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SMUD Comments Re Request for Information “ Equitable Building Decarbonization Program

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Docket No. 22-DECARB-03

Additional submitted attachment is included below.

**STATE OF CALIFORNIA
BEFORE THE CALIFORNIA ENERGY COMMISSION**

In the matter of:)	Docket No. 22-DECARB-03
)	
Equitable Building Decarbonization Program)	SMUD Comments Re:
)	Request for Information – Equitable Building Decarbonization Program
)	
)	January 20, 2023
)	

**Comments of SACRAMENTO MUNICIPAL UTILITY DISTRICT on
Request for Information – Equitable Building Decarbonization Program**

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide input and comments to the California Energy Commission (CEC) to inform the development of the Equitable Building Decarbonization Program.

SMUD strongly supports the state’s efforts to reduce greenhouse gas (GHG) emissions by promoting building electrification and increasing the development of renewable resources. In July 2020, our Board of Directors declared a climate emergency and adopted a resolution calling for SMUD to take significant and consequential actions to become carbon neutral (net zero carbon) by 2030. In April 2021, SMUD’s Board adopted our 2030 Zero Carbon Plan (SMUD’s Plan). The goal is to reach zero carbon emissions in our power supply by 2030 while maintaining reliability, safety, and affordable rates, doing it all with an eye toward equity for underserved communities.

SMUD is also experienced in offering direct install programs for low-income customers. Recently, we launched a pilot program for neighborhood electrification in Gardenland, one of the oldest neighborhoods in Sacramento. SMUD is also receiving a \$3M federal appropriation for fiscal year 2023 to demonstrate neighborhood electrification in the Meadowview neighborhood, providing clean technology for up to 300 single-family homes and aiming for 100% electrification where feasible.

Excerpted below are select questions from the “Discussion and Input Request” section of the Request for Information (RFI) for the Equitable Building Decarbonization Program.¹ SMUD is pleased to offer the following initial feedback and recommendations on the draft program framework, implementation plans, and key topics that should be considered in program scoping. SMUD looks forward to continuing to work with the CEC to provide feedback on program implementation.

¹ CEC Request for Information – Equitable Building Decarbonization Program (<https://efiling.energy.ca.gov/GetDocument.aspx?tn=248009&DocumentContentId=82299>). December 9, 2022.

Discussion and Input Provided

Direct Install Program Criteria

- 1) *AB 209 directs CEC to establish a direct install program that shall be “at minimal or no cost for low to moderate income residents” and defines a direct install program as an “energy efficiency, decarbonization, or load flexible solution provided directly to a consumer at minimal or no cost through a third-party implementer.” “Low-to-moderate income” is defined in section 50093 of the Health and Safety Code as persons and families whose income does not exceed 120 percent of area median income, adjusted for family size and amended from time to time by the U.S. Department of Housing and Urban Development. The CEC is considering segmenting the state into different regions for the purposes of this program and requesting proposals from program implementers to implement the program across these regions.*

The CEC is preliminarily planning to allocate 66 percent of total budget funds – up to approximately \$610 million – to the direct install program. The program will be able to cover only a small fraction of the millions of potentially eligible households. Program criteria used to prioritize and score proposals will need to be both flexible enough to meet the needs of the different regions of the state and sufficiently uniform to establish appropriate baselines and metrics for implementation.

- a) *What criteria should be weighed more heavily or prioritized when scoring program proposals?*

SMUD recommends that the following criteria be prioritized when scoring program proposals: 1) innovative program concepts that meet customers where they are and can leverage funds to ensure customers' needs can be fully met, 2) previous program administrator (PA) experience with low-income households, 3) local government and community-based organization (CBO) partnerships, 4) program proposals that demonstrate cultural competency (e.g., households with English as a second language), 5) use of data analytics to identify and prioritize approach for enrolling customers.

Innovative program concepts that meet customers where they are, rather than relying on one-size-fits-all efforts, are important to accommodate the greatest array of customers and their unique circumstances. An equitable program should serve all people based on need rather than address a subset of the population in a special way. In addition, program concepts that leverage other available funds can help both maximize the number of customers reached and address other needs (e.g., weatherization).

Proposals that prioritize decarbonization and equity, and that are administered by entities well-versed in serving low-income customers, should also receive greater weight. A significant emphasis should be placed on cultural competency because outreach efforts will need to overcome cultural, language, and trust barriers.

Using data analytics to identify and prioritize approach, rather than employing just one layer for geographic targeting to identify neighborhoods in the greatest need, is necessary to account for other factors that can have a devastating effect (e.g., medical inequities).

Other considerations when scoring program proposals should include:

- Ease of program participation and enrollment (e.g., is it easy for all low-to-moderate income customers to learn about the program, apply, and participate?)
- On-bill savings opportunities
- Overall process and timeline (e.g., will customers be without power or certain appliances for a long period of time during the construction process?)
- Flexibility or the ability to coordinate timing of installations around the customer's schedule (e.g., will installs occur when the customer is home or at work?)
- Ability to identify potential customers based on cost-effectiveness data and existing market conditions.

These considerations will help to reduce friction and challenges associated with program participation and ensure that program outcomes are more likely to be successful.

- b) *The CEC plans to require the use of meter data and analytical-based tools to prioritize and target participant households and measures through the lens of greenhouse gas (GHG) emissions, energy usage, and bill impacts. Should the CEC require all proposals to include independent, data-driven targeting of participants and eligible measures, or should the CEC itself contract to provide a single, program-wide tool to target participants and eligible measures that program administrators would be required to use?*

SMUD recommends that the CEC provide a single, statewide tool for PAs to help target participants and eligible measures based on publicly available data. PAs could use the tool, in conjunction with other data that may be accessible to the individual PA, to most effectively target participants and eligible measures.

For example, SMUD currently considers multiple data points to proactively identify prospective customers for our direct install program. These include:

- The age of home
- Customer energy burden (considers the impact of the bill in comparison to income)
- Customer eligibility for energy assistance program
- Equipment performance and cooling efficiency
- Renter versus homeowner

- Neighborhood with greatest needs based on SMUD's Sustainable Communities map
- Adequate distribution system capacity to support electrification.

As a supporting effort, SMUD believes there would be value for consumers and contractors if the CEC further expanded or developed a complementary tool to provide consumers with information on how to cost effectively reduce their carbon footprint. For example, the tool could be pre-populated with publicly available information and prompt the user to update this information and to add new information, such as panel size, to help determine what measures may be effective and whether a panel upgrade is necessary based on electric consumption, gas use, and future electrification projects. Contractors could use such a tool to support their sales processes, assist homeowners to compare quotes, demonstrate potential on-bill impacts, and track upgrades to show efficacy of the measures and the program. PAs can use this data to target homes with the largest need and cost benefit and to identify methods to address the more challenging buildings/areas.

In addition to the above, inclusion of the following elements, based on modeling and/or data that is already collected by the CEC, in the expanded or complementary tool may help stakeholders validate models of cost-effectiveness of fuel-switching and consumption of different devices (e.g., heat pump or heat pump water heater performance):

- Aggregations of gas and electric data within different climate zones, with options to sort data by home vintage or home size. Geographic aggregation capabilities may be helpful for jurisdictions inventorying and planning for reduction of GHG emissions for various geographic regions.
- Characterizing building envelope performance and providing opportunity zones for envelope upgrades.

c) *Should low-income and moderate-income households be incentivized at different levels? If so, how should that be approached?*

SMUD recommends that incentives for low- and moderate-income households should be scaled based on need. Low-income participants should receive greater incentives, while moderate-income participants may receive a lesser incentive amount.

Incentives should be structured to reflect that cost and complexity of individual installations vary. Home readiness differs greatly by and within neighborhoods, and other upgrades may be needed to support installations (e.g., roof issues) or to ensure the customer actually realizes the benefits (e.g., weatherization). The housing stock for low-income customer segments is typically in very poor condition and often requires additional upgrades beyond the specific measure.

In addition, to the extent possible, the program should align income-based requirements with Inflation Reduction Act (IRA) Low- or Moderate-Income (LMI) requirements (<80% AMI, 80%-150% AMI). This would more readily facilitate qualifying the Equitable Building Decarbonization Program for future Federal funding.

Additionally, the opportunities to incentivize housing investments that drive on-bill savings for low-income and renter households should also be a priority.

2) *To optimize program funds, CEC may offer preference for proposals that layer incentives or leverage other programs.*

a) *What best practices, program elements, or state actions would facilitate layering or leveraging different program offerings?*

SMUD suggests that the CEC take measures to ensure the program structure does not inadvertently disincentivize referrals to other programs, which may otherwise present a barrier to layering. SMUD suggests the CEC structure the Equitable Building Decarbonization requirements in such a way that the PA gets credit for serving a customer even if that customer is referred to other programs for service, thereby improving the PA's cost effectiveness. This could be accomplished by tracking counts of how many customers the PA actually served and how many were referred elsewhere.

b) *Should layering or leveraging other programs be a requirement for proposals or a prioritization when scoring proposals?*

SMUD recommends that layering or leveraging programs and other funding opportunities should be prioritized when scoring proposals. However, it should not be a requirement for participation in this program so as to qualify the broadest scope of applicants. Moreover, existing or complementary programs and funding sources (e.g., utility in-house programs) should not be negatively impacted if combined with this effort. For example, SMUD has existing partnerships with Community Resource Project Inc. (CRP), Grid Alternatives, and Habitat for Humanity that complement our in-house programs. Leveraging these relationships allows SMUD and our partners to reach more customers and make the most efficient use of our funds.

3) *The inclusion of both low-income and moderate-income households allows flexibility for proposals that want to electrify specific neighborhoods or communities.*

a) *What program elements, geographic targeting, or state actions would facilitate this approach?*

SMUD believes there may be significant benefits to a neighborhood electrification approach – for example, the ability to target communities where needs are

greatest, visibly demonstrating the advantages of electrification by making a large impact over a small area, and economies of scale to reduce cost. SMUD recently launched a pilot to electrify homes in Gardenland, one of the oldest neighborhoods in Sacramento, for customers who otherwise would not be able to afford the installations and may benefit from bill savings from more efficient appliances. SMUD is also receiving a \$3M federal appropriation to demonstrate neighborhood electrification in Meadowview. SMUD will contribute matching funds and the project aims to provide clean energy technology for up to 300 single family homes, aiming for 100% electrification of homes when feasible.

We provide the following initial recommendations:

Program Elements:

- 1) Rather than offering fixed incentive amounts, structure incentives to recognize that cost and complexity of installations may vary. Incentive amounts must be flexible, because home readiness can differ from customer to customer, and other upgrades may be needed to complete installations; and
- 2) Encourage partnerships with CBOs and culturally competent outreach. Overcoming cultural and language barriers will require unique outreach efforts. For example, in addition to having program/educational materials in Spanish, SMUD partners with CBOs and has undertaken door-to-door outreach with CBOs to explain our program benefits.
- 3) Encourage demonstration projects that can prove out the benefits of neighborhood electrification and provide valuable lessons learned.

Geographic Targeting:

- 1) Utilize data analytics and multiple layers for geographic targeting to help identify neighborhoods in the greatest need. Examples of geographic layers could include housing, employment opportunities, and education, among others. Factors like food and medical inequities can have devastating effects on a community. Targeting the poorest areas may be more costly and will require greater coordination with city and county permitting agencies and code enforcement to ensure a smooth installation process and that customers can remain in their homes.

For example, SMUD utilizes a Resource Priorities Map to help identify communities in our service area that need the most help. This interactive map assists SMUD in pinpointing the neighborhoods most likely to be under-resourced or in distress due to lack of community development, income, housing, employment opportunities,

transportation, medical treatment, nutrition, education, and a clean environment.

In addition, geographic targeting based on subdivision construction projects may present opportunities for addressing multiple customers with similar infrastructure. Electrifying homes in entire neighborhoods, built at the same time, will save time and money.

State Actions:

- 1) Consider opportunities to leverage federal funding to support neighborhood electrification.
- 2) Conduct statewide program marketing campaign.
- 3) To the extent possible, assist PAs with identifying which homes are connected to gas lines.
- 4) Stand up complementary programs to incentivize transitioning off gas (e.g., an incentive structure for commercial and multi-family, such as dollars per foot of gas line abandoned, can complement meeting the state's electrification goals).

4) *AB 209 authorizes the CEC to require tenant protections in participating rental properties.*

a) *What tenant protections could be applicable in all regions of the state?*

Multifamily affordable housing protections, or a portion thereof, may serve as a model to protect tenants in participating rental properties. These measures may include the following:

- Simplify the process for tenants to report violations to local jurisdictions
- Partnerships to provide tenants safety options (e.g., back up housing) to discourage retaliation or harassment by property owners
- Consider adding requirements for landlords receiving financial incentives for electrification to ensure tenant protections and/or stabilized rent for a certain time period.

In SMUD's experience, some customers are hesitant to participate in programs because of fear of housing violations getting reported for homes occupied by housing-insecure tenants, which could put their housing in jeopardy if repairs or improvements trigger rent increases that tenants cannot afford. Minimizing such risks will require coordinated partnership with an array of organizations to bring in complementary investment and ensure housing security and comfort with electrification.

b) *Who would be responsible for enforcing the agreements?*

Tenants and/or local cities or counties should have the right to enforce tenant protection measures. PAs should not be required to enforce such agreements.

- c) *What programs should the CEC look to for examples of effective building retrofit and decarbonization programs with tenant protection requirements?*

SMUD's partnership with the City of Sacramento to deploy competitive TECH Quick Start funding for heat pump and electrification of low-income housing is a prime example of an effective building retrofit/decarbonization program. This pilot project is targeting a minimum of 25 low-income homes for heat pumps, with complementary electrification and home rehabilitation improvements. SMUD and the City of Sacramento's approach with TECH Quick Start funding is to leverage the City's home rehabilitation investments to provide housing security and quality of life benefits alongside electrification. These pilots are focused on low-income homeowners, who are also vulnerable to displacement.

Direct Install Third-Party Implementers and Solicitation Scoring

5) *AB 209 defines "third-party implementer" as "non-commission staff under contract to the commission who propose, design, implement or deliver Equitable Building Decarbonization Program activities." Proposals from third-party implementers that include at least one community-based organization and employ workers from local communities shall be prioritized.*

- a) *How should the CEC segment the state for a multiple-implementer solicitation (e.g., by climate assessment regions, climate zone, groupings of air districts, counties, etc.)? Are there other ways to segment the state to provide geographic diversity and advance equity?*

Simplicity is key—any program should be easily accessible and simple to implement. Priority should be given to service districts/regions that can cost-effectively electrify and deliver on-bill savings, particularly for neighborhood or other large scale electrification projects that can drive statewide market development. Partnering with individual utilities can also help the CEC develop a program that is equitable and has maximum impact. If an already successful, proven utility program or demonstration project exists in a region, the CEC should consider using the Equitable Building Decarbonization Program to advance those local programs. For areas where programs do not currently exist, a statewide implemented program could be introduced.

Absent segmentation, a statewide program may be effective, but this would greatly depend on the program proposal and implementation.

- b) *What opportunities for workforce development should be considered, encouraged, or leveraged?*

SMUD recommends including an incentive for third-party implementers to hire a percentage of graduates from workforce development programs targeting under-resourced communities. Direct install third-party implementers are a great

resource to provide on-the-job training. Opportunities for workforce development may include training on installation of heat pump water heaters and other electric appliances.

SMUD is currently working to match up workforce training graduates with third-party implementers that offer paid or subsidized opportunities with firms serving under-resourced communities. Salaries will be paid by the training organization or a third party like SMUD. Workforce training participants not only receive on-the-job training in a whole new skillset, but this training also serves as an extended interview and candidates may be hired by the firms they are working with. SMUD is also exploring other incentive structures such as offering increased designated employer representative incentives for firms working in, and hiring from, under-resourced communities.

- c) *Should maximum incentives – at building, unit, and/or region – be established? If yes, at what level(s)?*

We do not recommend establishing a maximum cap at the outset of the program. However, funding should not exceed the total cost of the installation. Incentives should be flexible because costs can vary in different areas of the state and based on the readiness of individual homes, as noted above.

To the extent the CEC may be concerned about overpaying for installations, SMUD suggests that this could be addressed by tying PA base pay to a cost effectiveness metric. For example, PAs should be able to set maximum incentive levels to improve the program's cost-effectiveness.

6) Preference for participation in the direct install program shall be given “where the building meets one or more of the following criteria: (1) the building is located in an under-resourced community; (2) the building is owned or managed by a California Native American Tribe or a California Tribal organization; (3) the building is owned by a member of a California Native American Tribe.”

- a) *How can the CEC best facilitate awareness for residents and building owners within under-resourced communities to encourage program participation?*

SMUD recommends that the CEC engage with CBOs and local utilities to encourage program participation. The CEC should also prioritize proposals with CBO participation that can drive localized engagement and benefits.

CBOs and other local partnerships can help address trust, language, and cultural barriers. Customers may be reluctant to participate due to their circumstances (e.g., if they have unpermitted additions or are unfamiliar with the technology). Customer distrust, based on either perception or negative experience, could be a barrier to participation in energy efficiency programs for under-served communities.

For example, a common misunderstanding is that demand flexibility programs would lessen customer control while increasing customer bills. Partnering with local utilities and CBOs that have established relationships within the communities they serve, and that understand the needs and challenges of area residents, can help encourage program participation and overcome trust issues.

7) While designing the criteria and solicitations for the regional decarbonization programs, CEC is considering offering an initial phase of the Equitable Building Decarbonization Program to support or expand currently active decarbonization programs with established infrastructure and demand. These programs may be more limited in geographic scope or decarbonization activities than what is expected from the regional programs.

- a) *Should other currently active building decarbonization programs be allowed to compete for funding from the Equitable Building Decarbonization Program?*

SMUD recommends that other active and pilot building decarbonization programs be eligible for funding. Allowing such programs to compete for funds would immediately expand the reach and success of the Equitable Building Decarbonization Program and rapidly develop the market and improve cost-effectiveness for subsequent adopters.

- b) *Should the CEC fund decarbonization programs that have existing infrastructure in an initial phase to allow for the Program to quickly decarbonize homes and provide benefits to residents?*

There are multiple benefits to leveraging existing programs and pilots. As noted above, providing funding for existing decarbonization programs could immediately reach customers. Established, successful, and proven utility programs like SMUD's direct install and low-income programs could be an ideal partner for this initial phase. Additionally, the CEC may opt to distribute funding to existing programs (e.g., Technology and Equipment for Clean Heating program - TECH). Conversely, starting a new program requires new administrative structures that are costly and take time to build.

The CEC should also consider prioritizing areas for investment where complementary policies exist that may help facilitate the success of the programs. We believe there is high value in demonstrating early wins where there is strong local commitment, existing programs, and partnerships. One indicator of local support and readiness for electrification is adopted ordinances or policies, as an indicator of local agency support and readiness. Another indicator could include availability of stackable utility incentives for electrification. This approach could help ensure that lessons from early adopters could be used to inform the statewide program roll-out. In addition, this approach would encourage local agencies and utilities to be proactive in complementary electrification initiatives that support the State's goals, while incentivizing early adopters.

Direct Install Eligible Equipment and Measures

8) *The statutory direction on eligible measures is broad: “Projects eligible to be funded through the direct install program include installation of energy efficient electric appliances, energy efficient measures, demand flexibility measures, wiring and panel upgrades, building infrastructure upgrades, efficient air conditioning systems, ceiling fans, and other measures to protect against extreme heat, where appropriate, and remediation and safety measures to facilitate the installation of new equipment.” The CEC plans to require the use of meter data driven analytical tools to inform what measures should be prioritized based on GHG reduction, energy reduction, and bill impacts.*

a) *What specific equipment and measures should be prioritized?*

A key consideration for this program is helping the customers accomplish bill savings. Consideration in this should be given to changing utility rates, recognizing bill savings from electrification is expected to grow significantly over time. If bill savings are unlikely, then additional measures such as attic insulation may be necessary to ensure that the overall bill for the customer is lower.

SMUD recommends the following equipment be prioritized: heat pump water heating, heat pump space heating, and electric vehicle (EV) circuit. We also recommend making buildings all-electric ready and adopting a more-than-one-appliance approach to every home. For example, we may replace the water heater but leave the building electric-ready for future installation of heat pump space heating, or an EV. SMUD has found that the electrification technologies mentioned above (heat pumps for space and water heating and EVs) have the largest carbon and bill savings opportunity in the home and should be a priority for readiness investments. Along with readiness investments at the circuit level, we also recommend that the CEC extend funding to include necessary panel upgrades and potentially, transformer upgrades, which is important to ensure that the building is primed for future electrification installations and retrofits.

b) *What, if any, equipment standards or certifications should be considered as requirements?*

The state’s Building Energy Efficiency Standards code requirements should be a minimum starting point for equipment standards or certification, with the potential to fund higher energy efficiency installations that exceed code. To ensure bill savings, higher efficiency installations may be required, but the program should allow, at a minimum, certifications that meet the building code, which will capture the broadest scope of installations.

- c) *What unique equipment and measures should be considered for different building segments, i.e., existing single-family, multi-family, and mobile/manufactured homes?*

SMUD agrees that different criteria or measures may be needed for different customer types. For example, for mobile/manufactured homes, mini-split units should be considered in place of traditional heat pump space heating, due to ducting constraints. Mini-split units are heating and cooling systems that allow the user to control the temperatures in individual rooms or spaces. Instead of a central indoor unit connected by long lengths of ductwork, a mini-split system places small units directly in each room, which pull in warm air and send it back out as cold air. However, the CEC should make electric readiness a priority, regardless of building/customer type.

Beyond unique equipment and measures, a variety of incentive models may be needed for owners versus renters. For example, as noted above, the CEC could require minimum efficiency standards for funded rental unit electrification to ensure ongoing on-bill savings for renters.

- d) *How should the CEC consider equipment and measures that mitigate impacts from extreme heat, wildfires, or local air pollution but increase individual energy use (e.g., installing a heat pump heating and cooling system in a home that previously did not have an air conditioner)? How does this align with the legislative direction that the program shall “reduce the emissions of greenhouse gases”?*

Given rising temperatures and increased incidence of extreme heat waves, SMUD recommends that the CEC consider every home in California to need air conditioning, even when the building does not currently have a unit installed. Furthermore, in some climate zones, adding a heat pump heating and cooling system to a house that did not previously have air conditioning may still reduce the home’s carbon footprint even if it increases energy usage.

9) *This program offers a significant opportunity to advance load flexibility in the residential sector and across the state. Load flexibility or load management provides residents with the ability to shift their energy usage in response to hourly energy prices, GHG emissions, or grid conditions. This can provide savings on consumer bills, as well as provide grid reliability support.*

- a) *What load flexibility requirements should be included in the direct install program, and which load flexibility measures should be prioritized?*

SMUD recommends that heat pump water heaters have mixing valves to maximize efficiency when the water heater is programmed to operate at times of low emissions on the grid. In addition, programmable heat pump water heaters could provide an option for future participation in potential load flexibility programs.

10) AB 209 includes mobile homes as eligible buildings. The ability to decarbonize existing mobile and manufactured homes depends on factors such as location (mobile home park or rural), ownership, size, age, condition, access to electricity, and access to appropriately sized efficient-electric equipment.

- a) *What considerations should be taken for mobile or manufactured homes that are different from other eligible buildings?*

Traditional appliances like heat pump heating and cooling units that require ample spacing for duct installation may not be a viable option for mobile or manufactured homes, as noted above. In order to make these programs more accessible to residents in mobile and manufactured homes, installations of non-traditional appliances like mini-split units and smaller, space-saving energy efficient appliances should be eligible for program funding.

In addition, EV charging infrastructure may be more challenging to install in mobile/manufactured homes (e.g., limited panel, no garage, outdoor chargers needed, etc.).

Incentive Program

11) The CEC is directed to establish and administer a statewide incentive program for low carbon building technologies such as heat pump space and water heaters and other efficient electric technologies. A minimum of 50 percent of the funds allocated “shall benefit residents living in under-resourced communities.” Incentives for manufacture, distribution, sale, and installation; financing; and direct purchase of equipment are all under consideration.

- a) *How should the CEC prioritize the use of funds between these options? What market actor should be incentivized? Why?*

Incentives should be scaled for those that need more incentive to be able to participate in order to electrify as many homes as possible.

- b) *What criteria or factors beyond the reduction of direct GHG emissions should be considered when evaluating incentive options? How do these considerations benefit residents living in under-resourced communities?*

Criteria for evaluating incentive options should include: 1) need, and 2) total bill impacts. Programs should not be based exclusively on income, but on the actual need of the customer. There are many factors to consider when assessing need--income is just one factor. Other factors include the neighborhood or geographic area of residence and out of pocket costs that are not covered by the program. Finally, in order to leverage comprehensive solutions where feasible, the CEC should also consider prioritization of projects that assemble partnerships that can produce whole-house retrofits and/or neighborhood-scale electrification.

- c) *Where are the gaps in current incentive offerings that if addressed could advance the market for low and zero-carbon building technologies?*

There is no one-size-fits all financing option that addresses the needs of all customers. There is a strong need for equitable incentives being offered in the landscape of electrification. Homes are not always configured to accommodate the newest technology. For example, a new heat pump water heater may not fit in the old space. This program incentive should include funds to address/fix such issues.

- d) *How should incentives from this project interact with other incentives such as those available from the direct install program, utility programs, tax credits, etc.?*

SMUD recommends allowing layering up to the total cost of the installation; all combined incentives cannot exceed the project cost. SMUD also recommends that the market-rate funds be applied first, prior to low-income funds, in order to maximize the available funds for low-income customers.

- e) *What, if any, criteria should there be regarding the disposal of replaced equipment including refrigerants where applicable?*

The CEC should require contractors to follow appropriate practices for disposal of old equipment and refrigerants rather than leaning on the PAs to monitor compliance of retired equipment. Refrigerant recycling for all equipment should be a requirement built into the program. If a customer recently purchased a new system, focus on other existing measures in the home that are near the end-of-life and should be replaced (e.g., water heater, gas range, etc.).

- f) *Should CEC consider funding currently active building decarbonization incentive programs in an initial phase?*

SMUD encourages funding current building decarbonization incentive programs, especially if existing programs have been performing well and have the potential to expand and scale up effectively with more funding.

- g) *CEC aims to leverage and/or align with programs supported by the federal Inflation Reduction Act and the Infrastructure, Investment, and Jobs Act. Should CEC continue to leverage or align if it is at the cost of earlier implementation?*

Yes, the CEC should continue to align with the IRA and Infrastructure, Investment, and Jobs Act, as programs supported by these federal Acts will be--or should be--the main sources of program funds in our state. Working on alignment now may also help to ensure sooner access to federal funds for in our state.

12) The CEC will require ongoing data collection and measurement and verification to evaluate program success. This may include, but is not limited to, energy and GHG savings, bill impacts for ratepayers, number of homes retrofitted, number of people in the household affected, cost per home, occupant satisfaction, indoor air quality changes, location, and other programs or funds leveraged. CEC will work to align data collection principles (fields, formats) with other programs, and share program data with the public via reports or a website. For example, the Technology and Equipment for Clean Heating (TECH) program is currently incorporating project application data, meter data, and survey data into a publicly reportable site.

- a) *What data not mentioned above should be collected for tracking program performance and evaluating program success?*

SMUD recommends the CEC consider including non-energy benefits, such as comfort and safety. Indoor air quality changes may be difficult to measure, but improved air quality is an important benefit. Analyses of bill impacts should consider other contributing factors like weather, home occupancy, new appliance purchases, etc.

Because resolving existing code violations or bringing a building up to code can be a barrier to electrification, SMUD recommends the CEC track and account for such costs.

Other water efficiency measures that could also be considered are low flow showerheads, energy efficient toilets, and kitchen and bathroom aerators.

Conclusion

SMUD appreciates the opportunity to provide input and comments to inform the development of the Equitable Building Decarbonization Program. We look forward to continuing to work with staff in this proceeding.

/s/

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cc: Corporate Files (LEG 2023-0013)