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CLEAResult Response - CEC HOMES RFI

CLEAResult's response to Docket No. 23-DECARN-01 are uploaded below. These comments are provided in response to the CEC's RFI regarding the US Department of Energy's federal IRA Home Efficiency Rebates (HOMES) program. We thank you for the opportunity to provide our comments.

Additional submitted attachment is included below.

January 26, 2024

To: California Energy Commission

From: Alex Scott, Vice President – Business Development, CLEAResult

Date: January 26, 2024

Re: RFI Inflation Reduction Act Residential Energy Rebate Programs
Docket No. 23-DECARB-01

RFI Question 1: Braiding HOMES with Equitable Building Decarbonization Direct Install Program

Best Practices

a. *Share any best practices for braiding federal and state funds for highly effective rebate, incentive, and/or direct install programs aimed at households in disadvantaged communities or meeting low-income guidelines.*

To better understand the potential for braiding the HOMES program and the Equitable Building Decarbonization Direct Install Program (EBD), it is essential to breakdown the differences between the two DOE IRA programs: Home Efficiency Rebates Program (HOMES) (Sec. 50121) and the Home Electrification and Appliance Rebates Program (HEEHRA) (Sec. 50122), both in practice and in intent.

The HOMES program focuses on projects that enhance energy efficiency in residential homes by incentivizing a broad range of improvements, including insulation, HVAC upgrades, and other shell improvements. In contrast, the HEEHRA program promotes electrification through specific measures that encourage the adoption of energy-efficient electric appliances and systems, converting away from fossil-fuel appliances. The HOMES program includes qualifying energy efficiency measures regardless of the specific technology or energy source, identifying the percentage of energy savings as a threshold for rebates rather than conversion from fossil fuels, as HEEHRA and EBD do.

Despite this fundamental difference, CLEAResult supports braiding the IRA HOMES with EBD to help more low-income households. We envision a single customer-facing program, with simple avenues to participation and an emphasis on an energy advisor identifying and explaining the most advantageous retrofit path for the participant. The unified program would target only low-income households and cover 100% of the project costs, regardless of how much of the HOMES or EBD funds are used in each home.

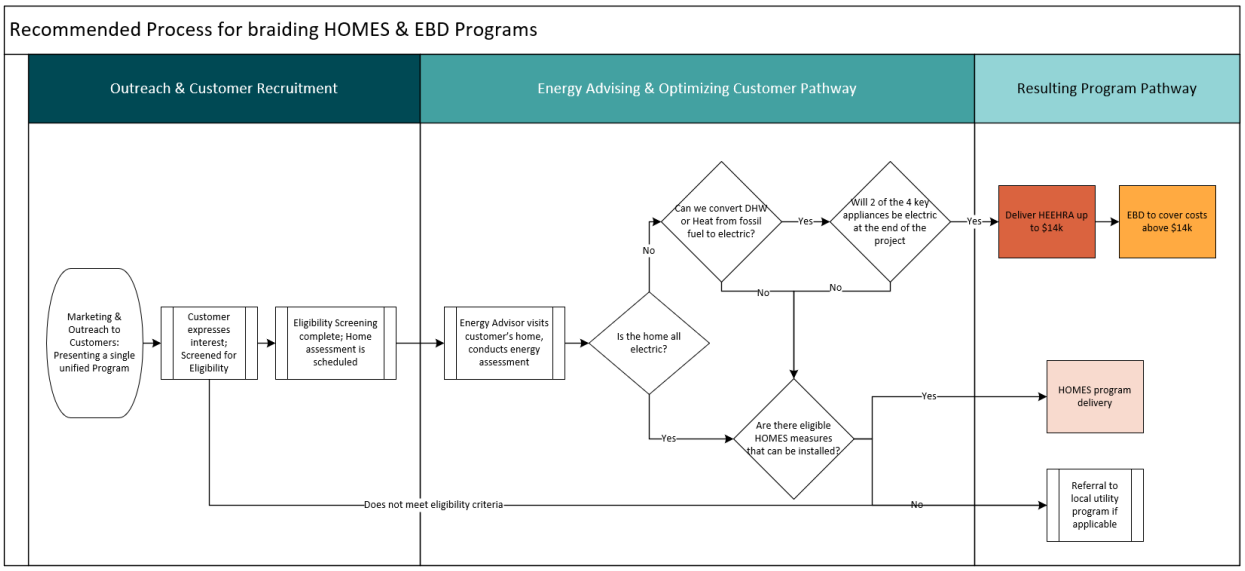
The braided program could use a common intake process for all participants. The marketing and outreach could use the same message to low-income households, and eligibility screening would remain the same, targeting low-income households. If eligible, the first step will be an energy advisor visiting the household for the energy assessment and determination of the optimal path for the participant, the EBD/HEEHRA or the HOMES program.

EBD projects rely on two key eligibility criteria: conversion of the domestic hot water or heating system, and that two of the four of the primary end-uses (space heating, water heating, cooking, and clothes drying) are electric at the time of project completion. All customers who can take this path will be offered it by their energy advisor. We envision the EBD program track should be stacked with the IRA HEEHRA funding to leverage the CEC EBD funding as much as possible. The HEEHRA funding could pay for the heat pump conversions up to $14,000 and the EBD funding could cover the remaining parts of the project.

If the energy advisor determines that the household is not eligible for EBD funds, they would be enrolled as a HOMES project. This process would be seamless for the participant. An ideal HOMES candidate, for instance, would be a low-income customer with electric resistance heat and no fossil fuel appliances in the home. They could receive shell improvements as well as a heat pump and a heat pump water heater, greatly improving the efficiency of their already electric home. The HOMES program could also specifically target electrically heated homes in disadvantaged communities.

No matter whether a house receives HOMES or EBD funding, it is presented to the customer as a single program and 100% of the improvement costs will be covered by the program. **Error! Reference source not found.** shows the proposed two track braided program.

Figure 1. Example of Braided Program Flow



The DOE provided guidelines for the IRA HOMES program, but it will be up to the CEC to decide the details of the program. As discussed above, if the CEC wants to braid the HOMES program with EBD, then the programs will need to be aligned, i.e., target low-income households and cover 100% of the program costs. The DOE requires the HOMES program use a Measured or Modeled energy savings verification method. A comparison of these two verification approaches is provided below in Section 2 under the "Rebate Determination Approach." If the EBD program and the HOMES program target the same households, deliver

the same household efficiency improvements, and cover 100% of the project costs, the programs can be delivered together and create economies of scale and administration.

The foundation of success of the braided program will depend on the experience, expertise and project tracking capabilities of the implementer. As with the EBD program, the implementer will need to have extensive experience delivering residential low-income programs and a strong team of community-based organizations to reach households eligible for the program. The braided program will require strong program design expertise to ensure that the two-track approach's delivery is as seamless to the participant as possible. Critical to the program's implementation will be the need for a robust project tracking platform to document project costs, ensure that projects receive funding from the proper sources, and meet with all U.S. DOE process and reporting requirements.

RFI Question 2: CEC Does Not Incorporate/Braid HOMES Program Funding into the EBD Direct Install Program

Overall Program Design

i. How can HOMES funds that are awarded to deliver residential whole building energy efficiency retrofits, be best utilized to support the state's decarbonization and electrification goals?

Like EBD, HOMES funds should be used to convert residential fossil fuel-based space heating and water heating to electric. For those households that are either currently fully electric or do not qualify for EBD, HOMES funding can be used to significantly reduce energy consumption by updating inefficient electric resistance heating. This approach will lower household energy bills and reduce demand (kW) during critical peak periods.

HOMES funds should be deployed as a statewide program, similar to the statewide HVAC program (Comfortably California). Running HOMES as a statewide program will reduce the administrative costs and ensure that income verification, project tracking, and project reporting is consistent across the state.

As described in Section 1, the HOMES funding should be reserved for customers not eligible for EBD funds. An ideal candidate, for instance, would be a low-income customer with electric resistance heat and no fossil fuel appliances in the home to convert to electric. They could receive shell improvements as well as a heat pump and a heat pump water heater, greatly improving the efficiency of their already electric home.

ii. Aside from ensuring that program participation is a simple process from the resident's point of view and the need to avoid cash outlays, how should the program be structured to support widespread access and uptake in households located in disadvantaged communities or with a low income? How could CEC structure HOMES's pay-for-performance option to reach low-income communities more effectively?

The CEC HOMES program should be structured as a statewide program and leverage the community-based organizations (CBOs) to reach households in disadvantaged communities and low-income households. The CBOs will provide local credibility for the HOMES program and will help tailor the program marketing to specific communities.

As described below, the fixed-cost and pay-for-performance options have their own advantages and disadvantages; however, the pay-for-performance may not be best suited to the low-income market. Pay-for-performance incentive payments are delayed until a pre- and post-billing data analysis can be conducted. The delay in the rebate payments to the contractors can be addressed by having an aggregators "float" the incentive and provide the rebate payment upon project competition. However, providing this "float" to the program will add costs to the program and will reduce the overall incentive amount that the program can provide to the participants.

iii. If funds are provided directly to existing residential efficiency programs, which programs will make the highest impact in terms of market transformation for efficiency and decarbonization technology?

In CLEAResult's experience, statewide programs, such as those supporting residential HVAC and water heating equipment, have the highest potential for impact in terms of market transformation for efficiency and decarbonization technologies. Many of these existing statewide programs leverage partnerships with key supply chain actors such as manufacturers, retailers, distributors and contractors to facilitate the adoption of high efficiency products and technologies that support decarbonization goals. Facilitating these funds through existing statewide programs would minimize administrative costs, reduce market confusion, and benefit local residential programs that currently coordinate incentive layering with existing statewide efforts.

California's statewide HVAC (Comfortably California) and Plug Load and Appliance (Golden State Rebates) Programs are best positioned to make the highest impact on the California market. The statewide reach, combined with the involvement of equipment distributors and installing contractors across the state, presents the greatest opportunity to reach communities typically underserved by California programs. Through direct funding, these statewide programs could offer ease of access to an already engaged contracting community, and distributor participation significantly impacts participation in workforce development activities such as ongoing training and business development. Further, the current deployment of both the Comfortably California and Golden State Rebates programs most closely match the DOE's workflow processes for discounting material purchase at the retail or distributor point of sale.

iv. Leveraging and stacking:

a) *CEC has gathered feedback on how electrification incentives could best be leveraged and stacked with existing programs. Are there additional considerations for best leveraging and stacking residential whole house efficiency rebates, like HOMES with existing programs?*

The CEC should consider how program requirements for equipment and installation standards will need to be aligned. California's ESA Programs, for example, are structured around a strict Installation Standards (IS) Manual. Attempts to stack programs that are not aligned to these

standards will create market confusion, contractor disengagement, and budget variances due to "pick-and-choose" participation in the various programs. The ESA Whole Home Pilot, which is best suited to stacking with HOMES, also faces the challenge of energy modeling standards for California versus DOE guidelines. Alignment on the availability of additional tools in California would increase likelihood of participation and stacking, whereas maintaining a more limited list of tools may prevent scalability of a stacked program.

The CEC should also consider how the timelines in the approval and processing of HOMES rebates may differ from the pace of existing programs. Misaligned timelines will contribute to confusion and frustration. Efforts to align processes and timelines will help ensure successful and effective leveraging of HOMES funding.

Many local residential programs currently coordinate with existing statewide programs to layer incentive funds that reduce upfront equipment costs. Ideally, a statewide approach to the HOMES program would similarly leverage coordination with these programs and benefit from standardized procedures and requirements and economies of scale.

b) Are there considerations for stacking pay-for-performance rebates (see below) with existing programs?

Delays in payment between program installation and performance measurement present a challenge to customers seeking to take advantage of performance-based HOMES rebates. However, upfront, deemed incentives from existing programs may represent an opportunity to offer some financial incentive up front at installation to reduce the amount funds carried until performance payments are realized.

The opportunity for stacking pay-for-performance rebates should be assessed with consideration for local electric rates, climate zone and vintage of local building stock as variables in the potential for projects with qualifying performance potential.

Multifamily properties may not be ideal candidates for performance-based rebates due to the frequent turnover of tenants and challenges of establishing baseline models with high confidence.

c) What are the best strategies for effective and efficient integration into existing programs' administration, websites, and materials?

The best strategies are to:

- Minimize market confusion by presenting a coherent, unified approach and messaging to contractors and customers
- Leverage established and trusted brands
- Rely on the expertise of program implementers and administrators to navigate the complexities of diverse funding sources and divergent requirements
- Leverage recent investments in statewide programs in terms of administration, technology, and marketing materials
- Augment, rather than replace or duplicate, websites or marketing materials

d) Which existing program quality assurance, quality control, workforce, or other implementation standards or best practices should be taken into consideration or used as a model?

Comprehensive QA/QC starts with solid processes, clear expectations, and tools designed to reduce errors and ensure that the installer understands that, beyond equipment selection, quality installation is a requirement. A combination of submission review and in-person or virtual inspections aligned with the requirements of utility programs can accomplish this to ensure equipment and installation standards are met and align with submitted applications. For example, the PG&E ESA Whole Home Pilot sets a strong standard: workforce development via installation contractor training on assessments, energy modeling, and equipment installation; quality assurance during the assessment and energy modeling phase, and quality control through in-person and virtual inspections during and post-installation. Engaging projects throughout the lifecycle presents the greatest opportunity to ensure project quality and future bill savings for the customer.

The CEC should consider a QA/QC process that provides a wholistic and preventive approach to set clear performance standards, monitor to proactively identify opportunities for improvement, and affect improvement on an ongoing basis. The QA/QC process should ensure the installed measures meet eligibility criteria, often done through post-installation inspections. Accurate and detailed tracking of the savings and cost budget should be part of this process. There should be a process to check the accuracy of all documented data, including customer applications, incentives, customer and contractor inquiries, and any other miscellaneous items. The process should include tracking customer and contractor satisfaction. We have found that monitoring customer and contractor satisfaction is essential for facilitating continuous program improvement. Similarly, the CEC should establish processes and procedures to ensure complaints and disputes are resolved to the customer's satisfaction.

Rebate Determination Approach and Rebate Values

i. *What are the advantages and drawbacks of program design using the fixed costs versus pay-for-performance method? Can the pay-for-performance method effectively serve low-income households?*

The following table presents a comparison of the fixed cost (modeled) and the pay-for-performance (measured) approaches to determining energy savings. Both approaches have their advantages, and our comprehensive project and measure tracking platform has been designed to track and record both approaches.

Table 1. Comparison of Fixed Costs vs. Pay-for Performance

Fixed Cost (Modeled)	Pay-for-performance (Measured)
Savings are calculated (modeled) for a typical meteorological year. This avoids the savings being low during a mild year, or high during an extreme year. Changes in household behavior do not impact the savings projections.	Savings are calculated using pre and post billing data. Provides the actual savings achieved during the evaluation period. Savings are weather normalized. Savings are subject to changes in household behavior.

Fixed Cost (Modeled)	Pay-for-performance (Measured)
There is no delay in rebate payment. There is also no incentive for the contract or aggregator to ensure they are doing the best installation work to maximize energy savings.	Payment of rebates delayed until 10-12 months of post-installation billing data is collected and analyzed. Contractor or aggregator takes savings risk and is required to "float" the customer rebate payment. The extra work and rebate "float" adds administrative costs to the program.
Contractors can be trained to use the modeling software.	This approach requires a third-party to perform the measured savings calculations.
This approach reduces the cost of verification.	This approach adds cost to the calculations of the savings.

Both approaches can effectively serve low-income households. The CEC will need to determine if the increase in energy savings accuracy with pay-for-performance approach is worth the additional administrative costs.

ii. What are the options to manage and allocate performance risk and financing costs during the 9 to 12-month post-installation period prior to issuing the rebate? Options should consider at a minimum that: low-income households are not required to utilize personal funds to pay for rebated work, the inability for many contractors, installers, or small businesses to "float" rebate costs, and the cost of capital for aggregators (or some designated entity) to float those costs.

We expect the measured path to utilize aggregators, as they do today in the Tri-County Regional Energy Network (3C-REN) residential program. The DOE's guidance on the Home Energy Rebate Program broadly defines an aggregator as, "an entity that engages with multiple single-family homes and/or multifamily buildings for the purpose of combining or streamlining projects as allowed by the State." The CEC could include a narrower definition, adding it as an entity that receives rebates from the program but does not receive administrative funds.

The aggregators float the entirety of the rebate dollars, where customers receive their rebate at the point of sale and contractors are made whole for their work by aggregators at the time of project completion.

One structure to manage both performance and cost of capital is to pay aggregators their rebate amount on a cadenced schedule (e.g., quarterly) and use the final payment as a true-up based on the actual performance of the project. If the project underperforms and the aggregator owes dollars back to the program, the administrators could use typical claw back procedures, such as reducing the next payment to the aggregator by the amount owed.

In concert with this process, accuracy could be rewarded, where the cadenced payment is higher for those aggregators with accurate forecasting than those without, incentivizing accuracy as a mode to reduce their cost of capital.

iii. For the fixed cost method, how should the CEC approach setting allowable project cost caps? What are similar programs CEC should use as examples?

EBD will set a precedent for covering 100% of project costs.

iv. What is the best way for the CEC to obtain consistent and sufficient documentation for contractors, such as itemized cost breakdowns, while remaining consistent with contractor business practices?

There is a delicate balance between having the necessary documentation and data without creating an unnecessary burden on contractors.

One path to simplicity is through data integration, specifically from the field tools used in the program to the program's system of record. One advantage is eliminating double data entry, where a contractor collects data in one system and is asked to supply it again in a different system. It also avoids adding extra time in asking the contractor to collect data via a mobile device only to have to attach or upload it on a different machine.

For the modeled path, we recommend having the contractors use the field tool that is best for them, as many have a preferred field tool. The system of record for EBD program should have an easy way to accept the HPXML files from their BPI 2400 compliant field tool of choice. This would build a "push button" approach for contractors to get their modeling data – including the project measure details – into the system of record. The measured path would be similar, in that the aggregators would collect field data using a tool that can supply the needed HPXML, with the additional benefit of aggregators helping to carry the administrative burden for contractors.

Eligible Recipients

i. *Should CEC reserve additional HOMES funds for low-income households, beyond the DOE-requirement of 50 percent of total rebate funds? If so, why, and what percent?*

We recommend that 100% of HOMES funding be allocated to low-income households. This will simplify program deployment and administration while simultaneously reaching customers with the highest burden of energy cost. Allocating funding in this way will also more closely complement the EBD program and provide a readily available alternative funding source for those households that will not qualify for the EBD program criteria.

Income Verification

i. *What approaches should CEC consider to verify individual household income that are efficient and accurate, safeguard information, and create a minimal burden for residents? Please provide examples of other programs and why you consider them effective models?*

CEC should use an income verification tool that is designed to seamlessly integrate into a variety of systems and user experiences. The true value of this approach lies in the back-end ability to determine applicant eligibility across a variety of variables and program rules. Customers will answer basic questions based on program requirements and based on those

responses; the tool should determine instant eligibility. Programs that do not use tools to determine instant eligibility see significant abandoned sessions during the application process.

The income verification tool should include the following customer information:

- **Geographic: D**etermine if the customer is in an eligible disadvantaged area by comparing to shape files at the Census Block, Track and Zip Code levels for eligibility confirmation.
- **Categorical Eligibility:** Utilize available data sets to identify customers who qualify through the eligibility categories identified in DOE's IRA guidance.
- **Income Rating Service:** Use a service that offers an API that can automatically verify the income information people provide in real time using an exclusive third-party data partner.
- **Document Review: P**rovide a secondary method to allow customers to be verified through a streamlined document review.

ii. The EBD Direct Install Guidelines established a list of federal and state assistance programs that can be accepted to qualify a resident as low- income (i.e., "Categorical Eligibility"). Should the CEC utilize the same list of programs for Categorical Eligibility for a program(s) developed with HOMES funding? In addition to the programs found in Section E.3. of the Guidelines, are there additional programs CEC should consider?

Yes, the CEC should use the same list provided in Section E.3. of the EBD Guidelines. The more similarities between programs serving the low-income populations, the less confusion there will be in the market.