VALLEY CLEAN ENERGY ALLIANCE

Staff Report – Item 18

To: Community Advisory Committee

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

Subject: Heat Pump Pilot Program

Date: March 10, 2022

RECOMMENDATION
Approve Phase 1 of Valley Clean Energy's Heat Pump Pilot Program.

BACKGROUND
Mid-2021, VCE began developing a Heat Pump Pilot Program 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. Initial research and engagement identified 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.

CAC Recommendation
Staff presented Phase 1 of the Heat Pump Pilot Program to the Community Advisory Committee (CAC) on February 24, 2022 and received constructive feedback. The CAC recommends that the Board approve Phase 1 of the pilot program if the program emphasizes fully electric heat pumps and dual fuel heat pumps equally.

ANALYSIS
Staff believes that focusing 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 CAC 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 cover a wide range of heat pump technologies, including heat pumps for space conditioning and water heating. A focus will be on encouraging the replacement of old, outdated, and inefficient heating, ventilation, and cooling (HVAC) systems with heat

pumps, including the ability of these systems to respond to price signaling that VCE may send in the future. The program will also market the rebates that are available for home and duct insulation, as these are important factors to consider when making any HVAC improvements.

Existing State Rebate Programs

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 the two current firms that were selected by the State to implement publicly funded energy efficiency rebate programs: (1) Franklin Energy, the implementers of the Comfortable Home Rebates (CHR) and (2) 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. Marketing 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 minimize increases in a customer's electricity bills associated with installation of heat pumps and boost customer satisfaction.

FINANCIAL IMPACT

Staff projects that this pilot program phase (Phase 1) could be efficiently run with a budget of $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

Staff and the CAC recommend that the Board approve of Phase 1 of this pilot 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: 03/10/22

Staff Resources and Support:

Assigned Program Managers: Rebecca Boyles, Sierra Huffman
Programs Task Group Members: Marsha Baird, David Springer
Consultant name (if applicable):

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, failed, inefficient, or outdated heating, ventilation, and air conditioning (HVAC) systems with heat pumps (HP). This approach targets essential and immediate home improvements that can lead to more comprehensive electrification. 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 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. This first phase will continue until the budget is exhausted or the end of phase 1 in March 2023.

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. Currently available rebates include $750 -$850 from PG&E's Comfortable Home Program available which can be stacked with $2,250 - $3,950 from TECH Clean California.	Scored high. Program can be initiated by referring applicants to Franklin Energy, who manages the Comfortable Home program for PG&E and Energy Solutions who manages the TECH Clean California rebates program.	Scored medium to high on strategic plan alignment: Reduces GHG Emissions Dependent upon the chosen heat pump technology, there can be near or total elimination of emissions from furnaces in homes that have central heating systems. Title 24 compliance software modeling results showed that dual fuel heat pumps can provide the same amount of emissions reduction as full heat pump replacements when used properly. Customer Satisfaction 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. Addresses Environmental Justice 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. Regulatory & Legislative Goals Alignment Highly aligned with state GHG reduction and electrification goals. Strategic Partnerships 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 heat pump webpage 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	

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 cash 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 HP 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:

HVAC replacement and improvement opportunities, as well as their associated rebates 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 on cohosting webinars and collecting customer stories to demystify heat pumps and home electrification.

Board, CAC, PTG Input:

The Programs Task Group (PTG) was influential in the design and direction of the proposed Heat Pump Pilot. A heat pump rebate program was originally suggested by the PTG, with a focus on promoting the most affordable option, a dual fuel heat pump. As more money became available with the release of TECH's rebate program, it became apparent the greatest need was not in providing rebates, but in marketing, outreach, and education.

The CAC was introduced to the Heat Pump Pilot on January 20th, as well as the Board of Supervisors on January 27th. The pilot went to the CAC for review and approval on February 24th. The CAC recommended that the Board approve Phase 1 of the pilot program if the program emphasizes fully electric heat pumps and dual fuel heat pumps equally. The CAC's feedback has been incorporated into the pilot program and VCE will look to educate and promote heat pump systems as a whole.

Next Steps:

1. Schedule joint contactor webinars with Franklin Energy and Energy Solutions
2. Begin engaging 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 program implementation

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

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15 SEER AC/9.0 HSPF Heating
Comfortable Home: $750
TECH Program: $2,250
Total Rebate: $3,000

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16 SEER AC/9.0 HSPF Heating
Comfortable Home: $850
TECH Program: $3,050
Total rebate: $3,900

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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 that 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