

VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 11

To: Community Advisory Committee

From: Mitch Sears, Interim General Manager
Rebecca Boyles, Director of Customer Care and Marketing
Sierra Huffman, Program and Community Engagement Analyst

Subject: Heat Pump Pilot Program

Date: February 24, 2022

RECOMMENDATION

Review and recommend approval for Phase 1 of Valley Clean Energy’s Heat Pump Pilot Program to the Board of Directors.

BACKGROUND

Consistent with the Board-approved 3-Year Programs Plan adopted on June 10, 2021, staff began developing a Heat Pump Pilot Program in mid-2021. The pilot is being developed within the context of a growing trend in home electrification programs available throughout the state. The shift in focus from traditional HVAC systems to heat pumps, alongside the availability of generous rebates for customers, motivated VCE to explore the most appropriate role its programs could fulfill. VCE is designing a program that complements existing rebates and incentives. From initial research and engagement, a key unfulfilled need is providing Marketing, Education and Outreach (ME+O) to contractors, customers, and other key stakeholders such as realtors and HVAC manufacturers. Staff presented Phase 1 of the Heat Pump Pilot Program to the Community Advisory Committee (CAC) on January 20, 2022, and received positive feedback.

ANALYSIS

Staff believes that the emphasis on ME+O for the initial phase of this pilot is the best way to provide value while learning more about the intricacies of the heat pump landscape. After the conclusion of the initial ME+O phase, staff (with the assistance of the Programs Task Group, or PTG) will determine whether VCE can add value by designing and launching a complementary heat pump rebate pilot phase.

VCE’s heat pump pilot will focus on Dual Fuel Heat Pumps (DFHP), as they are less expensive to install, highly efficient, and lead to the near elimination of greenhouse gas emissions from furnaces. A dual-fuel system is a type of heating, ventilation and air conditioning (HVAC) system that can switch between an electric heat pump and a gas furnace to maximize comfort and energy efficiency (i.e. the gas furnace is actually more efficient at space heating than the electric heat pump in very low temperatures).

Staff found that although large rebates are available to customers for the installation of heat pumps, few contractors based in Yolo County are currently certified to provide them. VCE staff connected with Franklin Energy, the implementers of the Comfortable Home Rebates (CHR) and Energy Solutions, the managers of TECH Clean California (TECH), to facilitate working together to engage local contractors. This pilot may provide support to Yolo County-based contractors in becoming certified to provide rebates through both CHR and TECH. Staff may provide contractors with program application assistance, as well as provide program clarity by developing web materials, and hosting webinars/in-person meetings.

Staff is planning to engage customers by hosting webinars/in-person workshops and connecting with customers through collateral such as web materials, social media, and printed information. Webinars/in-person workshops (similar to CoolDavis' "Make a Plan for a Clean Energy Home" workshop in which VCE participated in fall 2021) give customers the opportunity to connect with contractors and ask them questions, as well as cover topics on owning and operating a heat pump. Collateral would explain the benefits of heat pumps such as lowering gas bills, reducing greenhouse gas emissions, and improved indoor air quality. Subjects such as duct installation, building envelope, and heat pump best practices could be addressed to help minimize or eliminate increases in a customer's electricity bills associated with electrification and boost customer satisfaction.

FINANCIAL IMPACT

Staff projects that this pilot program phase (Phase 1) could be efficiently run with a budget of no more than \$5,000. The funds would primarily go toward collateral development and printing, and potentially for consultant support to help with paperwork and application assistance.

CONCLUSION

The Programs Task Group recommended that the CAC recommend approval of Phase 1 of this pilot to the Board of Directors and return to the CAC and Board after the conclusion of Phase 1 with the program design for Phase 2. Phase 1 of the pilot will run until initial \$5,000 funding is exhausted, or March 2023.

Attachment

1. VCE's Heat Pump Pilot Program Design/Implementation Form



Program Preliminary Design/Implementation Form

Program Concept: Heat Pump Pilot

Date: 02/24/22

Staff Resources and Support:

Assigned Program Managers: Rebecca Boyles, Sierra Huffman
Programs Task Group members: Marsha Baird, David Springer
Consultant name (if applicable): Franklin Energy and Energy Solutions

Scope:

Provide education and awareness of the available rebates through Comfortable Homes and TECH Clean California, while responding to community needs and identifying target strategies for potential rebates administered by VCE.

This is phase 1 of a multi-phase program, designed to lay the informational foundation for future building electrification efforts. Phase 1 will focus on marketing, outreach, and education (ME+O) for both contractors and customers. Secondary outreach will engage stakeholders such as city officials, local realtors, HVAC manufactures, county officials, mission-aligned organizations, and potential project partners.

Customer-facing ME+O will focus on getting customers up-to-date information on available rebates for replacing failing or failed air conditioners with heat pumps while retaining furnaces. These systems are referred to as dual fuel heat pumps (DFHP). A secondary focus will be on heat pumps for water heating. Supplementary rebates will be included in ME+O efforts, especially those that support customer comfort and mitigate potential bill increases due to electrification of heating, as these are potential barriers for customers.

Contractor-facing ME+O is geared toward increasing local contractor participation in both Comfortable Homes and TECH rebate programs. The program will provide clarity on program eligibility, application processes, and required materials, as well as potentially assisting contractors with customer applications.

In March 2023, program success will be evaluated using the proposed goals and metrics. Program success, as well as feedback from CAC, the Board, community members, and contractors will be used to begin the design of phase 2.

Timing:

(Approximate; pending approval) Phase 1 would begin in March 2022. Phase 1 will continue until program funding is exhausted, or the end of phase 1 in March 2023.



Program Design Criteria Evaluation:

	Criteria 1	Criteria 2	Criteria 3
Criteria Type	<u>Availability of Funds</u>	<u>Staff Time</u>	<u>Strategic Plan Alignment</u>
Reasoning for Program Score	Scored high. \$750 - \$850 PG&E Comfortable Home Program rebates are currently available. Along with \$2,250 - \$3,950 TECH Clean California rebates.	Scored high. Program can be initiated by referring applicants to Franklin Energy, who manages the Comfortable Home program for PG&E, or Energy Solutions who manages the TECH Clean California rebates program.	Scored medium to high on strategic plan alignment: <u>Reduces GHG Emissions</u> Near elimination of emissions from furnaces in homes that have central heating systems. Based on Title 24 compliance software modeling results, dual fuel heat pumps provide the same amount of emissions reduction as full heat pump replacements. <u>Customer Satisfaction</u> No adverse impact on comfort but may result in slightly higher heating bills for non-NEM customers. NEM customers with excess generation will have lower heating bills. <u>Addresses Environmental Justice</u> Small negative impact on low-income customers due to higher utility costs (amount to be determined). Effects will be mitigated through education on heat pump best practices, as well as home and duct insulation. <u>Regulatory & Legislative Goals Alignment</u> Highly aligned with state GHG reduction and electrification goals. <u>Strategic Partnerships</u> Several local contractors are participating in the rebate programs and more have expressed interest. Collaboration with Franklin Energy and Energy Solutions provides mutual benefits, as well as a marketing and outreach partnership with Cool Davis.

Program Metrics and Goals:

Metrics: Number of educational webinars held and the number of attendees. Number of VCE DFHP page visits and link click-throughs.

Goals: A total of 5 webinars in Phase 1, including contractor educational webinars/in-person meetings, customer educational webinars, and “ask a contractor” webinars with both customers and contractors. Additional events may be held with program partner Cool Davis or other interested stakeholders.



Proposed Programs Budget:

Resource	Source	Proposed Budget	\$ Remaining in Program Funds
Rebates	Programs Budget	NA	
Consultants (if required)	Programs Budget	\$5,000	
	Total	\$5,000	\$225,000

Budget Details:

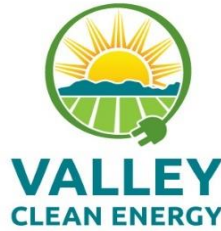
A total not-to-exceed budget of \$5,000 for phase 1, including webinar/meeting expenses, and (potentially) consultant support to assist with helping contractors with participation in rebate programs.

Organizational Goals Addressed:

Alignment with VCE’s Strategic Plan? Yes

- **Goal 1:** Maintain and grow a strong financial foundation and manage costs to achieve organizational health.
 - 1.1 **Objective:** *Maintain consistently healthy case reserves to fund VCE’s mission, vision, and goals:*
 - Replacing furnace gas use with heat pump electric use will increase revenues, particularly from NEM customers.

- **Goal 3.** Prioritize VCE’s community benefits and increase customer satisfaction and retention.
 - 3.2 **Objective:** *Develop programs and initiatives to better support community goals, including supporting member agency achievement of energy-sector emissions reduction targets.*
 - The primary objective of a DFHP program is to reduce emissions resulting from combustion of natural gas for residential heating
 - 3.5 **Objective:** *Develop customer programs and initiatives that prioritize decarbonization, community resiliency and customer savings.*
 - The proposed program prioritizes decarbonization. The impact on customer savings will be determined through the pilot program, as well as supported through education and outreach



Marketing, Education and Outreach (ME+O) Strategy:

Rebates and their associated technology will be marketed on VCE's social media accounts and website, as well as cross-promotion with aligned organizations. Additionally, there is the capability to initiate mail and/or email campaigns. Education will be achieved through website material expansion and webinars. Contractor webinars will be jointly hosted by project partners, Franklin Energy and Energy Solutions. Contractors will be engaged for assistance with the "ask a contractor" customer webinars. There is an opportunity to work with Cool Davis in ME+O co-hosting webinars and collecting customer stories to demystify heat pumps and home electrification.

Board, CAC, PTG Input:

Next Steps:

1. Schedule joint contractor webinars with Franklin Energy and Energy Solutions
2. Continue to engage local contractors and stakeholders
3. Add educational materials, as well as outreach and marketing materials to VCE's website
4. Schedule customer webinars
5. Begin engaging customers through social media and mailer campaigns
6. Full phase 1 program implementation; evaluate effectiveness and plan phase 2 in March 2023



PG&E COMFORTABLE HOME & TECH REBATES

Heat Pump Space Conditioning

HVAC (Heating, Ventilation, and Air Conditioning) systems do more than just heat or cool a space. When properly installed and working, HVAC systems draw air through filters to remove dust, dirt, and allergens; heat or cool the air; remove excess humidity from the air; and direct that conditioned air into your home. The comfort of your home depends on your HVAC.

PG&E Fuels required: electric **and** gas

Per Household: 2

15 SEER AC/9.0 HSPF Heating

Comfortable Home: \$750

TECH Program: \$2,250

Total Rebate: \$3,000

16 SEER AC/9.0 HSPF Heating

Comfortable Home: \$850

TECH Program: \$3,050

Total rebate: \$3,900

18 SEER AC/9.7 HSPF Heating

Comfortable Home: \$850

TECH Program: \$3,950

Total rebate: \$4,800



Heat Pump Water Heating

Heat Pump Water Heaters are FOUR TIMES more efficient than the best gas burning units and COST LESS TO RUN. These units use the exact same technology as your refrigerator and are just as reliable. If you have solar now, or will later, a Heat Pump Water Heater is the only logical choice.

PG&E Fuels required: see below

Per Household: 2

Standard: 3.24 EF / 3.09 UEF or better

PG&E Gas switching to PG&E Electric Heat Pump Water Heater

Comfortable Home: \$750

TECH Program: \$3,100

Total rebate: \$3,850

PG&E Electric to PG&E Electric Heat Pump Water Heater

Comfortable Home: \$750

TECH Program: \$1,000

Total rebate: \$1,750

