# Energy Efficiency Objectives and Metrics: Cal Advocates Proposal

The sections below outline proposed approaches to the new Market Support and Equity segments of the Energy Efficiency portfolio. We start by describing objectives for each segment, clarifying and expanding on guidance in D.21-05-031. Clear objectives will help facilitate targeted program and portfolio design that best addresses the needs of Californians and the State’s policy objectives. Refined objectives also facilitate the design of specific metrics for measuring success toward these goals; our proposal below includes various metrics for discussion, although we do not see this as an exhaustive list. As a principle, we seek metrics that seek to measure outcomes rather than merely outputs.

# Market Support

**Decision Language**

From D.21-05-031, p. 14: “Market Support: Programs with a primary objective of supporting the long-term success of the energy efficiency market by educating customers, training contractors, building partnerships, or moving beneficial technologies towards greater cost-effectiveness.”

**Cal Advocates Proposal: Segment Objectives**

Market Support: Programs with the primary objective of supporting the long-term success of the energy efficiency market in achieving cost-effective and sustainable energy savings, greenhouse gas reductions, and ratepayer benefits.

More specifically:

1. Market Support programs build the foundation for future cost-effective energy savings.
2. Market Support programs facilitate the achievement of long-term, deep decarbonization, including through fuel substitution and advancement of innovative and emerging technologies.

**Illustrative Metrics**

**1. Market Support programs build the foundation for future cost-effective energy savings.**

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| **Desired Segment Outcome** | **Metrics** |
| Customers are aware of and enthusiastic about energy savings and energy savings opportunities. | * Conversion rate (of customers reached by program, how many actually enrolled/installed measures) * Metrics NOT appropriate: Those purely measuring program outputs rather than outcomes, e.g. # of impressions, volume of marketing materials shared, etc. |
| Contractors are aware of, enthusiastic about, and have the necessary technical capabilities to install energy efficiency upgrades. | * Conversion rate (of contractors reached by a program, how many actually installed target measure)   + Persistence: Percentage of trained contractors who continued to offer measure in years following intervention * Where relevant certification programs exist, # and percentage of contractors certified * Metrics NOT appropriate: Those purely measuring program outputs rather than outcomes, e.g. # of impressions, volume of marketing materials shared, etc. |
| Energy saving technologies are cheaper and/or more effective. | * Measure adoption rates * Retail availability of cheaper/more effective technologies * Change in CPI-adjusted cost of measure over time (larger decrease is better) |

**2. Market Support programs facilitate the achievement of long-term, deep decarbonization, including through fuel substitution and advancement of innovative and emerging technologies.**

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| **Desired Segment Outcome** | **Discussion** |
| Lifecycle GHG reductions | Support technologies that provide greater lifecycle GHG emissions reductions than currently available technologies. |
| Electrification and fuel substitution | Support electric and fuel substitution technologies. To pass Part One of the fuel substitution test, the life-cycle source energy consumption of the measure technology must be lower than the life-cycle source energy consumption of the baseline technology. To pass Part Two of the fuel-substitution test, life-cycle CO2 emissions must be lower for the measure technology than for the baseline technology (D.19-08-009). |
| Energy savings | Support technologies that provide greater lifecycle energy savings and therefore GHG emissions reductions than currently available technologies. |
| Innovative technologies | Increase the uptake of cost-effective energy efficiency through advancing a novel technology, marketing strategy, or delivery approach. Pursue innovative processes and partnerships that identify, evaluate, and/or introduce emerging technologies. |

# Equity

**Decision Language**

From D.21-05-031, pp. 14-15: “Equity: Programs with a primary purpose of providing energy efficiency to hard-to-reach or underserved customers and disadvantaged communities in advancement of the Commission’s Environmental and Social Justice (ESJ) Action Plan; Improving access to energy efficiency for ESJ communities, as defined in the ESJ Action Plan, may provide corollary benefits such as increased comfort and safety, improved indoor air quality, and more affordable utility bills, consistent with Goals 1, 2, and 5 in the ESJ Action Plan.”

**Cal Advocates Proposal: Segment Objectives**

Equity programs will:

1. Directly support hard-to-reach and/or underserved individuals, households, and communities in realizing near and long-term energy savings and greenhouse gas reduction benefits.
2. Prioritize serving customers with the greatest need.
3. Support equitable decarbonization for hard-to-reach and/or underserved individuals, households, and communities.

**Illustrative Metrics**

**1. Directly support hard-to-reach and/or underserved individuals, households, and communities in realizing near and long-term energy savings and greenhouse gas reduction benefits.**

**2. Prioritize serving customers with the greatest need.**

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| **Sector** | **Metrics** | **Description** |
| **Commercial** | **Small Businesses in DACs**   * % of customers in this category * Of total category statewide, % served | California Department of General Services definition of “small business” uses the following criteria:   * Be independently owned and operated; * Not dominant in field of operation; * Principal office located in California; * Owners (officers, if a corporation) domiciled in California; and * Including affiliates, be either:   + A business with 100 or fewer employees;   + An average annual gross receipts of $15 million or less, over the last three tax years;   + A manufacturer with 100 or fewer employees; or   + A microbusiness. A small business will automatically be designated as a microbusiness, if gross annual receipts are less than $3,500,000 or the small business is a manufacturer with 25 or fewer employees. |
| **Agricultural** | **Socially disadvantaged farmers**   * % of customers in this category * Of total category statewide, % served | Farmers or ranchers who are members of a “socially disadvantaged group”. “Socially disadvantaged group” means a group whose members have been subjected to racial, ethnic, or gender prejudice because of their identity as members of a group without regard to their individual qualities. These groups include all of the following:   * African Americans. * Native Indians. * Alaskan Natives. * Hispanics. * Asian Americans. * Native Hawaiians and Pacific Islanders. |
| **Agricultural** | **Beginning farmers and ranchers**   * % of customers in this category * Of total category statewide, % served | A beginning farmer is an individual or entity who:   * Has not operated a farm for more than 10 years; * Substantially participates in the operation; * For farm ownership loans, the applicant cannot own a farm greater than 30 percent of the average size farm in the county, at time of application. * If the applicant is an entity, all members must be related by blood or marriage, and all entity members must be eligible beginning farmers. |
| **Agricultural** | **Limited resource farmers or ranchers**   * % of customers in this category * Of total category statewide, % served | The term “Limited Resource Farmer or Rancher” means a participant:  With direct or indirect gross farm sales not more than the current indexed value in each of the previous two years, and who has a total household income at or below the national poverty level for a family of four, or less than 50 percent of county median household income in each of the previous two years. |
| **All** | **Disadvantaged workers employed** | “Disadvantaged Worker” means a worker that (1) has a referral from a collaborating community-based organization (CBO), state agency, or workforce investment board; or (2) lives in a ZIP code that is in the top 25% in one or more of the five socioeconomic indicators as defined in the California Office of Environmental Health Hazard Assessment’s CalEnviroScreen Tool. |
| **Residential** | **Gas and Electric affordability ratios (AR)**   * % of program customers below a certain threshold * Of total category statewide, % served by program | AR is calculated as essential services/(household income minus non-discretionary expenses). Equity programs should be focused on customers exhibiting the greatest practical need for interventions. |
| **All** | **Benefits per $, generally and specific to categories described above**   * Energy savings * GHG reductions | Cost-efficiency of Equity programs should be measured in order to ensure maximum benefits for target populations relative to budget invested. |

**3. Support equitable decarbonization for hard-to-reach and/or underserved individuals, households, and communities.**

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| **Metric** | **Description & Rationale** |
| **GHG emissions reductions** | Near and long-term GHG reductions for hard-to-reach and/or underserved populations including but not limited to the categories described above. Aligns with the ESJ Action Plan as described in D.21-05-031. |
| **Deployment of electric and gas-to-electric fuel substitution measures** | CARB’s Resolution 20-32 found that indoor air pollutants from natural gas appliances are tied to reduced indoor air quality and that “(DACs) are at higher risk of exposure to unhealthy levels of indoor and outdoor air pollution” and “suffer disproportionately from the serious health impacts caused by exposure to elevated levels of pollution.” |