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RFI Comments from Resource Innovations

Re: Equitable Building Decarbonization Program

Thank you for inviting public comment on the California Energy Commission's (CEC) Equitable Building Decarbonization Program. Representatives from Resource Innovations, Inc. (Resource Innovations) participated in your scoping workshop, and we are happy to provide comments and recommendations for your consideration as you scope the Equitable Building Decarbonization Program.

Comments from Resource Innovations are attached.

Additional submitted attachment is included below.



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Subj: Docket Number: 22-DECARB-03 Request for Information
Re: Equitable Building Decarbonization Program

Thank you for inviting public comment on the California Energy Commission's (CEC) Equitable Building Decarbonization Program. Representatives from Resource Innovations, Inc. (Resource Innovations) participated in your scoping workshop, and we are happy to provide comments and recommendations for your consideration as you scope the Equitable Building Decarbonization Program.

If you have questions, or need any clarifications regarding our comments, please contact me at ri.bd@resource-innovations.com or 650.678.9154.

Sincerely,

Lauren Casentini
CEO, Resource Innovations

Written Comments

Direct Install Program Criteria

a. What criteria should be weighed more heavily or prioritized when scoring program proposals?

When scoring program proposals from potential administrators, we recommend that you prioritize the following criteria:

- Approach –
 - Does the proposed approach provide a clear path to achieving priority outcomes and does the vendor have demonstrated experience?
 - Is the solution inclusive of diverse suppliers and suppliers within hard-to-reach (HTR) areas?
- Proven ability to deliver on all services and activities within the scope of work (SOW), including:
 - Strong historical performance serving income qualified customers and sensitive communities through similar programs/offerings
 - Team qualifications and ability to perform SOW based on identified contractor reach and capacity
- Administrative budget is balanced – adequate to successfully perform the SOW, but optimized to maximize funding provided directly to targeted customers/communities

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?

We recommend that the CEC adopt an independent, program-centric tool and approach to data-driven targeting to accommodate the variations between the data and targeting techniques for the various regions and demographics.

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

Yes. We recommend that low- and moderate-income households be incentivized at different levels and that the CEC adopt the following approach:

- Low-income households: Receive equipment and electrification upgrades at no-cost to the customer as they already have a high-energy burden.

- Other disadvantaged groups or high-priority communities: Receive equipment and upgrades at no-cost to the customer.
- All other customers: Incentive rates are balanced based on the desired participation rates and benefits to the participant.

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?

Aligning participation processes and eligibility requirements across all applicable incentives and programs best allow customers to—

- Participate in multiple programs
- Facilitate the messaging/marketing of multiple programs by administrators and market actors/influencers (contractors, CBOs, etc.)
- Allow program administrators to layer in additional incentives and reporting requirements effectively.

We also recommend that the CEC consider coordinating with the California Public Utilities Commission's (CPUC) Low-Income Universal Application System (UAS) Working Group to see if there are opportunities to leverage the workstreams for these programs

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

Yes. The layering or leverage of other programs should be a requirement if the CEC and other parties have aligned participation processes and eligibility requirements. Otherwise, layering and leveraging should be a scoring metric, but not a requirement.

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?

To allow flexibility for proposals that want to electrify specific neighborhoods or communities we recommend that the CEC define the communities that they want to target and based upon the people and services available to the community, and / or existing statewide tools such as DAC, PUMA, and HTR designations to help with consistency.

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

The CEC should consider the following tenant protections for all regions of the state:

- Balanced protections that protect the tenant without dissuading property owners / investors from participating.
- Rent increases should be capped at a certain percentage annually (find a reference metric to serve as a guide) - for the first X years following a retrofit. While we are not experts in this area, tracking performance against an established benchmark such as the average market rate rent increase from the previous year for that area. Currently, CoStar tracks this metric for multifamily programs and House Canary uses a report that includes single family http://www.housecanary.com/wp-content/uploads/2022/08/HC_2022_Rental-Report_min-5.pdf:

a. Who would be responsible for enforcing the agreements?

Enforcement of the agreements is a key issue and will require careful collaboration among the CEC, IOUs, and other key stakeholders. One solution could be to have the program implementer be responsible for enforcing the agreements and that this responsibility transition to the CEC or other resource if the contract ends prior to the enforcement period. The CEC could also elect to establish a process that tenants can use to report excessive rent increases to the CEC.

Consequences for property owners who violate the agreement is a primary issue that the CEC and its stakeholders need to resolve. The CEC needs to establish consequences for property owners who violate the agreement as well as to determine if the CEC has the authority and accounting mechanisms in place to recoup the incentives, or impose penalties on individuals/organizations, particularly those that reside out of state. As the CEC explores how the agreement should be enforced, you will also likely determine the entity who should be responsible for enforcing the agreement.

b. What programs should the CEC look to for examples of effective building retrofit and decarbonization programs with tenant protection requirements?

We recommend that the CEC look to the investor-owned utilities' (IOU) Energy Savings Assistance (ESA) programs for examples of effective building retrofit and decarbonization programs with tenant protection requirements the ESA programs have protocols for both single and multifamily whole buildings.

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?

No comments.

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

The CEC should consider the following types of workforce development initiatives:

- Performing outreach to and training a diverse set of trade allies
- Engaging with NGOs and community colleges that have technical training programs focused on Disadvantaged Workers
- Connecting Disadvantaged Workers with our trade allies for internship, training, and full-time employment opportunities
- Tracking and reporting on the use of Disadvantaged Workers by us and our trade allies within the program
- Engaging multiple market actors in the supply chain
- Creating systems and incentives that promote up-skilling and the adoption of new or underutilized technologies
- Providing vendors with a holistic training program that includes entry level training, continuous improvement / continuing education, and advanced training / career advancement opportunities training
- Establishing “premium” contractor network requirements that promote certifications and education on appropriate relevant technologies
- Recruiting, hiring, and training, underrepresented and Disadvantaged Workers
- Coordinating with the California Workforce Development Board (CWDB)
- Requiring all contractors to post open jobs with the local job boards
- Providing links and access to all training resources, including the Workforce and Economic Development Division (WEDD), which supports California community college students and individuals with flexible and manageable workforce training and career pathways that result in high-skill and high-wage employment.
- Creating partnerships with workforce education and training programs and vocational schools using or agreeing to use the Multi-Craft Core Curriculum (MC3), a comprehensive

pre-apprenticeship training curriculum endorsed by the Building Trades National Apprenticeship and Training Committee.

- Leveraging Assembly Bill (AB) 1111: Breaking Barriers to Employment Initiative Grant Program, an initiative administered by the California Workforce Development Board (CWDB), that provides training and educational services for individuals with barriers to employment so they may participate in local labor markets
- Building the capacity and technical knowledge of local contractors and assisting them to obtain CLSB licenses to install all measure offerings

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

Incentive caps at the building, unit, and/or region levels are design elements that can limit fraud which allows the program to maximize the available program funds to serve as many customers as possible. However, other design elements, such as incentive caps per eligible measure based on current market trends or have a closed/contracted network of contractors, are much more effective at limiting fraud.

Overall, we do not recommend incentive caps for an equity electrification program because caps can dramatically limit who can fully electrify their home and ultimately results in high levels of participation from higher income customers with well-maintained homes rather than from customers with low incomes.

If the CEC wants to include incentive caps to spread available funds to customers, the CEC may want to consider a more equitable approach that scales the incentive cap based on participating demographic's needs e.g., limiting the total incentives available to customers with high incomes to allow for more participation from customers with low incomes.

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?

To encourage residents and building owners within under-resourced communities to participate in the program, we recommend including the following activities:

- Coordinating and collaborating with local community stakeholders and other community-based organizations (CBOs)
- Working with trade allies who are members of the under-resourced communities as they often act as helpful tools for presenting information to these communities

- Using respectful communications, discussing measures and how the measures are operated, sharing benefits of measures, and utilizing peer referrals/testimonials.

b. Are there any unique considerations that should be taken into account when developing program criteria or reviewing proposals for decarbonizing homes on Tribal lands?

The CEC should defer to the preferences and considerations of each California Native American Tribe or Tribal Organization regarding any unique considerations when developing program criteria for decarbonizing homes on Tribal Lands.

c. Should CEC issue a Tribal-only solicitation to fulfill items (2) and (3) more effectively?

The CEC should defer to the preferences and considerations of each California Native American Tribe or Tribal Organization regarding any unique considerations when developing program criteria for decarbonizing homes on Tribal Lands.

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?
- 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?

No. We believe that the goals and target customer bases are separate and distinct from the existing programs, and they should live as separate and distinct programs.

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?

Rather than create a specific list of priority measures, we recommend that a full suite of potential electrification measures be developed for each residential home type (single-family, multi-family, and manufactured homes), This will allow program implementers and participating contractors to recommend the measures that will optimize the value to the resident and greenhouse gas reductions.

- b. What, if any, equipment standards or certifications should be considered as requirements? Existing equipment quality and efficiency standards and market certifications employed by current efficiency and decarbonization programs should also be applied to this offering.**
- c. What unique equipment and measures should be considered for different building segments, i.e., existing single-family, multi-family, and mobile/manufactured homes?**

As mentioned in the response to 8a, a full suite of potential measures applicable to the different building segments, including reversing chillers to displace boiler and chiller equipment in multifamily buildings that use a central HVAC plant.

- 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”?**

To properly address the needs of underserved communities, we recommend that non-energy issues, such as indoor air-quality and protection from extreme heat also be addressed.

We also recommend that care be taken to not increase energy burden for low-income and underserved customer. Additional energy efficiency measures or solar PV may be required to meet this recommendation.

While adding cooling capacity via a properly installed (refrigerants properly sealed) heat pump system to homes that previously did not have an air-conditioner, will increase heating and cooling electric load, if the heat pump is displacing a combustion-based heating system, site level greenhouse gas emissions will be reduced.

- e. Should the CEC consider unique portfolios, technologies, and measures to reflect California regional diversity, such as different climate zones, electric utilities or community choice aggregator providing service, technology performance, electric reliability, wildfire risk, etc.?**

Any consideration that results in a better fit to community needs should be considered. Additionally, how this program can be leveraged for additional benefits should also be considered. In particular,

electric reliability/resilience for underserved customers so grid shutdowns do not negatively impact vulnerable populations that fully electrify.

- 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?**

While significant opportunity exists to advance load flexibility into this program, we do not recommend that it be a requirement for participation. Underserved communities generally distrust large and institutional organizations and load flexibility requirements could discourage decarbonization participation.

We recommend that bonus incentives paired with education and awareness for load flexibility be included in the program. These bonus incentives will be especially effective if load flexibility options, control configurations, and energy storage reduce energy costs.

- 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?**

As mentioned in the response to 8a, we recommend that measures specific to mobile and manufactured homes be developed. In addition to the appropriate measure design, specific outreach and targeted marketing tailored to mobile/manufactured home be included.

- b. What programs focused on retrofitting or decarbonizing mobile and manufactured homes or mobile home parks could offer recommendations or lessons?**

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?

The CEC should prioritize the use of funds to be allocated to under-resourced communities. Incentives/programs targeting contractors and residents are most effective and have the most direct impact on the target community.

Midstream (distributor)/upstream (manufacturer) programs are better for mass market adoption (less targeted) and availability of low carbon technologies.

Contractor and residential focused program structures are also much better able to integrate and enable participation in other incentives/initiatives, including participation in demand response/time of use programs.

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?

The CEC should consider the following incentive options:

- Energy burden reduction
 - Upfront equipment/retrofit costs fully covered by incentives
 - Ongoing total energy costs reduced or maintained, not increased
- Energy Reliability and Resilience
- Health, Safety, and Wellbeing
- Enablement of social mobility
- The reduction of GHG emissions should be an integrated metric of the factors listed above, but not the primary metric for targeting under-resourced communities.

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

Existing incentive programs are primarily focused on energy using equipment and can struggle to account for and address upgrades needed that are not related to the energy used by the equipment. For example, electrification efforts can require electric service upgrades on both the customer and

grid side that are not directly/effectively addressed by current utility programs and limit ability to effectively decarbonize the building. We've also seen that some IOUs are unable to incentivize electrification projects for large Commercial projects (fuel substitution) because of the projects not being cost effective (costly with long paybacks) and actually increasing energy usage.

Additionally, most current decarbonization programs have focused on residential buildings. Significant gaps and technological advancements need to be addressed for non-residential buildings, starting with frameworks that allow IOUs and other organizations to properly allow and account for fuel switching.

Additional efforts can be provided to support:

- Building level energy resilience
- Workforce development to increase the market capacity to drive decarbonization
- Marketing, awareness, and education to residents and business owners
- Investment in grid and load flexibility initiatives to reduce overall electricity costs compared to GHG fuels
- Encouragement of new electric rate structures for house that electrify

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.?

We recommend that the CEC consider using other programs / incentives first when available and applicable before applying incentives from this project. It may also be beneficial to ignore any available tax credits from consideration since the CEC will not have the means to determine which customers qualify for those credits.

- e. What, if any, criteria should there be regarding the disposal of replaced equipment including refrigerants where applicable?**
- f. Should CEC consider funding currently active building decarbonization incentive programs in an initial phase?**

Funding of existing decarbonization incentive programs will be most effective if funding addresses the recommendations in the response to 11c. Existing programs already have infrastructure to incorporate the additional funds allocated to the initiatives listed in 11c.

- 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?**

The CEC should align with and leverage the Inflation Reduction Act and the Infrastructure, Investment, and Jobs Act wherever possible. We recommend that alignment between all potential funding program processes be a priority whenever possible. See response to 2a.

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?**

In addition to the data mentioned by the CEC, we recommend that the CEC adopt additional measures to analyze health impacts related to improvements in air quality. For example, the Environmental Protection Agency's (EPA) [Co-Benefits Risk Assessment \(COBRA\)](#) tool is a screening tool that provides preliminary estimates of the impact of air pollution emission changes on ambient particulate matter (PM) air pollution concentrations, translates this into health effect impacts, and then monetizes these impacts. The CEC can then use the COBRA findings to identify the locations and types of emissions sources that contribute to local air quality problems and identify options that are likely to maximize health benefits, or that could be expected to achieve health risk reductions in the most cost-effective manner.

Another potential EPA tool is the [Avoided Emissions and Generation Tool \(AVERT\)](#) that calculates emissions impacts. AVERT allows users to easily evaluate county-level emissions impacts resulting from energy efficiency and renewable energy programs.

The CEC should also evaluate the inputs captured by California's organic quantification tools such as those created by under the [California Air Resources Board](#) to identify benefits to priority populations. While these tools have reduced value because of inconsistent approaches that make it difficult to ascertain opportunities for improvement through comparison with programs in other states. It is often a necessary cost for California when it is blazing new paths where there is no consensus or standardized approach for calculating impacts that California needs before others. Just the same, setting an objective to define approaches that can be leveraged by others, and then reverting to national tools when the rest of the country catches up, could add value for California too.