

DOCKETED

Docket Number:	22-DECARB-03
Project Title:	Equitable Building Decarbonization Program
TN #:	248472
Document Title:	Comments of Energy Efficiency for All (EEFA) Calif Coalition - Energy Efficiency for All Calif (EEFA-CA) + Other Organizations
Description:	Comments of Energy Efficiency for All (EEFA) California Coalition - Energy Efficiency for All California (EEFA-CA) + Other Organizations
Filer:	System
Organization:	Energy Efficiency for All (EEFA) California Coalition - Energy Efficiency for All California (EEFA-CA) + Other Organizations
Submitter Role:	Public
Submission Date:	1/20/2023 2:16:18 PM
Docketed Date:	1/20/2023

*Comment Received From: Energy Efficiency for All (EEFA) California Coalition
Submitted On: 1/20/2023
Docket Number: 22-DECARB-03*

**Energy Efficiency For All California (EEFA-CA) + Other
Organizations Public Comments**

Additional submitted attachment is included below.



Response to Request for Information: Equitable Building Decarbonization Program

January 20th, 2023

California Energy Commission
Docket Unit, MS-4
Docket No. 22-DECARB-03
715 P Street
Sacramento, California 95814

We appreciate the opportunity to comment in response to the Equitable Building Decarbonization Program from the California Energy Commission (CEC). This is a pivotal moment for CEC to ensure that racial, climate and economic equity are centered in the scoping and implementation of this program and that its benefits are received by communities that need them the most. The Energy Efficiency For All California (EEFA-CA) coalition submits this letter on behalf of its member organizations; the Greenlining Institute, California Housing Partnership, Association for Energy Affordability, California Environmental Justice Alliance, Natural Resources Defense Council as well as other organizations; Rising Sun Center for Opportunity, the Building Electrification Institute, Eden Housing, and Midpen Housing. On behalf of all organizations, we urge CEC to adopt our recommendations in response to the questions posed in the Request for Information (RFI).

We commend CEC for soliciting feedback on the program and encourage further communication and transparency to ensure procedural justice.¹ The creation of this program is a huge step towards ensuring that low-income communities can live in healthy homes and reap the environmental, health and economic benefits of electrification. However, while California offers a variety of climate change programs and grants to improve air quality and community health, reduce consumers' energy bills, and create clean economy jobs, these programs far too often fail to adequately reach the communities with the greatest needs, especially low-income communities of color. For that reason, we believe CEC must make a conscious, thoughtful effort to embed social, racial, and climate equity into all aspects of this program, from the development of the program's goals to evaluation. Ensuring that low income communities of color have access to clean, affordable energy and healthy homes means that racial equity must be a core objective for the CEC. The "Equitable Building Decarbonization Program" must make equity real by considering the needs of people and communities first, especially frontline communities.

The following is a summary of the recommendations provided throughout this document. Further detail on each recommendation can be found under the sections provided in the RFI.

- Prioritize low income households, disadvantaged communities, and hard to reach households
- Conduct a gap analysis to identify which communities are not covered under existing programs
- Host online/in-person community workshops for continued feedback on program implementation
- Fund development of CEC team for program enforcement, particularly for anti-displacement policies
- Establish funding set aside for compensation for community-based organizations
- Establish funding set aside for outreach and education for community-based organizations
- Establish funding set aside to implement anti-displacement policies
- Require tenant protection practices
- Require prevailing wage and other labor standard considerations
- Consider funding existing decarbonization programs in the first year

The undersigned organizations also want to acknowledge another comment letter submitted to the CEC led by the Natural Resources Defense Council (NRDC). The two letters were developed in different spaces, but are aligned on many recommendations to the CEC and share similar signatories. We encourage the CEC to see these letters as complementary and reinforcing the

¹ Procedural Equity - Decision makers create inclusive and accessible processes for developing and implementing clean energy programs. Retrieved from: <https://www.aceee.org/topic/energy-equity>

idea that the Equitable Building Decarbonization program should prioritize low-income households in its development and implementation.

Collectively, we firmly believe that a successful Equitable Building Decarbonization Program is an active, ongoing and evolving process. We appreciate the outreach CEC has done thus far and urge further transparency in the program development to support community engagement efforts and to uplift community voices.

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 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.¹ 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. While this is a significant amount of funding relative to previous decarbonization investments in existing buildings in California, it is a small amount relative to the need in the sector. 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?

We recommend that criteria that demonstrate that programs will serve disadvantaged communities should be weighted more heavily.

- The CEC has noted that preference will be given to proposals that involve community-based organizations (CBOs) but does not provide more nuanced criteria about the role that CBOs will play. CEC should develop criteria and a review process, similar to what is done in the Strategic Growth Council’s Transformative Climate Communities program, to assess the robustness of submitted community engagement plans.²
- Proposals serving unincorporated communities or prioritizing geographically hard-to-reach households, including mobile homes, should be given more weight.
- Proposals that include robust anti-displacement³ and anti-gentrification⁴ policies should also be favored. For example, CEC should consult the Strategic Growth Council on their Transformative Climate Communities program to solicit guidance on the “Transformative Elements” of the program (Appendix C of the Program Guidelines)⁵ as an example of language to help applicants identify and propose solutions to mitigate potential negative impacts of their projects. For example, Appendix C-2 provides guidelines on example policies to avoid the displacement of very low and low-income households from climate change mitigation projects.
- Lower income households may in some cases produce lower GHG emissions than higher income households, but their ability to afford emissions-reducing measures should outweigh this. GHG emissions analysis done by CEC should therefore include a correction factor for people who need the most support.

We also recommend that CEC score proposals holistically, prioritizing projects that span health and safety home repairs⁶, weatherization, and electrical upgrades/clean energy technology adoption. The closer programs are to a “one-stop-shop,” the closer CEC will be to the legislation’s goals of “energy affordability” and “grid reliability support”. Taken a step further, we recommend considering each project in context. For example, a development near amenities may be able to achieve less GHG benefit per building than a development contributing to sprawl, but may still provide greater GHG reduction benefits overall when we consider factors like decreased transportation emissions.

² [CLEAN MOBILITY EQUITY:](#)

³ <https://www.sparcchub.org/pathways-to-prosperity/displacement-resources/>

⁴ [CEJA Environmental and Housing Justice Policy Platform](#)

⁵ *Transformative Climate Communities Program Round 5 Draft Program Guidelines FY 2022-2023*, Strategic Growth Council. https://sgc.ca.gov/programs/tcc/docs/20221121-TCC_Round_5_Draft_Guidelines.pdf

⁶ [Home Repairs: California | HUD.gov / U.S. Department of Housing and Urban Development \(HUD\)](#)

Finally, we recommend CEC take guidance from work that has already been done. We strongly recommend that CEC study the barriers and recommendations from the SB 350 study when considering how to shape program criteria. We also encourage CEC to consider the San Joaquin Valley (SJV) pilot recommendation of a tiered approach to implementation, in which a project's first phase prepares the home with remediation and safety repairs and then the second phase includes the weatherization and energy efficiency retrofits and upgrades.

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?

The CEC should be the central tool-providing entity to ensure program consistency, trackability, and accountability. Development of this new tool should include engagement with the intended audience, to ensure accessibility and avoid redundancy with other potential tools already in use. CEC should carefully plan what level of data and analysis will be required, because the amount of recurring time and work for already-busy program administrators will greatly impact adoption. If customers are an intended audience for the tool once developed, then CEC should fund CBOs to conduct education and outreach to ensure access and adoption. Many communities that could benefit from tools like these are not sufficiently reached through outreach by state agencies; the CEC can avoid redundancy of the tool by utilizing the community expertise and connections of CBOs to raise awareness.

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

Only low income households, defined as below 80% AMI, should benefit from this program. This would allow the CEC to intentionally prioritize the lowest income households. Low income residents benefit disproportionately from bill reductions because utilities comprise a relatively greater share of their income⁷ and financing developments for low-income households is historically more difficult than developments for other income levels as evidenced by many buildings serving low income residents needing government subsidy.⁸

⁷ [CPUC 2020 Annual Affordability Report](#)

⁸ [Making It Pencil: The Math Behind Housing Development. Turner Center for Housing Innovation UC Berkeley](#)

Additionally, we strongly recommend that CEC determine incentive structure based on region, given that AMI versus federal poverty level or other income criteria can affect regions in California differently depending on the cost of living. Finally, we advise offering additional incentives to address split incentive issues with landlords. The CEC should coordinate with other local, state, and federal programs to develop options like green leases, on-bill financing, and stronger green building standards for low-income rentals.⁹

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?

The CEC should conduct a gap analysis to better understand which Environmental Justice (EJ) communities don't qualify for other programs (e.g. LIWP) and consider prioritizing proposals directed towards those communities.

CEC should consider how this program can layer with complementing public health and climate programs, as well as alternative finance options (e.g. tariffed on-bill financing) and utility and rent arrearage assistance programs. The CEC should collaborate with the California Public Utilities Commission (CPUC) on efforts to streamline low-income customer assistance programs under SB 1208.¹⁰ The CEC should consider California Air Resources Board (CARB) platforms that have aggregated different income-qualified transportation programs into a one-stop-shop. If a one-stop-shop is not possible, allowing participation in one program to be eligible for another would also be beneficial, as each additional source adds cost and time for the participant.

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

We recommend that CEC structure this program to provide ample opportunity for layering and leveraging other programs, rather than making it a requirement. Generally, projects are actively seeking multiple sources of funding and have more of an issue when they are blocked from using multiple funding streams. Rather than requiring recipients to find additional funding, implementors and administrators should help facilitate leveraging funds and maximizing program dollars. Furthermore, the CEC should play a stronger role in identifying and coordinating funding opportunities, whether through tools developed, program administration, or other vehicles. CEC should consider giving priority scoring to proposals that demonstrate how they will bring in additional funding.

⁹<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4819331/&sa=D&source=docs&ust=1673479273148422&usg=AQvVaw0ceFtIAVodxnsfUI5uhGMt>

¹⁰ https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220SB1208

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?

As a precursor for geographic targeting, CEC should recommend proposals consider tools like CalEnviroScreen 4.0¹¹ and CEJST 1.0¹². CEC should also consider more localized mapping tools, like the CalThrives tool¹³ which models extreme heat vulnerability in Fresno. Ultimately, we recommend working with community-based organizations to identify and direct resources to neighborhoods and communities with the most electrification needs. This is especially important as a community-based organization could be familiar with low-income neighborhoods located within wealthier census tracts that may otherwise go overlooked.

We support electrification on the community scale, and encourage selecting proposals for neighborhood-scale projects that focus on neighborhoods with a majority of low-income households. The CEC should clearly define the distinction between low-income and moderate-income. See our recommendation in 1.c for how to do that.

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

AB 209 25665.3 section (e)¹⁴ states that *“The direct install program may include tenant protections for participating rental properties. These protections may include requiring the consent of tenants impacted by the work, tenant education provided by community-based organizations, protections against short-term and long-term displacement, and limits on increases in rent after completion of a project funded pursuant to the direct install program.”*

The use of the word *“may”* instead of explicitly requiring tenant protections is concerning. Key concerns that have been raised by residents in LA, and echoed across the state, are around displacement due to construction or rent increases and harassment from landlords¹⁵. This is a critical part of making equity real in this program. Without mandated tenant protections that directly address these critical equity issues, this program should be renamed as the CEC Building Decarbonization program.

¹¹ CalEnviroScreen 4.0 | OEHHA

¹² Climate & Economic Justice Screening Tool

¹³ <https://citybes.lbl.gov/?hvi=1>

¹⁴ [A.B. 209](#)

¹⁵ [Report on Equitable Building Decarbonization](#)

Echoing sentiments expressed by NRDC in the December 13th Scoping Workshop, **we strongly recommend that the CEC mandate that all rental property projects under the program include tenant protections to ensure this program is implemented equitably without any unintended harm to participants.** We also recommend that the CEC revise the language in the statute from “may” to “must” to strengthen the legislative precedent.

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

We recommend that the CEC consult anti-displacement and anti-gentrification best practices, such as those highlighted in CEJA’s Environmental and Housing Justice Platform¹⁶ and SPARCC’s displacement toolbox¹⁷, for a complete list of tenant-protection practices to which to adhere. We highlight and recommend the following tenant protections as the minimum for inclusion:

- Prevent landlords/building owners from passing undue costs on to the tenants (i.e., temporary relocation costs, construction costs);
- Set an anti-harassment clause in any contract (i.e. times for construction, drop-in visit protocol);
- Require compensation for displacement during times of construction;
- Require that landlords/building owners maintain a period of affordability after implementation of program measures.

b. Who would be responsible for enforcing the agreements?

We recommend that the CEC ultimately be responsible for enforcing the agreements. Tenant protections are a core element for equitable building decarbonization and evaluating projects to ensure compliance and accountability should be a top priority for the CEC. We recommend that the CEC establish an enforcement unit for this program, similar to the CARB and EPA enforcement units. This should not be funded through the Equitable Building Decarbonization Program, and the CEC should utilize other internal funds to establish this unit. Staffing and training of such an enforcement unit should be driven by an understanding of anti-displacement and anti-gentrification policies and practices. The CEC can contract out enforcement to state housing agencies, like TCAC and HCD, who have housing and enforcement experience, but with the expectation that the CEC will build an internal enforcement unit to ensure social, racial, and climate equity throughout the program.

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

¹⁶ https://calgreenzones.org/wp-content/uploads/2021/10/CEJA_GZ-EHJP-Full-Platform-Final.pdf

¹⁷ <https://www.sparcchub.org/pathways-to-prosperity/displacement-resources/>

While there are several programs we can point to that include tenant protection principles (e.g. City of Berkeley’s Existing Building Electrification Strategy¹⁸, SJV electrification pilots, LIWP), it is difficult to assess which are truly effective. The CEC should consider the lessons learned while looking to create a program that centers thoughtful tenant protection structures.

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?

The CEC should coordinate any segmentation with existing efforts in the state to track progress on climate and energy benefits in order to ensure that the regions align as much as possible. For example, California’s Fourth Climate Change Assessment organizes the state into nine reporting regions.¹⁹ Maintaining a consistent segmentation in state climate efforts will help streamline and make data more comparable to better evaluate how conditions are improving in communities.

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

AB 209 25665.3 section (f) states that “*Projects funded pursuant the direct install program shall be performed by workers paid prevailing wage where possible and when applicable.*” Ensuring that jobs created through this program are high-quality, career-sustaining jobs is an essential component of an equitable program and we commend the CEC for including this language around prevailing wage. **We strongly encourage the CEC to mandate prevailing wage for all jobs under the direct install program, regardless of the statute language.** We also recommend that the CEC remove the “where possible and when applicable” language from the statute to mandate prevailing wage by law and hold that standard accountable throughout the program implementation.

¹⁸ [Existing Buildings Electrification Strategy](#)

¹⁹ [California's Fourth Climate Change Assessment](#)

We recommend that the CEC emphasize the role of partnerships in ensuring equity in developing labor standards and project selection criteria. From our research on workforce development programs in California, we recommend that the CEC work with organizations who adhere to these general principles:²⁰

- **1. Prioritize partnerships across programs:** Partnerships across programs, agencies and training providers have proven to improve employment outcomes for populations with higher barriers to employment than a single pipeline program itself.
- **2. Follow the Multi Craft Core Curriculum (MC3):** MC3 curriculum is a comprehensive pre-apprenticeship training curriculum that rigorously prepares trainees for adaptability in union careers, thus creating a pathway for success in the trades.
- **3. Utilize Project Labor Agreements (“PLAs”) and Community Workforce Agreements (“CWAs”):** The CEC should encourage engaging with PLAs and CWAs (see Seattle example below) that promote quality jobs and family sustaining wages to ensure equity in implementation. The CEC should also consider incorporating training programs within PLAs to streamline resources.
- **4. Orient toward broad occupational training:** Orienting toward earn-as-you-learn apprenticeship training for broad occupational skills provides a range of career opportunities as opposed to training for specific tasks related to clean energy.
- **5. Prepare students for Union apprenticeships:** The CEC should support training geared toward success in union apprenticeships that put students on a pathway to a career with family sustaining wages and benefits instead of providing project by project jobs without job security.
- **6. Establish formal agreements with apprenticeship programs:** When agreements are created between apprenticeship programs and employers, students benefit from the removal of certain entry cost barriers.
- **7. Provide additional support to address multiple challenges:** Funding needs to be available to support additional challenges that workers with high barriers to employment face such as transportation, homelessness, racism, hunger etc.

²⁰ *Research Highlights: Bay Area Green Infrastructure Jobs for Populations with High Barriers to Employment.* The Greenlining Institute. <https://drive.google.com/file/d/1C3w15kj2sZ4ttZJdJxL9SizgWRFUUoGy/view>

Diversity in the clean energy industry has been historically low. Only 8% of the clean energy workforce is Black, 16.5% is Latinx, and 27% are women²¹. Having a diverse workforce is important to spur economic development opportunities for low income communities of color and other underrepresented groups, as well as to ensure equitable outcomes with program implementation (i.e. comfort level of participating households, cultural competency). We encourage the CEC to create pipelines of diverse, local workers with intentional workforce and contracting measures. The following are some examples of inclusive, city-led workforce development:

- Boston²²
 - The Mayor of Boston took action to promote economic development for minority and women-owned businesses with an executive order following a study of employment related disparities in the city.
 - To support the city's objectives, The Emerald Cities Collaborative created the Boston Contractor Academy that provides free contractor training to disadvantaged contractors to improve diversity and inclusion in the HVAC industry.
- Seattle²³
 - The city entered into a CWA with the local trade alliance to ensure consistent working conditions for construction workers.
 - The CWA created a Priority Hire program which required a percentage of the labor hours on city projects worth \$5 million or more be performed by workers from economically distressed neighborhoods.
 - The CWA also required that 15% of city construction labor hours must be performed by apprentices.

We further recommend that CEC consult other state agencies that have demonstrated strong contracting practices with Minority, Women, Disadvantaged Business Enterprises (MWDBE) and replicate best practices.

- For example, the California High-Speed Rail Authority has commissioned work from 653 small businesses, including 213 Certified Disadvantaged Business Enterprises, resulting in over 6,000 construction jobs in the Central Valley of California.²⁴

²¹ <https://greenlining.org/2022/equity-driven-clean-energy-economy/>

²² Cha, Mijin, Dr. J, Devlin, Aria, & Conroy, J. *Winning on Climate: Case Studies of Cities Centering Economic Inclusion*. https://emeraldcities.org/wp-content/uploads/2022/05/CET-Report_Final_2022-04-27-1.pdf

²³ Inclusive Economics. (2021). High-Road Workforce Guide for City Climate Action. 64. https://www.usdn.org/uploads/cms/documents/workforce-guide_4.12.21_form.pdf

²⁴ *The High-Speed Rail Project*. California High-Speed Rail Authority. <https://www.caclimateinvestments.ca.gov/hsr>

Finally, we recommend CEC consider partnerships with organizations that provide training on cultural competency and anti-bias education for implementers, installers, and contractors who employ and serve residents of disadvantaged communities.

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

We recommend a maximum incentive level be set at a regional level to ensure equity in distribution. However, there should not be a cost cap placed on individual households so that whole-home remediation and retrofits are possible. Often, older buildings serving the lowest income households will be the most expensive to retrofit, but those buildings may need it the most. One possibility is a scaling system, where the program offers increased incentives for targeting the most vulnerable populations.

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 underresourced 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?

We support the CEC in prioritizing implementers partnering with community-based organizations (CBOs) to conduct outreach and education for this program which should include funding for childcare, travel, food, and other monetary incentives.

CBOs should be compensated through a set-aside for their time, expertise, and any promotion of CEC tools. The CEC should also consider funding for project management. Some communities may not have the bandwidth to participate in a program unless it is a major rehab or refinance. Providing some funding for capacity building and project management can help these communities get access to these resources.

In addition, we strongly encourage the CEC to reach out to communities and CBOs to hear their perspectives on what’s needed to encourage program participation. For example, the CEC can conduct community workshops, both virtual and in-person, in different regions of California, mirroring the 2022 CEC IEPR planning workshops.

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?

We strongly recommend working with tribal and tribal-affiliated groups to understand their unique needs, and defer to their expertise.

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

Yes, recognizing that the process can still be burdensome depending on the requirements set for the solicitation process. We strongly encourage the CEC to defer to tribal-affiliated groups on those specifications.

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?

Given the anticipated delay in funding for the program in the first budget year, we recommend that the CEC utilize funding for the Equitable Building Decarbonization Program as soon as possible to ensure that priority populations are able to benefit. We recommend that in the process of developing the program, the CEC should host community-focused workshops and conduct a gap analysis to assess where more investment is needed. While the CEC refines this program, funding should also be considered for currently active low-income building decarbonization programs. An example of a program that works is the Low-Income Weatherization Program (LIWP) which has successfully invested in DACs, despite having uncertain funding year-to-year.

If the potential programs being funded are geographically limited, having different pools, where one is for existing programs and another for individual participants, is recommended. One issue that may arise is that the program applying for funding may be misaligned with the Equitable Building Decarbonization program. The CEC should make sure that the monies distributed to existing programs funds projects related to the Equitable Building Decarbonization program's goals. A second issue is that some regions may have decarbonization programs while others do not. By funding both programs and individual participants, monies can be distributed with more geographic equity.

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?

We recommend that as the CEC builds out the Equitable Building Decarbonization program, existing decarbonization programs also be considered in the first round of funding. Allowing initial funds to be used by existing programs will give the CEC runway to develop and refine the program structure through analysis and community input.

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?

We believe that three types of equipment and measures should be prioritized over others:

- Remediation and safety measures be prioritized in all applicable scenarios. These measures are driven primarily by health and safety concerns, not quantitative measures like GHG reductions or bill impacts, but are a necessity for a safe home and should be conducted before any weatherization or electrification measures. Building in funding and consideration for remediation measures will help the CEC streamline program implementation.
- Technologies that are more likely to be installed in building types that are characteristic of disadvantaged communities should be emphasized. For example, mini split heaters and heat pump water heaters can greatly advance electrification in multifamily housing. Currently, 60% of multifamily units are occupied by low and moderate income households.²⁵
- We recommend that the CEC prioritize proposals that provide a plan for leveraging existing low-income solar programs (i.e. SOMAH, SGIP, community solar). While there is nuance depending on the project, decarbonization measures can lead to utility bill increases without appropriately designed and paired policies. To ensure that this program does not exacerbate energy burden in low-income households, the CEC should ensure that projects where the proposed decarbonization upgrades have a high risk of utility bill increases for the lowest income households include a pathway to access solar.

²⁵ [Multifamily Affordable Housing Collaborative | Department of Energy](#)

In special cases, where the project demonstrates it is not eligible for any existing solar program pathways, funding from this program may be used towards solar. We encourage the CEC to consider this not only as critical to maintaining energy affordability, but also as a strong basis for working toward holistic home upgrades. However, first and foremost this program should prioritize decarbonization measures with its funding.

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

The CEC should consider requiring third-party certified environmental products, as recommended by the EPA²⁶ (e.g. ENERGY STAR, EPEAT). CEC should also consider going a step further by banning the use of all gas and fossil fuel appliances, including those covered under third-party certified environmental labels.

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

Technologies like integrated systems that combine a heat pump, ventilation system, and heat pump water heater have the potential to reduce barriers to multifamily retrofits. However these technologies are mostly in the Research and Development (“R&D”) phase and may not be ready for mass production. The CEC should coordinate internally on its research grants to decide on the feasibility of supporting the deployment of these technologies in DAC communities to support innovation and meet electrification goals.

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”?

The CEC should allow for installation of equipment and measures meant to mitigate the impacts of extreme heat, even at the risk of increasing individual energy use. As long as the whole portfolio of measures installed under the direct install program reduces GHG emissions, the goal stated in the statute will have been achieved. The language in the statute also states “*shall encourage, where feasible, resiliency to extreme heat*” along with other goals that show the program will still be aligned with the stated legislative direction with these installations.

²⁶ [Recommendations of Specifications, Standards, and Ecolabels for Federal Purchasing](#)

Additionally, when comparing technologies for GHG emissions, the comparison should be technologies that have the same result. For example, a heat pump to cool a house should be compared to a window unit, not to having no unit at all. The two technologies have a similar cooling effect, whereas there is not a cooling effect without a unit.

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.?

The CEC should develop regional portfolios of acceptable technologies and measures. For example, it's estimated that 1,300 people die every year from extreme heat, and the number of annual extreme heat events is rising in the U.S.²⁷ Areas in California that previously had little need for cooling devices could be exposed to as many 50 extreme heat days every year by 2050.²⁸ The CEC should consider passive cooling measures that don't increase energy load, such as installing solar-control window films or adding roof insulation²⁹, as well as measures such as heat pumps or water coolers. While the latter measures may sometimes result in a higher energy load, these measures will be critical to the health and safety of program participants, particularly in DAC communities who disproportionately experience the effects of extreme heat.

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?

No inputs at this time.

²⁷ [Unveiling hidden energy poverty using the energy equity gap | Nature Communications](#)

²⁸ [Lawrence Berkeley National Laboratory Passive cooling designs to improve heat resilience of homes in vulnerable communities](#)

²⁹ [Lawrence Berkeley National Laboratory Passive cooling designs to improve heat resilience of homes in vulnerable communities](#)

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?

No inputs at this time.

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

The CEC should consider the lessons learned from the SJV electrification pilot program³⁰ as well as the CPUC Mobile Home Parks program.

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?

We recommend that the CEC prioritize funds for point-of-sale rebates to the consumer that cover as much cost of the equipment as possible. This prioritization of consumers will help ensure clear accountability of benefits for disadvantaged communities instead of tracking benefits from upstream market actors. Financing as much as possible will help motivate consumers to apply. For example, the chief concern raised by non-participants of the SJV electrification pilot was around affordability because the appliances were not free.³¹ The CEC should alleviate these concerns as much as possible by directing the majority of incentives to the consumer.

³⁰ <https://pda.energydataweb.com/api/view/2432/SJV%20DAC%20Final%20Research%20Plan%20101220.pdf>
³¹ http://live-evergreen-economics.pantheonsite.io/wp-content/uploads/2022/10/SJV-DAC-PILOT-Process-Evaluation-Results-Public-Webinar_100522.pdf

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?

We recommend three other factors the CEC should consider outside of direct GHG emissions:

- Reduced energy usage. In addition to energy poverty disproportionately impacting Black and Hispanic households, more than 60% of low-income households in the U.S. face a high energy burden, with some paying more than 20% of their income on utility bills.³² We recommend that the CEC ensure that incentives go towards technologies that will reduce energy burden on households.
- Extreme heat resiliency. As noted above, there are scenarios where cooling technologies that would add energy load are required for households to be more resilient in extreme heat events. These technologies should be incentivized regionally.
- Energy reliability in the face of Public Safety Power Shutoff (PSPS) events, rolling blackouts, and brownouts. Around the country communities of color and low-income communities experience power outages more frequently than whiter, more affluent communities.³³ The CEC currently has a solicitation out now to study the equity impacts of PSPS events in disadvantaged communities.³⁴ The CEC should consider incentivizing technologies that will address that inequity.

These non-emissions criteria should center the experience of the residents. The newly released 2023 Energy Efficiency Impact Report details household nonenergy benefits of weatherization ranging from reduction in thermal stress cold and asthma, increased productivity, reduced home fires, etc.³⁵

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

We recommend that the CEC consider the following points when assessing the incentive options:

- Electrification readiness-related incentives that include costly electric panel upgrades³⁶, running new feeder cables, new circuits, and potentially even new transformers
- Higher incentives are needed for induction ranges
- Manufacturer incentives are needed to drive domestic product development for multifamily commercial laundry drying units given the lack of products available

³² [Co-Benefits with Energy Savings](#)

³³ [Too many blackouts: How underserved communities are making utilities listen](#)

³⁴ [GFO-22-302 - Valuation of Investments in Electricity Sector Resilience](#)

³⁵ [Co-Benefits with Energy Savings](#)

³⁶ [Residential electric panels represent a nearly \\$100B 'roadblock' to full electrification, report finds | Utility Dive](#)

- Incentivize repairs required prior to installation of equipment (e.g. Fixing existing distribution problems like balancing and crossover is critical before installing central heat pump water heaters but these repairs do not generally get their own rebates)³⁷

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 allow incentives from this project to overlay with any other utility, state, or federal program. This will maximize the benefits, leading to lower costs for the consumer and higher program adoption rates. The total incentive should come together to fully finance a project. If not, there would be a cost burden for developments serving low-income households that may not be bridged through other financing mechanisms, leading to resources not being used equitably. The CEC should consider mapping out the current incentives based on each technology so that there will not be an over- or under- incentive for any technology.

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

Since disadvantaged communities have often borne the brunt of exposure to industrial waste, it is especially important that the CEC set criteria to responsibly install, repair, and retire HVAC equipment to make sure that there are no negative health or climate impacts from refrigerant leakage. The CEC should consider adopting the EPA's standards for refrigerant recovery and recycling equipment.³⁸

The CEC should also consider adopting standards set in the California Department of Toxic Substances Control's Certified Appliance Recycler (CAR) program which requires by law that "major appliances, and certain materials within the major appliances, be properly removed and managed."³⁹

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

Yes, for the same reasoning provided in question 7.b about the direct install program.

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?

³⁷ [HEAT PUMP RETROFIT STRATEGIES FOR MULTIFAMILY BUILDINGS](#)

³⁸ [Refrigerant Recovery and Recycling Equipment Certification | US EPA](#)

³⁹ [Certified Appliance Recycler \(CAR\) Program | Department of Toxic Substances Control](#)

We recommend that the CEC develop this incentive program to leverage and align with federal incentives and programs while also remaining open to initially distributing funding to existing decarbonization incentive programs in the first year of funding. This will ensure ongoing building decarbonization efforts are funded while the CEC conducts research and receives feedback on how to best structure the program.

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?

We recommend that CEC collect the following additional data:

- We know it can be challenging to access household income information, but collecting household income data from before and after program implementation will not only help verify that eligibility criteria are being met, but also provide a baseline for analysis on possible correlation between home health improvements and improved wealth.
- In collecting data on cost per home, separate that cost by various actions taken, such as remediation, weatherization, electrical, appliance upgrades, etc. Remediation actions are often a necessary, but unaccounted for, precursor to allow for installation, so understanding the relative cost of remediation will help CEC understand the true cost of installation. In general, data on the costs of various actions will be useful for structuring funding in future iterations of this program.
- To ensure a comprehensive equity focus, CEC should consider collecting data on participant race or ethnicity. Unfortunately, race is still a key indicator for living in environmentally hazardous locations, and communities of color disproportionately suffer the environmental and economic impacts of our country's long-term reliance on fossil fuels.
- University of Michigan's Energy Equity Project Report shares additional metrics to consider (e.g. Disparity in program savings by customers among frontline households and renters, percentage of eligible customers served by financial assistance programs).⁴⁰

⁴⁰ https://energyequityproject.com/wp-content/uploads/2022/08/220174_EEP_Report_8302022.pdf

CONCLUSION

On behalf of the Greenlining Institute, California Housing Partnership, Association for Energy Affordability, California Environmental Justice Alliance, Natural Resources Defense Council, Rising Sun Center for Opportunity, the Building Electrification Institute, Eden Housing, and Midpen Housing, we appreciate the opportunity to provide feedback on the CEC's Equitable Building Decarbonization Program and urge the CEC to address the recommendations and concerns outlined above. We look forward to continuing to collaborate with the CEC to make equity real in the development of this program and provide a pathway for California to achieve its goals.

Sincerely,

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