

DOCKETED	
Docket Number:	22-DECARB-03
Project Title:	Equitable Building Decarbonization Program
TN #:	248479
Document Title:	Energy Solutions comments re Equitable Building Decarbonization Program RFI
Description:	N/A
Filer:	System
Organization:	Energy Solutions
Submitter Role:	Public
Submission Date:	1/20/2023 2:44:58 PM
Docketed Date:	1/20/2023

Comment Received From: Energy Solutions / Teddy Kisch
Submitted On: 1/20/2023
Docket Number: 22-DECARB-03

Energy Solutions comments re Equitable Building Decarbonization Program RFI

Additional submitted attachment is included below.

Energy Solutions Response to Request for Information Regarding the CEC Equitable Building Decarbonization Program

Docket 22-DECARB-03

Submitted January 20, 2023

Energy Solutions respectfully submits a response to the Request for Information (RFI) regarding the Equitable Building Decarbonization Program following the California Energy Commission's (CEC) Scoping Workshop on December 13, 2022. Energy Solutions leads the program implementation team ("TECH Implementation Team") for the Technology and Equipment for Clean Heating initiative ("TECH Clean California" or "TECH Initiative"), a statewide market transformation program driving adoption of heat pump space and water heating technologies.

I. Comment Summary

In July 2022, Governor Newsom outlined ambitious new targets for California's building decarbonization goals, including goals of:

- 3 million climate-ready and climate-friendly homes by 2030 and 7 million by 2035
- 6 million heat pumps by 2030; and
- Directing 50 percent of investments to low-income and disadvantaged communities.

Achieving these goals will require effective coordination and leverage of multiple programs to catalyze market development and installation scale of heat pumps, while maximizing the energy, cost savings and health outcomes of recipients, particularly for low-income households. This approach necessitates building trust with communities, participants, and market actors, and creating positive experiences that will build momentum from this initial deployment towards these long-term goals. We detail below select areas in which our experience may inform the Equitable Building Decarbonization program:

- **Streamlining the Customer and Participant Experience.** The Equitable Building Decarbonization programs will be complemented by and interacting with other sources of building decarbonization funding, such as the federal efficiency and electrification rebates from the IRA, local programs, and statewide programs

including the Low-Income Weatherization Program (LIWP) and TECH Clean California. Creating a positive customer and participant experience will require streamlining across these programs, such as customer eligibility, equipment standards, contractor qualifications, and incentive layering.

- **Utilizing Meter Data to Maximize Benefits and Mitigate Risk to Low-Income Households.** Some households may not see positive bill impacts from electrification measures, and impacts can vary widely even within a geographic area or census tract. Since the direct install program can only fund a small fraction of home retrofits relative to the statewide need, meter-based targeting can serve as a critical tool to identify the best candidates, as well as avoid active outreach to candidates that could see negative bill impacts. In the initial phases of the low-income program, this approach can help build and maintain trust with communities and ensure positive outcomes.

II. Responses to CEC's Request for Information

Direct Install Program Criteria (Question 2a): What best practices, program elements, or state actions would facilitate layering or leveraging different program offerings?

Incentive Program (Question 11d) How should incentives from this project interact with other incentives such as those available from the direct install program, utility programs, tax credits, etc.?

The Equitable Building Decarbonization Programs will be one of multiple programs administered to promote building decarbonization within California. With numerous potential state, regional, federal and utility incentives available for decarbonization measures, effective coordination and among administering organizations is critical to create a streamlined and positive participant experience, both for the supply chain and for residents. Some guiding principles for incentive layering¹ include:

¹ Similar principles for incentive layering are outlined in in the CPUC Decision 21-11-002 <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M421/K107/421107786.PDF>

1. **Ease of Participation:** Streamlining both the initial enrollment process and ongoing application submission can minimize participation barriers. For example, for TECH, contractors can enroll through Efficiency First's registration portal in about fifteen minutes provided they have all required documentation ready. Efficiency First's contractor license portal receives automated updates from the relevant licensing boards, ensuring that all participating contractors' licenses are up to date without requiring them to take time to submit additional documentation on an ongoing basis. For individual applications, a best practice is creating an application process that can be completed and uploaded while in the field, which aligns with contractor workflow and minimizes additional processing time.
2. **Complementary Incentives:** Incentive types or sources should complement each other by addressing distinct market needs or existing program limitations. For example, the IOU Energy Savings Assistance (ESA) programs provide significant home upgrades for income-qualified households but can be limited by programs caps on remediation work. To ameliorate this issue, TECH has collaborated with the ESA programs to provide complementary incentives that support remediation work and enable ESA projects to move forward that would otherwise not be completed.
3. **Ongoing Coordination among Administrators / Implementers:** Close coordination among various utilities, regional organizations and state agencies administering incentive programs across a wide range of program elements is critical to achieving a positive participant experience. For example, the TECH Initiative coordinates with a wide range of entities including investor owned utilities, third party implementers, municipal utilities, regional energy organizations, and community choice aggregators. This ongoing engagement covers topics such as program planning, measure selection and incentive amounts, trade ally / market actor outreach, equipment standards, customer eligibility (such as income-level standards) and contractor qualifications. Many of these incentive programs can be tracked through the Building Decarbonization Coalition's Incentive Finder at www.switchison.com. While there may be unanticipated barriers or situations where integration is not feasible, coordination and commitment to align where possible can improve the outcome and experience for participants.

Direct Install Program Criteria (Question 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?

Meter data analysis can enable geographic targeting of specific neighborhoods or communities. However, at current electric and natural gas rates, electrification may increase bills for a portion of the population, and GHG emissions reductions from electrification can vary widely across projects. Data-driven geographic targeting can be a useful tool to maximize the benefits of electrification and minimize any potential adverse effects such as unintended bill increases, which are particularly important when considering low-income customers.²

The TECH Implementation Team is utilizing interval meter data, combined with demographic data, building location and rate schedule to identify residences most likely to benefit from a heat pump installation. TECH is currently conducting a series of targeting activities and plans to publicly share results as we finalize these efforts later this year. For example, targeting data can be leveraged to identify the specific lists of customers in DAC census tracts on CARE rates who are currently burdened with cooling costs that represent over 40% of their total annual energy usage, while using minimal gas heating. These customers are optimal candidates for a high efficiency heat pump HVAC system installation, which is likely to result in significant annual bill savings from cooling and would substantially offset minor heating cost increases from fuel switching. These customers will also likely benefit from additional holistic efficiency measures to make maximize the benefits of the new heat pump HVAC system.

When considering geographic targeting for an entire community rather than an individual household, it is important to note that we have consistently observed wide ranges of space heating and cooling usage within the same climate zone, ZIP code, and even census tract due to

² While this is an important general principle, there may be special cases for inclusion such as a) households that do not currently have air conditioning but face extreme heat or b) customers that do not have comprehensive meter data but may also benefit, such as propane heating customers. The types of special cases should be developed with community consultation to ensure buy-in.

variations in individual comfort and behavior. For example, recent analysis showed that the proportion of natural gas used for heating varied by over 150% within a single randomly selected census tract in Merced County. Thus, even customers within a census tract may have widely varying bill impacts under current rates.

The wide variation in local outcomes may suggest a dual approach where the main program focuses on targeting high opportunity individuals and achieving maximum benefits to participants, ensuring occupant comfort is improved and utility bills do not increase. In parallel, the Program could potentially create a separate, more holistic geographic targeting effort such as electrifying an entire neighborhood or community. To address the challenge of varying bill impacts, geographic targeting efforts could also be paired with monitoring of bill impacts and some form of bill protection to guard against unintended bill increases.

Additional Data Needs (12a) What data not mentioned above should be collected for tracking program performance and evaluating program success?

While the RFI noted that smart meter data will be used to track program success, it is important to highlight the important link between customer targeting and measuring post-install impacts. Energy usage impact analysis requires a universal customer identifier such as service account ID and/or meter ID to link customer pre-installation, historic data (used for targeting), and post-installation data (used for measurement and verification). Without a service account or meter ID, it can be difficult to accurately connect pre- and post-installation data. However, getting premise or meter ID from households can be challenging and time consuming, particularly for market rate incentive programs. For example, TECH currently uses customer address to match to a service account or meter ID, rather than requiring the service account or meter ID to be provided by the contractor on the incentive application. The Equitable Building Decarbonization Program will benefit from easy access to utility service account and meter ID lists, which would enable pre- and post-install comparisons by this universal customer identifier, regardless of if the unique identifier is directly collected by the program or determined by data matching techniques.

With this unique identifier, post-install data can be compared to pre-installation forecasts and can be used to iteratively improve savings estimates based on pre-installation home

characteristics. For example, this type of analysis can model how pre-installation air conditioning usage is correlated to post-installation bill impacts, GHG impacts, and grid value of heat pump retrofits for market rate and/or low-income customers by climate zone. These analyses will also demonstrate what factors most strongly correlated with desired impacts that are used to evaluate program success (decreased peak demand and grid strain, no bill increases, etc.), and iteratively improve program targeting. Similarly, evaluation of pre- and post- installation meter data linked by a unique identifier can be used to identify factors that contribute to adverse outcomes and inform future efforts to mitigate them. This approach is likely to be particularly insightful for understanding impacts for low-income direct install customers, where projects are often comprised of comprehensive measure packages and entail more detailed data collection than single-measure, market rate programs.

An additional metric that CEC could track is occupant comfort. The Equitable Building Decarbonization program has multiple priorities including achieving greenhouse gas reductions, bill savings, and increased occupant comfort. It may not always be feasible to maximize all three of these factors simultaneously for a given project, and so it is critical to have robust occupant comfort measurement so that the CEC can understand their interrelationships and how these factors influence one another.

III. CONCLUSION

Thank you for the opportunity to provide input on the Equitable Building Decarbonization Program. We look forward to ongoing dialogue with the CEC and the broader stakeholder community throughout this process.

Dated January 20, 2023

Respectfully,

/s/ Teddy Kisch

Teddy Kisch

Senior Fellow, Decarbonization Strategy

Energy Solutions

449 15th Street

Oakland, CA 94612

tkisch@energy-solution.com