

**DOCKETED**

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**Comments on the Equitable Building Decarbonization Program RFI**

*Additional submitted attachment is included below.*



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Submitted via e-commenting portal

**RE: Enervee Comments on the Equitable Building Decarbonization Program Request for Information (22-DECARB-03)**

Enervee is a California-based climate tech company that has been operating online ecommerce platforms in the State since 2015. Our platforms eliminate barriers and empower Californians, including those in traditionally underserved customer segments, to buy decarbonization technologies and enroll in demand response programs in the course of natural replacement cycles. The importance of such marketplaces has been called out by the California Energy Commission (CEC) in various documents, including the SB 350 Low-Income Barriers Study and the 2019 California Energy Efficiency Action Plan (refer to Appendix for details).

Enervee participated in the Lead Commissioner Workshop on Scoping California's Equitable Building Decarbonization Program (EBDP) held on 12/13/2022, where we were invited to share our views on statewide incentives for under-resourced communities. In addition, Enervee welcomes the opportunity to respond to the CEC's RFI questions on the incentive program component of AB209. Question numbers correspond to the numbering in the RFI.

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 actors should be incentivized? Why?

- Target market actors. California's ability to meet its decarbonization goals depends on millions of buying decisions, many made by individuals. Therefore, funds should be used for incentive program designs that effectively eliminate key barriers that prevent consumers from buying energy efficient technologies (market, cognitive, psychological, financial) regardless of the market actors involved. In fact, the most impactful and transformative programs will engage all relevant market actors.

Enervee has demonstrated our ability to leverage additional consumer incentives from the manufacturers and retailers we partner with, rather than having to incentivize them. Under the Cool LA program, for example, Enervee negotiated manufacturer incentives that we could layer with LADWP incentives, making it possible to offer efficient air conditioners to target customer segments at low or no cost to consumers. The impact was considerable, with thousands of high-efficiency units being sold in just a few months from an eligible customer base of only 238k customers. We also work with contractors and the TECH initiative to provide consumers with the ability to bundle fixed-price heat pump water heater installation, take advantage of all available incentives, and finance their purchases.

- Prioritizing technologies. Under the Inflation Reduction Act, the Federal government has allocated \$292M under the Home Energy Performance-Based, Whole-House Rebate (HOMES) program and \$291M under the High Efficiency Electric Home Rebate (HEEHRA) program to California. The HEEHRA program will be offering incentives of up to \$14,000 per household for low- and moderate-income (LMI) customers for instant point-of-sale rebates, covering 100% of the cost for LI purchases (household income below 80% of Area Median Income) and 50% for MI purchases (household income up to 150% of AMI) of electric cooking appliances and heat pump dryers, water heaters and HVAC. There are other incentives available for heat pump water heaters and HVAC in California, as well (TECH Clean California, Golden State Rebates). This should be taken into account when considering any rebate proposals.

According to the California Low-Income Potential & Goals Study completed in 2021, nearly 58% of energy efficiency potential for the low-income segment is associated with plug loads, not the least because plug loads are typically purchased at retail by individuals and don't require installation by a licensed contractor. The importance of plug loads was also emphasized in the 2019 California Energy Efficiency Action Plan (refer to Appendix), and the SB350 Low-Income Barriers Study recommended ensuring "...that low-income persons have product selection options and information necessary to avoid driving up their plug-load energy use". Nevertheless, there are no incentives available in California on the vast majority of plug loads. The EBDP should therefore prioritize incentives

that drive more efficient plug load purchases by underrepresented communities. See section 11.c. below for further information on this important gap.

- Prioritizing use of incentive funds. Enervee recommends prioritizing the use of funds based on a set of principles aligned with the goals and legislative intent of AB209. Specifically, incentive programs should be prioritized that are aligned with the following design principles:
  - Serve under-resourced communities statewide
  - Scale deployment rapidly
  - Leverage private capital to make every incentive \$ go further
  - Catalyze lasting change. Demonstrate a feasible pathway to scale impact after Equitable Building Decarbonization funds have been expended.
  - Avoid duplication, facilitate integration. The EBDP will not be operating in a vacuum. It is therefore important to focus on gaps not addressed by existing or planned direct-install or incentive programs available to California residents (utility, state, federal...) and synergy with them.
  - Flexibility to respond to federal program guidance.

Based on these principles, incentives tied to financing programs should be a top priority, in particular financing programs that empower individual consumers to make efficient 1-off purchases at retail. Financing programs are among the best ways to leverage private capital and make every incentive dollar go further, because they focus on making clean and efficient purchases affordable for consumers, rather than on subsidizing the full cost of a building decarbonization technology. The following graphic shows how financing – taking the example of GoGreen Home microloans – fills a gap between free, direct install programs and rebates. Financing also makes efficient new appliance purchases affordable for lower-income consumers, by breaking down the purchase price into small monthly payments. This is more effective than typical rebates, which don't overcome the upfront purchase price barrier, even when delivered at the point of sale, as raised at the workshop.



At the Lead Commissioner workshop, Enervee presented equity outcomes from GoGreen Home microloans<sup>1</sup>.

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?

Incentive options that are designed to achieve the following outcomes should be prioritized:

- Serve under-resourced communities statewide (energy and non-energy benefits)
- Deploy funds rapidly at scale
- Leverage private capital / drive private investment
- Leverage and layer incentives from various sources
- Avoid duplication, facilitate integration with existing programs

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

Influencing retail buying decisions at scale is a strategic climate mitigation priority. However, with the exception of the new Golden State Rebate of \$20 on room air conditioners, there are no longer any incentives available to California consumers to overcome the up-front purchase price barrier that prevents them from buying efficient electric appliances and other plug loads at retail. And plug loads matter<sup>2</sup>. According to the California Low-Income Potential & Goals Study completed in 2021, nearly 58% of energy efficiency potential for the low-income segment is associated with plug loads.

The importance of plug loads was also emphasized in the 2019 California Energy Efficiency Action Plan (refer to Appendix), and the SB350 Low-Income Barriers Study included principal recommendation 5(e): “Ensure that low-income persons have product selection options and information necessary to avoid driving up their plug-load energy use, recognizing that low-cost appliance and consumer products are commonly less energy-efficient than other appliances and products.”<sup>3</sup> Equitable Building Decarbonization incentives should be used to implement this State recommendation from the 2016 Barriers Study and ensure that every purchase reduces GHG emissions and energy bills.

This is also aligned with [\*The Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050\*](#), published in November 2021, which states that “the priority in this decade is to rapidly improve energy efficiency and increase the sales share of clean and efficient electric appliances...while also improving the affordability of energy and the equitable access to efficient appliances...”.

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<sup>1</sup> See Slide 6: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=248091&DocumentContentId=82404>

<sup>2</sup> [Unsung Heroes of Decarbonization: People & Plug Loads](#)

<sup>3</sup> [SB 350 Low-Income Barriers Study, Part A](#), p. 8.

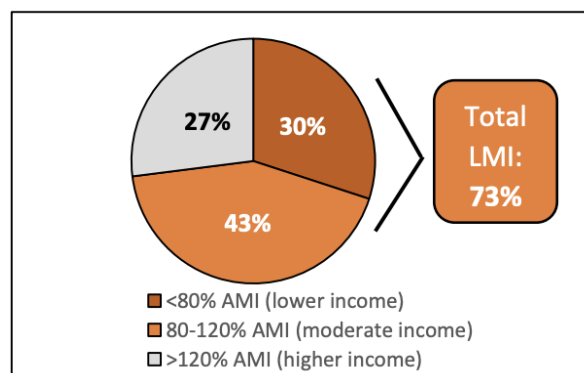
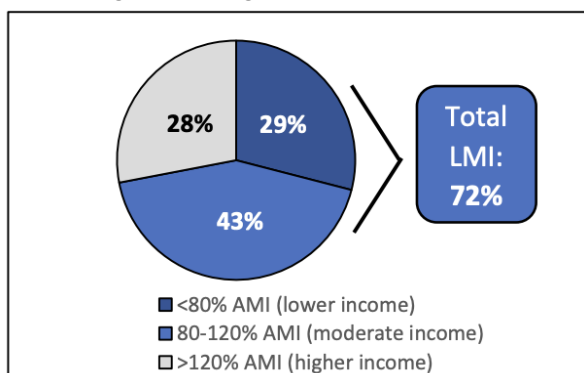
Ensuring that natural replacement purchases for energy-using consumer products are clean and efficient is a cost-effective way to rapidly scale impact, as it meets consumers where they are and leverages private investment dollars that would otherwise be spent locking in the use of wasteful products over a decade. Americans spend roughly \$50 billion annually on plug loads. This is the largest GHG reduction opportunity in the residential sector out to at least 2030<sup>4</sup>.

Appliances and other plug-in devices are predominantly bought at retail, not through contractors, because the vast majority don't require installation by a licensed contractor. It is therefore critical to deploy Equitable Building Decarbonization incentives to empower consumers to purchase clean and efficient equipment at the retail point-of-sale.

Historically, as was pointed out by Vice Chair Brian McDonald, Chemehuevi Tribe, at the Lead Commissioner Workshop on Scoping California's Equitable Building Decarbonization Program (EBDP) held on 12/13/2022, the most common incentive programs – rebates – have left LMI consumers behind.

A promising option to more effectively overcome the up-front purchase price barrier is financing. The statewide GoGreen Home Energy Financing Program provides credit enhancements in the form of a loan loss reserve, making it possible for private lenders like Enervee to offer consumers safe and affordable term loans for the online purchase of clean and efficient products. Launched in 2021<sup>5</sup>, the new GoGreen Home microloan pathway – which was the first in the nation – provides instant financing for 1-off online retail purchases, and Eco Financing microloans are delivering encouraging equity outcomes<sup>6</sup>:

- 85% of loans to underserved borrowers
- 73% of gas savings and 72% of electric savings to LMI<sup>7</sup>



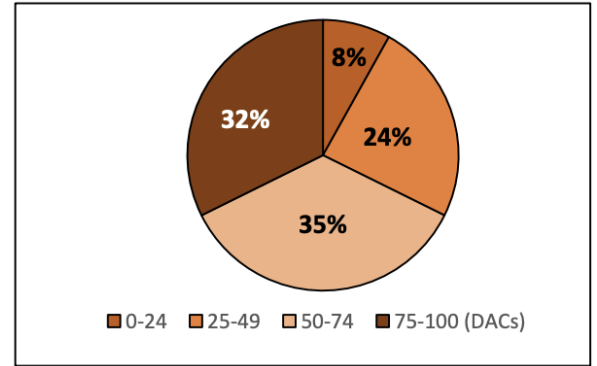
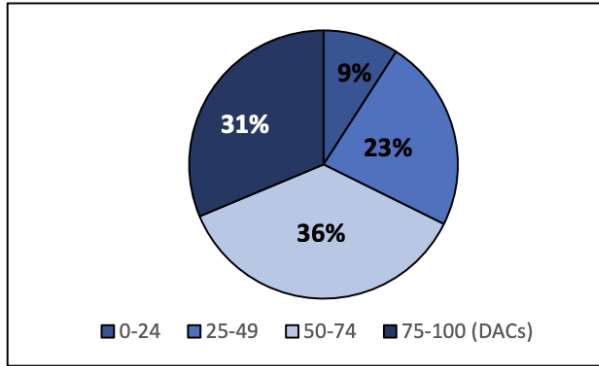
<sup>4</sup> [The Customer Action Pathway to National Decarbonization](#)

<sup>5</sup> [New Microloans Make it Easier to Buy Energy Efficient Appliances](#)

<sup>6</sup> These results were achieved without specifically targeting marketing towards these traditionally underserved consumer segments, so program optimization could yield even greater equity benefits.

<sup>7</sup> <https://www.treasurer.ca.gov/caeatfa/cheef/energysavings/deemed-ggh-report-q2-2022.pdf>

- 32% of gas savings and 31% of electric savings to DAC<sup>7</sup>



- Roughly half of loans to credit-challenged borrowers with credit scores below 640
- 27% of loans to renters.

During their beta phase, in addition to delivering superior equity outcomes, enrollment of consumer microloans quickly outpaced standard loans, demonstrating their potential to scale rapidly.

This program addresses one of the main challenges discussed at the Lead Commissioner workshop on 12/13/2022, namely influencing emergency replacements.

With the utility ratepayer-funded GoGreen Home microloan financing program already in place, Equitable Building Decarbonization funding should be used to enhance the carbon and equity impact of this innovative program with the following incentives that are currently not being offered by any other source:

- Interest rate buy-down (e.g., to support zero-interest financing for underserved borrowers), with funding channeled through the State Treasurer's Office/California Advanced Energy and Alternative Transportation Financing Authority (CAEATFA) for GoGreen Home microloans. While CAEATFA administers several programs, GoGreen Home microloans should be prioritized, given strong equity outcomes and ability to scale rapidly.
- No-cost haul-away and professional recycling services (e.g., for refrigerators and freezers to avoid end-of-life refrigerant emissions and continued use of inefficient equipment);
- Performance-based payments to scale participation by under-represented communities (e.g., payment for each qualified efficient purchase, providing a carrot for programs to make targeted lead generation investments to successfully engage these communities).

These incentives will drive greater participation among target segments, reduce end-of-life emissions and can be implemented rapidly statewide. Enervee proposes standing up an ecommerce platform to apply all three of these incentives to achieve equitable decarbonization. This statewide online point-of-sale channel, with integrated instant incentives and financing, can serve as a core resource for the Building



Decarbonization & EV Charging Web Guide that the CEC is building (we elaborated on this opportunity in our response to the RFI on the Web Guide<sup>8</sup>).

The existing GoGreen Home microloan ecommerce channel can be expanded statewide and used to deliver federal IRA High-Efficiency Electric Home Rebates on electric cooking appliances and heat pump clothes dryers, water heaters and HVAC equipment, reducing the need for large point-of-sale EBDP incentives on these technologies.

In addition, integrating Equitable Building Decarbonization incentives into the existing GoGreen Home ecommerce microloan program offers a “quick start” opportunity and will deliver timely results needed for a strong California green bank application for funding from the \$27B Inflation Reduction Act (IRA) GHG Reduction Fund, paving the way for continued funding from the federal government for the interest rate buy-down and loan loss reserves.

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.?

- EBDP statewide incentives should address gaps and avoid duplication with existing programs. In particular, the statewide incentives should complement ratepayer-funded utility and federal IRA rebate programs (HOMES home upgrade rebates, HEEHRA point-of-sale LMI rebates), not duplicate them.
- In addition, the Equitable Building Decarbonization incentives should target under-resourced communities.
- Driving efficient retail plug load purchases offers great potential for decarbonization. Other than a \$20 rebate on room air conditioners, there are no longer any consumer rebates for the purchase of efficient electric plug loads in California, despite having the greatest energy efficiency potential for LI households (2021 California Low Income Potential & Goals Study). The plug load gap and the importance of addressing it was called out in the SB350 Low-Income Barriers Study, as well as in the 2019 California Energy Efficiency Action Plan (see Appendix).

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

As mentioned under our response to question 11(c), it is important to drive better retail purchases made by consumers. However, we cannot force consumers to give up their old appliances.

We therefore recommended above that haul-away/recycling services be incentivized, if not included in the purchase price, so consumers can opt for responsible end-of-life

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<sup>8</sup> [Enveree comments on Decarbonization Web Guide \(SB 68\) 22- DECARB-02](#)

handling. It is particularly important to ensure proper recycling of fridges/freezers, because of their refrigerant charge.

Enervee's ecommerce platform offers haul-away/recycling services on water heaters, appliances (cooking appliances, dishwashers, dryers, range hoods, refrigerators/freezers, washers) and electronics (TVs). Our fulfillment partners ensure proper handling and recycling by licensed third-party recycling partners. We can integrate online point-of-sale incentives to cover the full cost of haul-away/recycling, if EBDP statewide incentive funding is available.

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

In general, the Equitable Building Decarbonization program should not merely direct additional funds to increase budgets for existing programs. EBDP incentives should be used synergistically to address gaps, leverage private capital / investment and drive market transformation.

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 legislative intent is for rapid deployment of EBDP funds. At the same time, Enervee agrees strongly with the CEC's aim to leverage / align with significant federal funding opportunities. We believe there is sufficient guidance available to prioritize incentive approaches that leverage/align, but not duplicate, key federal opportunities:

- There is already clear guidance on IJJA/BIL State Energy Program funding, and the CEC has already submitted its application for SEP funds. Programs aligned with DOE guidance should be prioritized.
- While the implementation details for the IRA home rebate programs (HOMES, whole home upgrades; HEEHRA, point-of-sale rebates for 1-off purchases) are still being worked out, the Inflation Reduction Act spells out the broad strokes of the two programs. It is particularly important to consider how incentive program designs proposed for Equitable Building Decarbonization Program funding would leverage and accommodate integration of, but not duplicate, the point-of-sale LMI rebates (HEEHRA). This could be readily accomplished via Enervee's ecommerce platform which supports layered point-of-sale incentives and Eco Financing across over 30 categories.
- IRA / GHG Reduction Fund. States will be able to compete for \$7B from this source to deploy zero-emission and other GHG reduction activities to LMI/DAC. Therefore, spending EBDP funds on incentive programs that can be scaled using GHGRF funds is a strategy to ensure that early State investments can leverage federal dollars to scale impact. Obtaining good early performance results from Equitable Building Decarbonization incentives will increase California's chances of success

when applying for federal funds. The \$7B GHGRF pool of funds is to be used for providing grants, loans or other forms of financial assistance, as well as technical assistance. The CEC should therefore prioritize and launch related incentives (e.g., interest rate buy-down and performance-based lead generation payments for GoGreen Home microloans) as rapidly as possible.

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?

Rather than focusing on additional data collection at this time, we would like to make several general points about program metrics, tracking and reporting:

- The CEC should consider whether Equitable Building Decarbonization Program outcomes should be tracked at the aggregate level or more granularly, which core metrics should be tracked and which entity(ies) should be responsible for data collection and reporting for each metric.
- Incentive programs supported under the Equitable Building Decarbonization Program are likely to be quite diverse in their program theory, scope and delivery, and not all incentive programs will have access to the same data. Measuring indoor air quality changes, for example, isn't an option for a point-of-sale incentive program, nor would it be relevant unless an existing gas technology is replaced. In addition, suitable methods for measuring or estimating GHG savings will vary by program design. Tracking outcomes at the aggregate Program level would look very different than for an individual component.
- With respect to data collection, tracking and reporting at the level of individual incentive programs, the CEC should ensure flexibility for programs to propose meaningful metrics, suitable methods and streamlined reporting procedures. Allowing program implementers to propose performance metrics aligned with their specific program theory and design has a precedent in the third-party energy efficiency program solicitation process used for utility energy efficiency portfolios, spanning resource, market support and equity programs.
- When Equitable Building Decarbonization incentives are used to augment existing programs or combined with other incentives, it will be exceedingly difficult to isolate the impact of the Equitable Building Decarbonization incentives. Therefore the emphasis should be placed up-front on ensuring wise choices about which

incentive programs to fund, rather than trying to precisely attribute program outcomes during the implementation phase.

The CEC aptly summarized the challenge that the Equitable Building Decarbonization Program was designed to take on: “There is a real risk that without thoughtful and intentional prioritization, the state’s most vulnerable and underserved residents may be the last to benefit from the transition to low-carbon building technologies due to lack of capital, credit, and access to infrastructure.” Augmenting GoGreen Home microloans with interest rate buy-downs, recycling incentives and performance payments for efficient product purchases by under-resourced communities is a promising strategy to rapidly scale equitable decarbonization.

Sincerely,

/s/ Anne Arquit Niederberger, Ph.D.  
SVP Market Development  
Enervee  
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## **Appendix**

### **2019 California Energy Efficiency Action Plan – Excerpts of References to Plug Loads**

Source:

<https://efiling.energy.ca.gov/GetDocument.aspx?tn=231261&DocumentContentId=62916>

Goal 1: Double Energy Efficiency Savings by 2030

Single Family Sector

Opportunities in the Single-Family Market (p. 24)

Plug Loads: Plug loads are appliances or measures that plug into a building. While no single plug load has major savings potential, the aggregated amount of energy consumed by plug loads is large. Ongoing research into miscellaneous electrical loads in homes is uncovering the scale of potential savings. Marketplaces that provide consumers with energy efficiency scores for appliances, most prominently those supported by the IOUs, have a track record of success. Continuous support and expansion of such programs will result in more achievable savings from the growing plug-load demand.

Multifamily Sector

Opportunities in the Multifamily Market (p. 29)

Plug Loads: As in single-family homes, plug loads are a major source of energy consumption in multifamily units. Since end uses like space and water heating may be maintained by owners rather than tenants, most in-unit energy savings that can be controlled by tenants are plug loads. Given the varied income levels of tenants, it is important that affordable and efficient products are available. Online marketplaces are an effective tool at making energy efficient products readily available and easily discounted.

Goal 2: Low-Income and Disadvantaged Community Energy Equity

Component 1: Low Income and Disadvantaged Community Barriers

Plug-Load Marketplaces (p. 73)

In 2017, the CPUC directed IOUs to create or expand online marketplaces for appliances and other plug loads, or do both, in response to Assembly Bill 793 (Quirk, Chapter 589, Statutes of 2015). The Barriers Study recommended that low-income households receive information and options for purchasing appliances or devices that draw electricity. Now, all IOUs offer marketplaces that collect incentives and educate customers on the most efficient plug loads. These marketplaces can continue to expand and be a resource for more than IOU program activities. Collaboration between utilities and government agencies could add more incentives and information for products that benefit low-income households. The marketplaces could provide a direct-to-consumer channel for incentives, which would enhance consumer choice and flexibility, improve program effectiveness and lower costs. The CEC continuously approves new appliances for sale in the state, and these marketplaces are updated to reflect that.