff Report**

CONSENT AGENDA (≈ 5 minutes)

5. **Approval of March 24, 2022 Meeting Minutes.**

6. **Receive quarterly Customer Enrollment update.**

7. **Receive Community Advisory Committee 2022 Long-Range Calendar.**

8. **Receive update on Customer Dividend and Programs Allocation.**

REGULAR AGENDA

9. **Review and consider recommendation on Customer program concept: Electric Vehicle Rebates Program. (Discussion/Action) (≈ 20 minutes)**

10. **Receive information on VCE load and power costs forecasting. (Information/Discussion) (≈ 40 minutes)**

11. **Advisory Committee Member and Announcements. (≈ 5 minutes)** Action items and reports from members of the Advisory Committee, including announcements, reports on meetings, and information which would be of interest to the Committee or the public.

12. **Announcement and Adjournment.** The CAC's next scheduled meeting is Thursday, May 26, 2022 at 5 p.m.

PUBLIC PARTICIPATION INSTRUCTIONS FOR UPCOMING VALLEY CLEAN ENERGY COMMUNITY ADVISORY COMMITTEE MEETING ON THURSDAY, APRIL 28, 2022 AT 5:00 P.M.:

PUBLIC PARTICIPATION. Public participation for this meeting will be done electronically via e-mail ***and*** during the meeting as described below.

Public participation via e-mail: If you have anything that you wish to be distributed to the CAC and included in the official record, please e-mail it to VCE staff at meetings@valleycleanenergy.org . If information is received by 3:00 p.m. on the day of the CAC meeting it will be e-mailed to the CAC members and other staff prior to the meeting. If it is received after 3:00 p.m. the information will be distributed after the meeting, but within 24 hours of the conclusion of the meeting.

Verbal public participation during the meeting: If participating during the meeting, there are two (2) ways for the public to provide verbal comments:

1) **Computer with a microphone:** activate the "participants" icon at the bottom of your screen, then press the "raise a hand" icon.
2) **Phone:** Press *9 to indicate a desire to make a comment. Once called upon, press *6 to unmute your microphone.

VCE staff will acknowledge that you have a public comment to make during the item and will call upon you by name or phone number when it is your turn to comment. Speakers will be limited to no more than two minutes. Speakers will be asked to state their name for the record.

Public records that relate to any item on the agenda for a regular or special CAC meeting are available for public review on the VCE website. Records that are distributed to the CAC by VCE staff less than 72 hours prior to the meeting will be posted to the VCE website at the same time they are distributed to all members, or a majority of the members of the CAC. Questions regarding VCE public records related to the meeting should be directed to Board Clerk Alisa Lembke at (530) 446-2750 or Alisa.Lembke@ValleyCleanEnergy.org. The Valley Clean Energy website is located at: https://valleycleanenergy.org/cac-meetings/.

Accommodations for Persons with disabilities. Individuals who need special assistance or a disability-related modification or accommodation to participate in this meeting, or who have a disability and wish to request an alternative format for the meeting materials, should contact Alisa Lembke, VCE Board Clerk/Administrative Analyst, as soon as possible and preferably at least two (2) working days before the meeting at (530) 446-2754 or Alisa.Lembke@ValleyCleanEnergy.org

VALLEY CLEAN ENERGY ALLIANCE

Staff Report - Item 5

TO: Community Advisory Committee

FROM: Alisa Lembke, Board Clerk/Administrative Analyst

SUBJECT: CAC March 24, 2022 Meeting Minutes

DATE: April 28, 2022

Recommendation

Receive, review and approve the attached March 24, 2022 meeting minutes.

MINUTES OF THE VALLEY CLEAN ENERGY ALLIANCE
COMMUNITY ADVISORY COMMITTEE MEETING
THURSDAY, MARCH 24, 2022
VIA TELECONFERENCE

Chair David Springer opened the Community Advisory Committee of the Valley Clean Energy Alliance in a meeting on Thursday, March 24, 2022 beginning at 5:01 p.m. via videoconference pursuant to the Brown Act and Assembly Bill 361 (AB 361). The Board of Directors found that the local health official recommended measures to promote social distancing and authorized the continuation of remote meetings for the foreseeable future.

Welcome and Roll Call

Committee Members Present: David Springer (Chair), Marsha Baird (Vice Chair), Christine Shewmaker, Gerry Braun (departed at approximately 7:04 p.m.), Mark Aulman, Lorenzo Kristov, Jennifer Rindahl, Cynthia Rodriquez (arrived at approximately 6:19 p.m.)

Committee Members Absent: Yvonne Hunter

Welcome and Approval of Agenda

Motion made by Jennifer Rindahl to approve the March 24, 2022 meeting agenda, seconded by Christine Shewmaker. Motion passed unanimously.

Public Comment / Introductions

There were no written or verbal public comments on items not on the agenda and on Consent Agenda items.

Brief task Group and VCE staff Reports

Task Group Reports

Leg/Reg: Christine Shewmaker informed those present that there is a lot going on in the legislature with numerous bills associated with climate change. Four (4) bills have gone to the Board without first going to the CAC for discussion and a recommendation. Ms. Shewmaker thought that one solution was to put information on the CAC's consent agenda about the bills being considered for potential action/position. Lorenzo Kristov noted that Item 9 on the consent agenda needs clarification because it asks for the CAC's feedback. Executive Officer Mitch Sears clarified that Staff are not seeking feedback, a mistake in the Staff Report, and that this item is on the consent for the information purposes. Mr. Kristov requested that should the status of a bill change, such as action or a position taken, from the time the staff report is prepared and the day of the CAC's meeting, that Staff provide an update during the regular portion of the agenda.

Outreach: Mark Aulman informed those present that the task group has been busy providing input on adding new items (OhmConnect, Heat Pump Rebate Program, Time of Use) to the VCE website. The Yolo County Climate Action Commission at their meeting last month endorsed the shift of all non-solar Yolo County buildings to

UltraGreen. Yolo County Staff are reviewing the recommendation and the Commission hopes the item will go to the Yolo County Board of Supervisors in April for approval. Mr. Aulman noted that the City of Woodland is also considering opting up their accounts to UltraGreen. He invited CAC members to join the Outreach Task Group and to volunteer at a few upcoming events: California Honey Festival, Celebrate Davis and soon Farmers Markets. If interested to please contact VCE Staff Rebecca Boyles.

Programs: Marsha Baird informed those present that VCE Staff have been busy preparing the Electric Vehicle Rebate program which is planned for the CAC's April meeting seeking a recommendation to the Board to adopt. The task group is looking at outreach to contractors for the heat pump webinars that Staff are setting up. The OhmConnect program campaign will begin April, with a demonstration on the program scheduled for the upcoming Board meeting. AgFIT (Agricultural Flexible Irrigation Technology) dynamic pricing pilot program continues to progress with a May 1st launch date.

Energy Resilience: VCE Staff Gordon Samuel opened up offer for others to join this task group. Gerry Braun informed those present that the task group is looking at a specific project in VCE's service territory. He recommends that Staff and CAC think about bringing in other member jurisdictions or school representatives to join in early into the conversation.

March 10, 2022 Board meeting update: Mr. Sears informed those present that the Board approved the AgFIT Polaris contract, Collections Policy, loan agreement with River City Bank, Time of Use (TOU) Bill Protection and Customer Heat Pump Pilot Program; and, took positions on several legislative bills.

Staff Report: Mr. Sears informed those present there is no update on legislation regarding entities holding remote meetings; therefore, VCE will continue to hold remote Board and CAC meetings. He and Ms. Boyles visited farms in Capay Valley to introduce the AgFIT program to different growers.

Consent Items

Ms. Baird informed those presented she is working with Staff on having a quarterly customer enrollment update rather than a monthly update. There were no objections by the CAC members for a quarterly update. Ms. Shewmaker asked that Item 8 – approval of Energy Resilience Task Group tasks be moved to the Regular agenda because she has a task she would like to add to the Charge. Mr. Kristov asked that Staff provide an update on the position taken by the Board on Senate Bill 881 (Min) (Item 9D) during the Regular agenda. There were no written or verbal comments as indicated above.

Lorenzo Kristov made a motion to approve the Consent agenda items with Items 8 and Item 9D moved to the Regular agenda, seconded by Mark Aulman. Motion passed by the following vote:

AYES: Baird, Shewmaker, Braun, Kristov, Aulman, Rindahl, Springer
NOES: None
ABSENT: Hunter, Rodriguez
ABSTAIN: None

The following items were:

5. approved February 24, 2022 meeting Minutes;
6. received customer enrollment update as of March 16, 2022;
7. received 2022 long-range calendar; and
9. received Staff Summary on legislative bills:
   a. AB 2696 (E. Garcia)
   b. SB 1174 (Hertzberg)
   c. AB 2937 (Calderon)

Chair Springer moved Item 8 to the beginning of the Regular agenda and moved the Staff update on Item 9d – SB 881 (Min) to the end of the Regular agenda.

Item ~~8~~ 10 – Energy Resilience Task Group Charge Tasks

Ms. Shewmaker made a motion to add a task of holding a public forum on microgrids and their utility to the draft Energy Resilience Task Group (ETRG) Charge. Mr. Kristov is in favor of this task and requests that Staff manage the logistics of setting up the public forum. Mr. Kristov suggested an amendment to the motion to specify the subject of the public forum to "Community Energy Resilience". Ms. Shewmaker agreed to the amendment to her motion. Ms. Shewmaker made an amended motion to add the task of holding a public forum on Community Energy Resilience and for Staff to handle the logistics, seconded by Lorenzo Kristov.

After a brief discussion, the CAC asked that the Outreach Task Group to assist with engagement of the community in the public forum; and, involvement of the Programs Task Group when considering the Self Generation Incentive Program (SGIP) as a potential program because it effects resiliency.

Staff supports the public forum and asks that the scope and outline of the public forum be reviewed by the CAC at a future meeting to provide comments. There were no written or verbal public comments.

The Board Clerk took the vote on the motion: Ms. Shewmaker made a motion to add the task of holding a public forum on Community Energy Resilience and for Staff to handle the logistics, seconded by Lorenzo Kristov. Motion passed by the following vote:

AYES: Baird, Shewmaker, Braun, Kristov, Aulman, Rindahl, Springer
NOES: None

ABSENT: Hunter, Rodriguez
ABSTAIN: None

Item 11: Receive presentation on California Community Power Joint Powers Authority long duration energy storage project: Goal Line (Information)

Mr. Samuel summarized the California Community Power (CC Power) Joint Powers Authority long duration energy storage project "Goal Line" by reviewing slides. Staff are seeking a recommendation to the Board for VCE to participate in this CC Power project. There were no written or verbal public comments.

After a brief discussion, Ms. Shewmaker made a motion to recommend to the Board that VCE participate in the CC Power Goal Line Project, seconded by Mark Aulman. Motion passed by the following vote:
AYES: Baird, Shewmaker, Braun, Kristov, Aulman, Rindahl, Springer
NOES: None
ABSENT: Hunter, Rodriguez
ABSTAIN: None

Item 12: Receive overview of VCE Forecasting (Information / Discussion)

Mr. Samuel provided an overview on the forecasting process and information that is used in forecasting models and budget, including market price benchmarks, power and administrative costs, revenues, and financial model. Staff are seeking feedback from the CAC on information they would like to receive for future discussions on forecasting.

The CAC asked questions and discussed: other forecasting models used and what do they model; forward curve; the ability to adjust the forecast due to weather, drought, costs; collaboration efforts among the CCA's; factors, such as weather/climate, load, administrative and power costs, and Resource Adequacy (RA) used in the forecasting models; and, procurement. CAC Members provided input on what information would be useful in the upcoming forecasting CAC agenda information items. Mr. Sears commented that VCE's load forecasting has been within 5% of estimations. There were no written or verbal public comments.

Item 13: Receive presentation on VCE's rates update. (Information)

Staff reintroduced the thinking, analysis and conclusions that resulted from the discussion VCE had in the Fall 2021 on expanding the customer rate structure. VCE Staff Edward Burnham reviewed the proposed cost-based rate structure that was discussed: three (3) customer rate options, customer distribution, and portfolio/price pertaining to renewable and GHG content, and draft rate discussion schedule.

(Cynthia Rodriquez arrived at approximately 6:19 p.m.)

CAC Members asked questions and discussed: renewable power content and portfolio, CARE/FERA default rate and portfolio content, Time of Use (TOU), customer rate options, differentiation between PG&E and VCE, messaging to customers, and local project investment. There were no written or verbal public comments.

Item 14: Review and discuss Customer program concept (Electric Vehicle Rebates Program). (Information /Discussion)	VCE Staff Sierra Huffman summarized the Electric Vehicle Rebates Program summarized the Electric Vehicle (EV) Rebates program which is focused on available rebates and tax credits for the consumer with the pilot program designed to stack and demystify the electric vehicle purchase process. CAC Members discussed: funding for the rebates, community need and program goals, anticipated participation rate and incentives, and bi-directional charging. The CAC provided feedback and suggestions to Staff. Staff will present Phase 1 of the EV Rebates Program to the CAC at their April meeting seeking a recommendation to the Board for their May meeting. There were no written or verbal public comments. (Gerry Braun departed at approximately 7:04 p.m.)
Item ~~9D~~ 15: Status on Senate Bill 881 (Min)	Mr. Sears informed those present that Senate Bill (SB) 881 (Min) would require load serving entities to procure sufficient energy to achieve a diverse, balanced and reliable statewide portfolio specified electricity sector greenhouse gas emissions reductions. Currently, load serving entities file an integrated resource plan (IRP) and updates with the California Public Utilities Commission (CPUC) to ensure that load serving entities accomplish specified objectives. He informed those present that this bill is problematic and CalCCA is currently in discussion with the author on amending the bill. A few days ago, the sponsor rejected the suggested amendments and negotiations ended. The hearing on the bill is scheduled for next Monday. Due to timing, this bill went from "watch" status to VCE needing to take a position on the bill. Staff went through the expedited process to submit a Letter of Opposition unless Amended, which was submitted on March 23, 2022. The CAC asked Staff to provide a verbal update on a legislative bill if things change between the time the staff report is prepared and the CAC meeting.
Advisory Committee Member and Announcements	Mr. Kristov thanked Staff for their work and the CAC for good discussions on the agenda items.
Adjournment to Next Meeting	Chair Springer announced that the next meeting is scheduled for Thursday, April 28, 2022 at 5 p.m. The meeting was adjourned at 7:14 p.m.

Alisa M. Lembke
Board Clerk/Administrative Analyst

VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 6

TO: Community Advisory Committee

FROM: Rebecca Boyles, Director of Marketing & Customer Care

SUBJECT: Quarterly Customer Enrollment Update (Information)

DATE: April 28, 2022

RECOMMENDATION

A quarterly Customer Enrollment update was provided to the Board at their April 14, 2022 meeting. Please see Item 9 for a quarterly update.

VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 7

TO: Community Advisory Committee

FROM: Alisa Lembke, Board Clerk/Administrative Analyst

SUBJECT: Board and CAC 2022 Long Range Calendar

DATE: April 28, 2022

Please find attached an updated and revised 2022 Board and Community Advisory Committee (CAC) Long Range Calendar. Specifically, at the bottom of the calendar lists future (proposed) topics of discussion for the CAC.

If you have an item that you would like added, please send an email to Assistant General Manager Gordon Samuel, Board Clerk Alisa Lembke, CAC Chair and Vice Chair for consideration.

Attachment:

1. 2022 Board and CAC Long Range Calendar

VALLEY CLEAN ENERGY
2022 Meeting Dates and *Proposed* Topics
Board and Community Advisory Committee (CAC)
(CAC: Topics and Discussion Dates may change as needed)

MEETING DATE		TOPICS	ACTION
~~January 13, 2022~~ **Special Meeting scheduled for January 27, 2022**	**Board**	• Election of Officers for 2022 (Annual) • Near-term Procurement Directives and Delegations for 2022 Power Procurement Activities • Calendar Year Budget and 2022 VCE customer rates • GHG Free Attributes • 2022 Legislative Platform • Receive CAC 2021 Calendar Year End Report (Annual) • 2021 Year End Review: Customer Care and Marketing	• Action • Action • Action • Action • Action • Information • Information
~~January 27, 2022~~ January 20, 2022	**Advisory Committee**	• 2022 Task Groups Tasks/Charge (Annual) • Update on 2022 Power Charge Indifference Adjustment (PCIA) and Rates • Carbon Neutral by 2030 Study • CC Power long duration storage • Draft Collections Policy • Update on customer programs development (draft Heat Pump Pilot Program)	• Action • Discussion/Action • Discussion/Action • Information • Information/Discussion • Information
February 10, 2022	**Board**	• CC Power long duration storage • Update on customer programs development • Update on 2022 PCIA and Rates • Update on Time of Use (TOU) • Update on SACOG Grant – Electrify Yolo • Strategic Plan Update (Annual) • Carbon Neutral Report	• Action • Information • Information • Information • Information • Information • Information/Discussion
February 24, 2022	**Advisory Committee**	• Power Procurement / Renewable Portfolio Standard Update • Time of Use (TOU) and Bill Protection • Final Draft Collections Policy • Customer program concept (Heat Pump Pilot Program) • 2022 Task Group – energy resiliency	• Information • Discussion/Action • Action • Discussion/Action • Discussion/Action

March 10, 2022	**Board**	• Receive Enterprise Risk Management Report (Bi-Annual) • Collections Policy • Presentment of customer program concept (Heat Pump Pilot Program) • Time of Use (TOU) Bill Protection • Ag FIT (Flexible Irrigation Technology) pilot program	• Information • Discussion/Action • Action • Discussion/Action • Discussion/Action
March 24, 2022	**Advisory Committee** ~~WOODLAND~~	• Customer program concept (draft EV Rebates Program) • CC Power long duration storage project • Overview of VCE Forecasting	• Information • Information • Information/Discussion
April 14, 2022	**Board**	• Update on SACOG Grant – Electrify Yolo • 7/1/21 thru 12/31/21 Audited Financial Statements (James Marta & Co.) • CC Power long duration storage project	• Information • Action • Discussion/Action
April 28, 2022	**Advisory Committee**	• Program Concepts Development (EV Rebates Program) • Update on Customer Dividend and Programs Allocation • Forecasting – load and power costs •	• Discussion/Action • Information • Information • Discussion
May 12, 2022	**Board**	• Update on Customer Dividend and Programs Allocation • Presentment of customer program concept (EV Rebates Program) • Appointment of At-Large Members to the CAC	• Information • Action • Action
May 26, 2022	**Advisory Committee**	• Update 3-Year Programs Plan • Forecasting – financial modeling • Draft Rate Structure • Net Energy Metering (NEM) 3.0 Update	• Information/Discussion • Information • Discussion
June 9, 2022	**Board**	• Re/Appointment of Members to Community Advisory Committee (Annual) • Extension of Waiver of Opt-Out Fees for one year (Annual) • Update 3-Year Programs Plan • Draft Rate Structure	• Action • Action • Information • Information/Discussion
June 23, 2022	**Advisory Committee**	• Draft Rate Structure	• Discussion/Action
July 14, 2022	**Board**	• Update on SACOG Grant – Electrify Yolo • Net Energy Metering (NEM) 3.0 Update (placeholder) • Draft Rate Structure	• Information • Information • Discussion/Action

July 28, 2022	**Advisory Committee**	• Power Procurement / Renewable Portfolio Standard update •	• Information •
August 11, 2022	**Board**	•	•
August 25, 2022	**Advisory Committee**	• 2022 Operating Budget / Renewable Portfolio Standard update • Mid-year rate update •	• Information
September 8, 2022	**Board**	• 2022 Operating Budget / Renewable Portfolio Standard update • Certification of Standard and UltraGreen Products (Annual) • Enterprise Risk Management Report (Bi-Annual) • Mid-year 2022 rates review	• Information • Action • Information • Information/Discussion
September 22, 2022	**Advisory Committee**	• Legislative End of Session Update • 2023 Draft Operating Budget • Mid-year 2022 rates review	• Information • Information • Information
October 13, 2022	**Board**	• Update on SACOG Grant – Electrify Yolo • Update on 2023 draft Operating Budget	• Information • Information
October 27, 2022	**Advisory Committee**	• Update on Power Content Label Customer Mailer • Review Draft CAC Evaluation of Calendar Year End (Annual) • Review 2023 customer rate study/information	• Information • Information/Discussion • Information/Discussion
November 10, 2022	**Board**	• Certification of Power Content Label (Annual) • Preliminary 2023 customer rate options • Preliminary 2023 Operating Budget (Annual)	• Action • Information/Discussion • Information
November 17, 2022 **(rescheduled November 24th meeting due to the Thanksgiving holiday)**	**Advisory Committee**	• Finalize CAC Evaluation of Calendar Year End (Annual) • Review Procurement Directives and Delegations (Annual) • GHG Free attributes • Power Procurement / Renewable Portfolio Standard Update • Review CAC Charge (Annual) • ERRA Filings Update (PCIA and bundled rates) (Annual) • Preliminary 2023 customer rate options	• Discussion/Action • Information • Information • Information • Discussion • Information • Information/Discussion
December 8, 2022	**Board**	• Approve 2023 Operating Budget (Annual) • 2023 Customer Rate Adoption • Receive Enterprise Risk Management Report (Annual) • Approve Procurement Directives and Delegations (Annual)	• Action • Action • Information • Action

		• GHG Free attributes • Update on SACOG Grant – Electrify Yolo • Receive CAC 2022 Calendar Year End Report (Annual) • Election of Officers for 2023 (Annual)	• Action • Information • Information • Nominations
December 15, 2022 (rescheduled December 22nd meeting due to the Christmas holiday)	**Advisory Committee**	• 2023 CAC Task Group(s) formation (Annual) • Review draft 2023 Legislative Platform • Strategic Plan update (Annual) • 2023 Customer Rates • Election of Officers for 2023 (Annual)	• Discussion/Action • Discussion/Action • Information • Information • Nominations
January 12, 2023	**Board**	• Oaths of Office for Board Members (Annual if new Members) • Update on SACOG Grant – Electrify Yolo • Strategic Plan Update (Annual) • 2023 Legislative Platform • Approve Updated CAC Charge (tentative) (Annual)	• Action • Information • Action • Action • Action
January 26, 2023	**Advisory Committee**	•	•

Notes: 1. CalCCA Annual Meeting typically scheduled in November.
2. Currently all meetings are held remotely via Zoom video/teleconference, "location" is subject to change.

CAC *PROPOSED* FUTURE TOPICS **Topics and Discussion dates may change as needed**	**ESTIMATED MEETING DATE(S)**
Net Energy Metering (NEM) 3.0 (Information/Discussion/Action)	TBD
Carbon Neutral by 2030 (types of energy, where procured, BTM, FOM, policy) (Discussion/Action)	2022 Quarter 3
Integrated Resource Plan / Public Workshop (IRP – update due 11/1/2022) (Discussion/Action)	August/September 2022
Self Generation Incentive Program (SGIP)	TBD
CAC Charge revision (as needed)	
Legislative Items (as needed)	
Strategic Plan additional updates (as needed)	
Time of Use (TOU) (as needed)	
SACOG Update (as needed)	

VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 8

TO: Community Advisory Committee (CAC)

FROM: Mitch Sears, Executive Director
Edward Burnham, Director of Finance & Internal Operations

SUBJECT: Customer Dividend and Programs Allocation Report

DATE: April 28, 2022

RECOMMENDATIONS
Informational Report

OVERVIEW
The Board adopted the VCE Rate Structure & Dividend Program Guidelines on June 17, 2019, to be effective starting at the beginning of the following fiscal year on July 1, 2019. The FY 2021/22 (6-month) audited financials resulted in a net loss of $3.1M for the fiscal year ending on December 31, 2022. The annual net loss of $3.1M for FY 2021/22 did not meet the threshold (profitability) to allocate reserves to customer dividend(s) and the local program reserve.

CONCLUSION
No cash reserve allocation will be contributed to customer dividends and the local program reserve.

VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 9

To: Community Advisory Committee

From: Mitch Sears, Executive Officer
Rebecca Boyles, Director of Customer Care and Marketing
Sierra Huffman, Program and Community Engagement Analyst

Subject: Electric Vehicle Rebate Pilot Program

Date: April 28, 2022

RECOMMENDATION
Review and recommend Board approval of Phase 1 of Valley Clean Energy's Electric Vehicle Rebate Pilot Program.

BACKGROUND
In mid-2021, VCE began developing an Electric Vehicle (EV) Rebate Pilot Program within the context of a national and statewide movement in transportation electrification. The shift in focus from traditional gas vehicles with the recognition of the emissions associated with fossil fuel transportation motivated VCE to explore the most effective ways to increase local EV adoption. VCE designed a program that stacks with existing EV rebates and incentives, providing VCE customers with additional funding opportunities. Initial research and engagement identified that providing customers with greater financial assistance, especially to those of lower income, could increase the adoption rate of EVs by making it a more feasible financial decision.

Considering the complexities that arise from providing rebates or incentives for electric vehicles, staff recommends a phased approach to the pilot. Phase 1 would be a simple, streamlined approach that is straightforward to implement and easy for customers to apply. Phase 1 would provide rebates for new electric vehicles with proof that the customer has received a rebate from the California Vehicle Rebate Project (CVRP). Low-income applicants would receive a more generous rebate, and higher rebates would be provided to battery EVs as compared to plug-in hybrids. Income criteria and vehicle model eligibility would be based on the CVRP's program standards.

PROGRAM DESIGN
Staff believes that taking a phased approach to this pilot is the best way to provide value while learning more about the intricacies of providing EV rebates. After the conclusion of the initial phase, staff (with the assistance of the CAC Programs Task Group, or PTG) will determine how

best to expand vehicle eligibility to include used vehicles, as well as the added value and feasibility of proving a point-of-sale incentive for electric vehicle purchases.

Existing State Rebate Programs

Three state programs and one regional program are providing financial assistance for EVs: the Clean Vehicle Assistance Program Grant (CVAP), Drive Clean Assistance Program (DCAP), California Clean Fuel Reward (CCFR), and Clean Vehicle Rebate Project (CRVP). Both the CVAP and DCAP provide grants to income-qualified applicants before they purchase an EV. The CCFR is a small automatic incentive that is provided right at purchase through eligible dealerships. The CVRP provides a rebate within three to six months after an EV purchase to customers who make less than the high earners cap, with greater rebates provided to low-income applicants.

Staff recommends aligning with the CVRP because it differentiates between low- and mid-high income, tracks that the vehicles are kept for at least 30 months, includes a luxury vehicle cap, and has funding at this time. This is the approach Redwood Coast Energy Authority chose for their EV rebate program, for many of the same reasons cited.

Staff will engage customers by potentially joining related webinars, attending local in-person events, and connecting with customers through collateral such as web materials, social media, advertising, and printed information. Webinars/in-person events give customers the opportunity to ask questions about navigating the many rebates and incentives, as well as cover topics on owning and maintaining an EV. Marketing collateral would explain the benefits of owning an EV such as reduced or eliminated gas cost, reducing greenhouse gas emissions, and potential vehicle to grid benefits. Additional advertising strategies are being explored such as radio ads and bus ads to reach a greater audience and a more diverse demographic. Emphasis will be put on engaging low-income customers and disadvantaged communities.

FINANCIAL IMPACT

Total proposed program budget is $100,000. A dedicated portion of the budget may be spent on marketing, advertising and customer engagement, while the majority will be allotted to rebates. Should demand for rebates be high, staff has reserved $10,000 in the budget for as-needed consultant support. That amount would be reallocated to rebates should staff not need the program support.

Staff (in consultation with the PTG) is loosely planning on rebate amounts as follows: low-income customers would be provided with $4,000 for any new battery or plug-in hybrid EV; all other eligible customers would receive $2,000 for new plug-in hybrids or $2,500 for new battery EVs.

CONCLUSION

Staff is asking the CAC for feedback, and to provide a recommendation to the Board for approval Phase 1 of Valley Clean Energy's Electric Vehicle Rebate Pilot Program.

Attachment

EV Rebates Program Design/Implementation Form Draft

Program Preliminary Design/Implementation Form

Program Concept: Electric Vehicle (EV) Rebates Pilot

Date: 4/14/22

Staff Resources and Support:
Assigned Program Managers: Rebecca Boyles, Sierra Huffman
Programs Task Group members: Marsha Baird, David Springer
Consultant names: (*potentially; still TBD*) SMUD, Jim Parks, Green Ideals

Scope: Develop program infrastructure and disburse rebates for Electric Vehicles to qualifying customers until program funds are exhausted. Income-qualified customers are eligible for higher rebates.

Timing: (approximate; pending approval) Announce phase 1 program roll-out after Board approval in Spring 2022. Begin phase 1 of program implementation in May 2022 (pending board approval). Begin providing rebates at the start of implementation, and close rebate application process when funds are exhausted.

Program Design Criteria Evaluation:

	Criteria 1	**Criteria 2**	**Criteria 3**
Criteria Type	Availability of Funds	Staff Time	Strategic Plan Alignment
Reasoning for Program Score	Scored high; we have internal funds set aside for such programs	Scored high; low impact on staff time. Multiple CCAs have implemented similar programs and found it easy to do, requiring minimal staff time; and we would emulate these programs	Scored medium to high on strategic plan alignment: Reduces GHG Emissions Higher penetration of EVs in Yolo County would lead to less emissions from transportation Customer Satisfaction Addresses an issue of importance to customers as stated in a customer survey Addresses Environmental Justice Addresses the needs of the underserved, underprivileged and/or lower-income customers by making EVs more accessible Regulatory & Legislative Goals Alignment Aligns with state goals of increasing penetration of EVs in CA Strategic Partnerships Level of collaboration with local organizations: we could potentially work with California Air Resources Board, EV dealers, Yolo-Solano Air Quality Management District, low-income communities, community-based organizations, and additional stakeholders

Program Metrics and Goals:

Metrics: The total number of EVs purchased utilizing VCE's rebate program; number of EVs purchased and total dollars provided to low-income qualified applicants.

A calculation of avoided or reduced greenhouse gas emissions (GHG) from replacing or substituting gas vehicles with electric transportation. Emissions reductions will be calculated by estimating the number of miles a customer drives annually and comparing the carbon emissions per mile for gas to the emissions per mile for electric. The emissions per mile for electric will derive from the GHG emissions associate with VCE's energy portfolio. There will be the potential to replace estimates with real customer data on average vehicle miles driven, through optional questions on rebate applications.

Goal: 26 EVs incentivized; including 10 income-qualified recipients

Proposed Programs Budget:

Resource	Source	Proposed Budget	$ Remaining in Program Funds
Rebates	Programs Budget	$80,000	
Marketing, Education & Advertising	Programs Budget	$10,000	
Consultants (if applicable)	Programs Budget	$10,000	
	Total	$100,000	$119,000

Budget details:
$2,500 rebate for new or leased vehicles (16 rebates if 50% of budget used). Battery Electric Vehicles (BEV) will qualify for the full rebate of $2,500, while Plug-In Hybrid Electric Vehicles (PHEV) will receive $500 less in incentives, totaling to $2,000.

$4,000 rebate for income-qualified customers for new or leased vehicles (qualifying by being on CARE/FERA). Low-income customers will not be subjected to lower incentives for PHEVs versus BEVs. All qualified EVs will be eligible to receive the full incentive amount of $4,000. (10 rebates if 50% of budget used). Total of 26 BEV rebates given if funding was split 50/50 income-qualified/not.

Rev. 4/25/22

Organizational Goals Addressed:

Alignment with VCE's Strategic Plan? **Yes**

- **Goal 3.** Prioritize VCE's community benefits and increase customer satisfaction and retention and;
    - *3.2* ***Objective:*** *Develop programs and initiatives to better support community goals, including supporting member agency achievement of energy-sector emissions reduction targets.*
    - *3.5* ***Objective:*** *Develop customer programs and initiatives that prioritize decarbonization, community resiliency and customer savings.*

Phase 1 Program Eligibility:

1. Must be a Yolo County resident and an existing customer of Valley Clean Energy; one rebate per household
2. Must apply and be approved by Valley Clean Energy after being approved for a rebate from the Clean Vehicle Rebate Project
    a. Low-income eligibility requirements set by and verified through the Clean Vehicle Rebate Project
3. Purchase an eligible vehicle:
    a. New or leased EV
        i. Model eligibility set by the Clean Vehicle Rebate Project
            1. Includes a luxury vehicle cap, currently set at $45,000
    b. Must be a plug-in hybrid or battery powered EV

Application Process:

Applications will be processed on a first-come, first-served basis until the budget is exhausted. If an applicant has been waitlisted by the Clean Vehicle Rebate Project (CVRP) because funds have become temporarily unavailable, VCE will hold program funds for them until their rebate is approved by the CVRP.

Customer applications will be available on VCE website in both English and Spanish. Delivery by email is preferred but applications will also be accepted by mail, fax, or drop-off.

Valley Clean Energy or a contracted 3rd party will provide application support to our interested customers, as well as help them find information on and apply for additional EV rebates like the Clean Vehicle Assistance Program and Drive Clean Assistance Program. We encourage all applicants, especially low-income, to apply for additional rebate programs.

Dispersal of funds:

VCE will write a check using the applicant's information.

Marketing, Education and Outreach (ME+O) Strategy:
Promote on social media, website, and evaluate cross-promotion with aligned organizations (e.g. RISE, Inc., Mutual Housing, Grid Alternatives, Davis Electric Vehicle Associations). Potential to initiate targeted mail and/or email campaigns, print or radio advertisement campaigns, as well as create marketing materials for use in car dealerships.

Board, CAC, PTG Input:
The Programs Task Group (PTG) has played a fundamental role in the development of this rebate pilot from its conception in early 2021. The PTG supports the pilot's alignment with the Clean Vehicle Rebate Project.

Next Steps: Research lessons learned from sister CCAs with similar programs; formalize budget; develop full list of eligibility criteria and terms & conditions; seek Board approval; develop ME+O Strategy; implement program.

VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 10

TO: Community Advisory Committee

FROM: Gordon Samuel, Assistant General Manager & Director of Power Services

SUBJECT: VCE Load and Power Costs Forecasting

DATE: April 28, 2022

Load Forecasting Methodology

The attached document outlines the approach VCE uses to produce the load forecast. This final load forecast, which is updated annually, has multiple uses including but not limited to: informing VCE's energy, resource adequacy (RA), and renewable portfolio standard position as well as multiple regulatory filings.

Attachment

1) "2022 Integrated Energy Policy Report Electricity Demand Forecast Filling: Form 4 – Demand Forecast Methodology"

Valley Clean Energy Alliance

2022 Integrated Energy Policy Report

Electricity Demand Forecast Filling

Form 4 – Demand Forecast Methodology

Submitted

March 31, 2022

Forecast Process

The method used for the 2022 VCEA IEPR Electricity Demand Forecast submittal is described in the 8 steps listed below. Note that VCEA's 2023 resource adequacy forecast is equal to year 2023 of the IEPR demand forecast.

1. Process Historical Customer Interval Meter Data

The VCEA demand forecast begins by evaluating historical retail meter interval data provided from PG&E as "Item 17" data. For this forecast, interval data for the period 2016 - 2021 was analyzed.

2. Develop Average Customer Load Profiles by Rate Class

For the interval data history, customer counts varied over the period for two reasons:

1. The interval data set did not contain 100% of all PG&E customers in the VCEA territory, and for any given customer, a complete time series of interval data across the historic period may not have existed;
2. Customer growth: generally over the period, customer counts increased due to new locations taking electric service.

For the five-year period of interval data history, for each rate class, average per customer loads were developed by dividing the total load for each rate class by the number of customers in that rate class to develop an average hourly load per customer/per class load profile.

Specifically, for the 2016 – 2017 interval data, for each rate class, per customer hourly loads were determined using all load data for all PG&E customers in the VCEA service area. For 2018-2021, for each rate class, the per customer VCEA loads were developed using a subset of the Item 17 interval data from PG&E, filtered based on VCEA customers as identified in the customer information data provided by PG&E ("4013" data) as of the end of the year. Service account information for VCEA customers from the 4013 report was used to match to the interval data.

Customers were categorized by rate class using PG&E's ERRA rate class categories. Table 1 below shows those categories.

Table 1. PG&E Rate Classes

Residential (Non TOU)
Residential TOU
Small Commercial (Non TOU)
Small Commercial TOU
Medium Commercial
Street Lighting
Traffic Control
Agricultural
E19 S (Large Commercial/Industrial, Secondary Voltage Service)
E19 P (Large Commercial/Industrial, Primary Voltage Service)
E20 P (Very Large Commercial/Industrial, Secondary Voltage Service)
E20 S (Very Large Commercial/Industrial, Primary Voltage Service)

Rate classes were further split into enrolled VCEA customers versus eligible customers on net energy metering prior to VCEA's launch. The Winters customers are assumed to have similar load shapes to the existing VCEA customer base and are mass enrolled in January 2021. There are also a small subset of customers moving from VCEA to direct access in January 2021.

3. Weather Normalize the Load Profiles by Rate Class (Weather Adjustments)

The load profiles were weather normalized by developing regression models for each rate class. The weather variables included daily cooling degree days (CDDs) with base temperatures of 65°F, 70°F, and 75°F, heating degree days (HDDs) with base temperatures of 65°F and 60°F, and a non-linear weather response "s" shaped curve for daily high temperatures above 90 degrees Fahrenheit. Daily lagged HDDs and CDDs variables were also specified in the regression models to account for the thermal mass in the building shell.

A daily weather pattern for the forecast expected weather conditions was then developed. Weather data for the VCEA service area comes from the Sacramento International Airport. Daily high and low temperatures are available from the NOAA FTP web site. To develop the normal weather temperature pattern, daily high and low temperatures from 2000 through 2019 were ranked and averaged by month and arranged on the calendar by average monthly temperature to produce a normal weather year. A heat wave was placed in July during the weekdays to create a peak simulation.

The normal weather pattern is then applied to the regression models for each rate class to obtain the 8,760 hour per customer load shape. For the Agriculture rate class only, precipitation is a driving factor in usage. Last year was a drought year and that drought is expected to continue into this year (2022) so a drought indication was used resulting

in higher expected Agriculture demand in 2022 with a return to normal precipitation in subsequent years.

4. Forecast Customer Growth by Rate Class (Economic and Demographic Data)

The actual and forecasted economic and demographic data were produced by the Sacramento Area Council of Governments (SACOG)[1]. The SACOG information included area population, housing and jobs forecasts disaggregated into the Davis, Woodland and unincorporated Yolo county areas. The SACOG economic and demographic forecasts were developed at the parcel level for SACOG's 2020 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS). The forecasted data was last updated in May 2021. The forecast of jobs growth from SACOG's 2016 MTP/SCS report was retained for this forecast based on validation with other sources of data.[2]

The table below shows the population, housing and jobs forecast for the VCEA service territory.

Table 2. Growth Rates for VCEA Service Area (SACOG)

Forecast Factor	Annual Growth Rate, %
Population	0.72%
Housing	0.8%
Jobs	1.2%

The starting point for the customer forecast was based on the number of VCEA customers from the PG&E 4013 report as of January 15, 2022. This report listed both the VCEA and non-VCEA (PGE bundled service or direct access) customers in the VCEA service territory. For VCEA customers, the growth rates were applied to the January 2022 customer count to produce the customer forecast from 2022 to 2035.

The updated household population annual growth rate of 0.88 percent from SACOG was used to forecast the number of customers for the residential, streetlights and traffic signal rate classes. The annual jobs growth rate of 1.2 percent from SACOG was used to forecast the number of customers for the small, medium, and E19S customer classes. The jobs growth rate was adjusted downward for forecast year 2022 to reflect COVID and economic related uncertainty.

[1] For additional information, see SACOG 2020 MTP/SCS Modeling Projections for 2016 and 2040, https://www.sacog.org/post/sacog-2020-mtpscs-modeling-projections-2016-and-2040
[2] For additional information, see SACOG Data Library, City and County Profiles, Updated May 2018, https://www.sacog.org/data-library

The customer counts in the E19P, E20S, E20P, and agriculture rate classes was kept constant at their 2021 levels due to lack of information and uncertainty regarding their growth over the forecast period.

Customer counts were adjusted monthly to produce a monthly forecast of customer counts over the forecast horizon.

5. Apply Rate Class-Specific Customer Load Profiles to Customer Forecasts

The modeled/normalized per customer rate class-specific load profiles were applied to the rate class-specific customer forecasts to develop the hourly retail load forecast by rate class and calibrated to the settlement data.

Depending on the individual rate classes, assumptions of COVID-19 during certain periods in 2020-2021 are included in the regression models to account for the load impact triggered by altered customer behaviors\usage due to COVID-19.

For the non-NEM customers, Residential, Small, Small TOU, Medium, and E19S rate classes have COVID-19 assumptions during periods in 2020-2021 where the comparison of before and after COVID-19 periods shows noticeably declined or increased in average customer's load. This comparison is based on a forecast estimation up through 2019 and with the prediction for 2020-2021. These rate classes also include a trend variable for 2021 as the basis for subsequent years' trend in the forecast.

For NEM customers, only the Residential class has specific COVID-19 assumptions during the periods in 2020-2021 to account for any inter-year anomalies not accounted for in the annual trend variables. NEM customers have the added challenge of PV and other load modifiers such as customer migration and TOU shifts that make it difficult to identify any specific COVID-19 patterns. Most likely, the application of calendar effects along with year specific binary explanatory variables in the regression equation already capture the load impacts of COVID-19. Therefore, finding further controls may not be necessary or feasible.

6. Apply Residential TOU Adjustment

Existing Residential customers, not already on a Time-of-Use (TOU) rate, will be moved to the Res TOU rate class starting in February 2022. Most customers will transition in May with NEM customers transitioning as their True-Up bills occur over the course of the year. Low-income (CARE) customers will not need to transition and may remain in the Residential rate class. Based on a review of CARE and non-CARE customer counts and usage, the following assumptions were made for the load forecast:

- 95% of CARE customers will remain in their current (non-TOU) residential rate
- 24.3% of the current (non-TOU) residential rate customers will remain in that rate class

- 26.2% of the current (non-TOU) residential rate load will remain in that rate class (the average CARE customer uses more energy than the average non-CARE customer)

Based on a PG&E study, the following shift in load was assumed. This shift was only applied to those customers moving from the non-TOU residential rate class to the TOU residential rate class starting in 2022. The load shift only applies to summer (June-September) and the only holidays are Independence Day and Labor Day.

Table 3. Residential TOU Load Shift

time	HE	Weekday	Weekend/Holiday
mid-1am	1	0.0%	0.0%
1am-2am	2	0.0%	0.0%
2am-3am	3	0.0%	0.0%
3am-4am	4	0.0%	0.0%
4am-5am	5	0.0%	0.0%
5am-6am	6	0.0%	0.0%
6am-7am	7	0.0%	0.0%
7am-8am	8	1.0%	1.5%
8am-9am	9	3.0%	2.5%
9am-10am	10	4.5%	3.5%
10am-11am	11	5.0%	3.0%
11am-noon	12	4.5%	3.0%
noon-1pm	13	2.5%	1.0%
1pm-2pm	14	0.0%	0.0%
2pm-3pm	15	0.0%	0.0%
3pm-4pm	16	0.0%	0.0%
4pm-5pm	17	-4.5%	-3.5%
5pm-6pm	18	-5.5%	-4.0%
6pm-7pm	19	-5.5%	-4.5%
7pm-8pm	20	-5.5%	-4.0%
8pm-9pm	21	-4.5%	-3.5%
9pm-10pm	22	0.0%	0.0%
10pm-11pm	23	0.0%	0.0%
11pm-mid	24	0.0%	0.0%

7. Make Additional Adjustments for Net Metered Solar Installations, Plug-In Electric Vehicle Charging Loads, 2022 Building Standards Update, and Building Electrification

Growth in four known load/usage modifiers were separately modeled in this load forecast: 1) Net energy metered solar installations in residences, 2) Plug-in electric

vehicle adoptions and the charging load impacts, 3) 2022 Building Standards Update, and 4) Building Electrification. Each is described in detail in sections below.

8. Apply Distribution Losses

Up to this point in the process, all loads forecasted are retail loads as measured at the customer meters. Monthly distribution loss factors were applied to the hourly loads to develop a "wholesale" load, excluding transmission losses.

PG&E provides historical hourly distribution loss factors for primary and secondary voltage service customers. Hourly loss factor data for 2019 – 2021 were pulled and averaged to create monthly factors by service level voltage. The percentage of VCEA load forecast to be served for secondary and primary service level voltages was then applied to the factors to develop a composite monthly factor. The factors are shown in Table 4 below.

Table 4. PG&E Distribution Loss Factors

Month	Primary Voltage DLF	Secondary Voltage DLF	Weighted Composite Distribution Line Loss
% on voltage level	5%	95%	100%
1	1.018205884	1.067141481	6.463%
2	1.017887535	1.066641052	6.414%
3	1.01744391	1.066023999	6.353%
4	1.017361881	1.065924552	6.344%
5	1.018109293	1.067167531	6.465%
6	1.020164877	1.071019494	6.841%
7	1.021155835	1.072921373	7.027%
8	1.021724374	1.074154118	7.147%
9	1.020330491	1.071243914	6.864%
10	1.018584897	1.06793265	6.540%
11	1.017872453	1.066604098	6.411%
12	1.018477313	1.067594042	6.508%
Average Annual	1.0189432285	1.0686973587	6.615%

The weighted composite monthly distribution line losses were then added to the hourly retail load forecasts to obtain hourly wholesale loads.

Additional Mass Enrollments

No new mass enrollments are expected.

Customer Migration/Opt-Outs

For the VCEA forecast, opt-out rates are implicitly assumed to remain at the current opt-out percentages, by rate class. No explicit opt-out percentage is applied to customer growth assumptions because customer growth for the VCEA forecast is applied to the base of existing VCEA customers (that excludes customers who have opted out).

New Net Energy Metered Distributed Generation Adoption

VCEA's service area has a high adoption rate of net energy metered (NEM) solar installations. From January 2019 to January 2020, 2,794 residential customers in VCEA's service area installed net energy metered distributed generation at existing service locations. We extrapolated that growth into the future and assumed that one-half of new all VCEA customers would install net energy metered solar for each month of the forecast horizon. To simplify the modelling, it was assumed that these installations would mostly be in residences including the TOU participants.

The California Energy Commission (CEC) updated the building energy code in late 2021. This update sets new requirements for PV, water heating, space heating, and other electrification technologies. In addition to residential new construction, the update to the building energy code will also target new commercial buildings such as grocery stores, offices, retail stores, schools, and warehouses. The standard will go into effect in 2023. To account for this update to the building energy code, the North American Industrial Classification System (NAICS) code assigned to VCEA customers was used to identify customer segments impacted by this standard for the following (Non-NEM) rate classes: Small, Small TOU, Medium, and E19S. Since the customer count for the other commercial classes was kept constant, it was assumed that the updated building energy code would not impact these classes. The NAICS code was used to develop allocation factors which were then applied to the forecasted additions in customer count for these 4 rate classes. Considerably uncertainty exists in how to properly model the impact of this standard given its recent passage and so a compliance rate of 80% with the building energy code was assumed to be in effect over the forecast period. This assumption will be refined in the future as more data becomes available.

The number of NEM customers are forecasted separately by month. Current and future NEM customers spread among all customer classes except traffic control and street lighting. A separate regression analysis is conducted for each NEM class using historical metered data from 2016 to 2021. The analysis uses an estimated hourly PV generation in the regression equation to improve the accuracy of the estimation and forecast. The resulting forecast of each NEM subclass is then combined with the forecast of the corresponding non-NEM customer subclass to produce the complete

forecast by class. For example, the forecast of Residential (non-NEM) plus the forecast of Residential NEM customers make the total Residential class forecast.

Residential Plug-In Electric Vehicle Charging Loads

Adoption of electric vehicles (EVs) is increasing. Over time, we expect the vehicle charging loads to be significant. The California Air Resources Board, in its 2017 Climate Change Scoping Plan[3] identified a statewide target of needing 5 Million electric vehicles on the road in order to meet 2030 carbon emission reduction goals. VCEA contracted with a third-party consultant to develop an electrification forecast which included expected EV stock, estimated annual charging and a load shape. The EV stock was converted to annual additions and only new additions were added to the forecast using the assumption of 8,000 miles per EV with 0.56 kWh per mile. The EV stock forecast only went to 2030 so it was extended using the trend from 2025-2030 as the basis.

Table 5. VCEA Plug-in EV Stock

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Total Stock (#)	2,805	4,233	6,484	9,836	13,284	16,808	20,407	24,081	27,829	31,660	35,569	39,557	43,622	47,765
Additional Stock Annual	892	1,428	2,250	3,352	3,449	3,524	3,599	3,674	3,749	3,831	3,909	3,987	4,065	4,143
Additional Stock Cummulative	892	2,320	4,571	7,923	11,371	14,895	18,494	22,168	25,916	29,747	33,656	37,644	41,709	45,852
Additional MWh	3,997	10,395	20,477	35,493	50,944	66,730	82,853	99,311	116,105	133,268	150,781	168,644	186,856	205,419

To simplify modeling, we assumed all charging would be done in residences with the energy split between the Residential (non-TOU) and Residential TOU classes by the proportion of monthly customers counts in each rate class.

Building Electrification

There is an effort to shift energy usage from gas to electric to reduce carbon impacts. VCEA contracted with a third-party consultant to develop an electrification forecast which included expected stock of water heaters (WH) and space heaters (SH), and an hourly load shape by single-family dwellings (SFD), multi-family dwellings (MFD), small and mid-size enterprises (SME), and commercial and industrial (C&I) customers through 2030. Similar to the EV modeling above, only stock added after 2021 is added to the forecast because existing stock is included in the base forecast.

The electrification forecast was originally only through 2030. We extended the forecast past 2030 by calculating the energy per unit of stock for each category and trending the annual addition of stock using 2022-2030 as the basis. For the shape, we used similar years with 2023 as the shape for 2031 and 2024 as the shape for 2032, etc.

[3] *California's 2017 Climate Change Scoping Plan, The Strategy for Achieving California's 2030 Greenhouse Gas Target*, California Air Resources Board, November 2017, https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

The SFD and MFD were allocated to the Residential (non-TOU) and Residential TOU classes with the energy split by the proportion of monthly customers counts in each rate class (same as the EV charging). The SME electrification was split 40% to Small Commercial, 10% to Small TOU Commercial, and 50% to Medium Commercial based on energy sales. The C&I electrification was split 60% to E19S, 10% to E19P, 10% to E20S, and 20% to E20P based on energy sales.

Table 6. Building Electrification Impacts

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
SFD - WH														
Total Stock (#)	9,995	12,403	14,710	16,924	19,052	21,101	23,078	24,987	26,836	28,571	30,222	31,790	33,275	34,677
Additional Stock Annual	2,517	2,408	2,307	2,214	2,128	2,049	1,977	1,909	1,849	1,735	1,651	1,568	1,485	1,402
Additional Stock Cummulative	2,517	4,925	7,232	9,446	11,574	13,623	15,600	17,509	19,358	21,093	22,744	24,312	25,797	27,199
Additional MWh	3,128	6,121	8,988	11,739	14,384	16,931	19,387	21,761	24,058	26,214	28,266	30,216	32,061	33,803
SFD - SH														
Total Stock (#)	12,412	14,658	16,815	18,888	20,886	22,812	24,675	26,478	28,228	29,876	31,449	32,948	34,374	35,725
Additional Stock Annual	2,345	2,246	2,157	2,073	1,998	1,926	1,863	1,803	1,750	1,648	1,573	1,499	1,425	1,351
Additional Stock Cummulative	2,345	4,591	6,748	8,821	10,819	12,745	14,608	16,411	18,161	19,809	21,382	22,881	24,307	25,658
Additional MWh	4,378	8,572	12,600	16,471	20,201	23,798	27,275	30,642	33,909	36,986	39,924	42,724	45,385	47,908
MFD - WH														
Total Stock (#)	9,140	9,892	10,620	11,326	12,013	12,681	13,334	13,972	14,596	15,193	15,771	16,330	16,870	17,391
Additional Stock Annual	778	752	728	706	687	668	653	638	624	597	578	559	540	521
Additional Stock Cummulative	778	1,530	2,258	2,964	3,651	4,319	4,972	5,610	6,234	6,831	7,409	7,968	8,508	9,029
Additional MWh	149	294	433	569	701	829	955	1,077	1,197	1,312	1,422	1,530	1,633	1,733
MFD - SH														
Total Stock (#)	9,818	10,525	11,211	11,878	12,528	13,162	13,782	14,390	14,987	15,560	16,116	16,656	17,179	17,686
Additional Stock Annual	729	707	686	667	650	634	620	608	597	573	556	540	523	507
Additional Stock Cummulative	729	1,436	2,122	2,789	3,439	4,073	4,693	5,301	5,898	6,471	7,027	7,567	8,090	8,597
Additional MWh	140	276	407	535	660	782	901	1,018	1,132	1,242	1,349	1,453	1,553	1,651
SME - WH														
Total Stock (#)	4,022	4,455	4,860	5,240	5,596	5,930	6,243	6,537	6,812	7,057	7,278	7,477	7,652	7,803
Additional Stock Annual	463	433	405	380	356	334	313	294	275	245	222	198	175	152
Additional Stock Cummulative	463	896	1,301	1,681	2,037	2,371	2,684	2,978	3,253	3,498	3,719	3,918	4,093	4,244
Additional MWh	56	107	156	202	244	284	322	357	390	420	446	470	491	509
SME - SH														
Total Stock (#)	3,139	3,337	3,524	3,700	3,865	4,021	4,168	4,307	4,438	4,556	4,664	4,762	4,850	4,929
Additional Stock Annual	211	198	187	176	165	156	147	139	131	118	108	98	88	78
Additional Stock Cummulative	211	409	596	772	937	1,093	1,240	1,379	1,510	1,628	1,736	1,834	1,922	2,001
Additional MWh	2,665	5,167	7,529	9,751	11,836	13,807	15,664	17,418	19,073	20,565	21,930	23,169	24,283	25,271
C&I - WH														
Total Stock (#)	8,866	9,285	9,676	10,041	10,382	10,700	10,998	11,275	11,535	11,764	11,969	12,151	12,309	12,444
Additional Stock Annual	448	419	391	365	341	318	298	277	260	229	205	182	158	135
Additional Stock Cummulative	448	867	1,258	1,623	1,964	2,282	2,580	2,857	3,117	3,346	3,551	3,733	3,891	4,026
Additional MWh	231	447	649	837	1,013	1,177	1,330	1,473	1,607	1,725	1,831	1,925	2,007	2,076
C&I - SH														
Total Stock (#)	991	1,051	1,107	1,160	1,210	1,256	1,300	1,340	1,379	1,413	1,444	1,472	1,497	1,519
Additional Stock Annual	64	60	56	53	50	46	44	40	39	34	31	28	25	22
Additional Stock Cummulative	64	124	180	233	283	329	373	413	452	486	517	545	570	592
Additional MWh	861	1,668	2,423	3,135	3,806	4,426	5,016	5,558	6,080	6,543	6,961	7,337	7,670	7,960

Load Loss to Direct Access

Regarding CPUC Decisions 19-05-043 and 19-08-004, VCEA had a load loss starting in 2021. This is reflected in the actual data and customer counts, and no additional loss is expected.

Energy Efficiency and Demand-Side Management

In this IEPR load forecast, we did not attempt to model the impacts of future energy efficiency and demand-side management programs, as those programs are currently managed by PG&E. VCEA does not have enough information on those programs or their estimated impacts to properly factor them into this 2022 IEPR forecast.

Climate Change and Electrification

Although not explicitly labeled as “climate change” in this VCEA 2022 IEPR forecast, the forecast incorporates a heat wave in July during the weekdays to create a peak

simulation. In addition, the forecast uses 20 years of weather history, as opposed to a more traditional 30 years, capturing the more recently observed climate.

Apart from residential vehicle electrification and building electrification, additional possible future impacts of other electrification, were not modelled.