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**CALIFORNIA  
ENERGY COMMISSION**



## **PROGRAM GUIDELINES**

# **Building Initiative for Low-Emissions Development (BUILD) Program, Second Edition**

(Senate Bill 1477, 2018)

**Gavin Newsom, Governor**  
February 2025 | CEC-300-2024-022-F



# California Energy Commission

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## **DISCLAIMER**

**These proposed guideline revisions are anticipated to be considered by the California Energy Commission (CEC or Energy Commission) at an upcoming business meeting. They will become final upon approval by California Public Utilities Commission (CPUC) staff in accordance with the process specified in CPUC Resolution E-5116. The requirements in these guidelines are based on applicable law — including Public Utilities Code Sections 748.6, 921, and 921.1 and CPUC Decision 20-03-027. As a staff proposal, the proposed guideline revisions do not represent the views of the CEC or of the State of California. This document has not been approved by the CEC nor has the CEC passed upon the accuracy or adequacy of the enclosed information.**

## ABSTRACT

The Building Initiative for Low-Emissions Development Program is a residential building decarbonization program established by Senate Bill (SB) 1477 (Stern, Chapter 378, Statutes of 2018). It provides technical assistance and financial incentives for new, low-income residential building projects using near-zero-emission building technologies to reduce greenhouse gas (GHG) emissions from buildings and reduce energy demands of a building on the electrical or gas distribution system. The program is further governed by California Public Utilities Commission (CPUC) Decision 20-03-027, which also authorized and requested the California Energy Commission (CEC) to serve as the program administrator. These guidelines establish the rules for the program, including eligibility requirements, participation process, and incentive structure.

**Keywords:** SB 1477, building decarbonization, BUILD, heat pump, water heater, low-income, technical assistance, TECH, low-emission building, near-zero-emission technology, CPUC, D.20-03-027

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# What's New in These Guidelines?

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The Building Initiative for Low-Emissions Development (BUILD) Program Guidelines - Second Edition revisions are summarized below and include changes to increase program access, improve the accuracy of incentive calculations, and update the utility cost savings method and equipment requirements. The BUILD Program Guidelines - Second Edition are effective upon adoption by the CEC at a publicly noticed business meeting. Once in effect, these Guidelines apply to all applicants and projects.

In addition to the substantive edits discussed below, non-substantive edits (e.g., formatting, word choice, document "clean up") are made throughout.

## **Eligible Applicant (Chapter 2, Section A.1; Chapter 5, Section A.2(b)(vii))**

The proposed modification allows an eligible applicant to collectively demonstrate at least five (5) years of development experience.

## **BUILD Calculator Pathway (Chapter 2, Section A.6; Chapter 4, Section B; Appendix B, Section B.1)**

The proposed modification removes the pathway for applicants to use the BUILD Calculator for Step 1 (Design Reservation) unless the applicant is a new adopter.

## **Step 3 Completion Document Requirements (Chapter 5, Section A.4.a.iv)**

The proposed modification ensures that projects without virtual net energy metering (VNEM) agreements meet the modeled resident utility cost savings requirements by a demonstration of individual meters or proof of a measure installation and a rental/lease agreement provision/addendum template for all units subject to BUILD Program affordability requirements. The provision/addendum would provide the Custom Path Tool's modeled resident utility cost difference(s) as a utility rent/lease credit for no less than 5 years. This provision is only for projects requiring a Custom Path Tool tenant photovoltaic (PV) allocation and located in a utility service territory without a VNEM or equivalent program.

## **Step 3 Completion Document Requirements (Chapter 5, Section A.4.a.xiii)**

The proposed modification removes the requirement to list all premise and service point IDs and revises the requirement for meter IDs if infeasible to obtain by certificate of occupancy issuance.

## **Project Completion and Final Payment Expiration Date (Appendix A, Section E)**

The proposed modification clarifies the expiration date for project completion and final payments.

## **Permission to Operate Verification (Appendix A, Section F.3)**

The proposed modification clarifies the timeframe for verification of the permission to operate (PTO[s]) for the project for any installed solar.

## **Unitary Heat Pump Water Heater (Glossary; Appendix B, Section C, Table B-3)**

The proposed modification provides more context for unitary heat pump water heaters (HPWHs) and clarifies the JA13 kicker incentive is only for unitary systems.

## **Central Heat Pump Water Heater (Appendix B, Section B, Table B.1)**

The proposed modification expands on the minimum requirements for central HPWHs.

## **Space-Conditioning Equipment (Appendix B, Section B, Table B.1)**

The proposed modification updates the minimum requirements for space-conditioning equipment and provides clarifying language for electric resistance space- and water-heating equipment.

## **Electric Vehicle Supply Equipment (Appendix B, Section C, Table B.3)**

The proposed modification updates the minimum requirements for electric vehicle supply equipment.

## **Modeled Resident Utility Costs Savings Methodology (Appendix C, Section D.2, Tables C.1 and C.2; Section E.1; Section G)**

The proposed modification updates the methodology by:

- Updating the electric and gas utility rates to 2023.
- Updating the treatment of excess PV generation to align with net billing tariff (NBT).
- Adding context for PV calculations in the Custom Path Tool.

# CHAPTER 1:

## Program Overview

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### A. Summary of Key Program Design Elements

The Building Initiative for Low-Emission Development (BUILD) Program is a residential building decarbonization program providing incentives and technical assistance to support the adoption of advanced building design and near-zero-emission technologies in new all-electric low-income homes. BUILD incentives are based on the additional reduction of greenhouse gas (GHG) emissions compared to current building standards. The governing statute, Senate Bill (SB) 1477, (Chapter 378, Statutes of 2018)<sup>1</sup>, for BUILD and CPUC D.20-03-027, also require that projects receiving BUILD incentives do not result in higher utility bills for building occupants.

BUILD is designed to support market transformation toward building decarbonization and reduce the upfront costs and perceived risk of adopting new technologies, in the challenging and complex affordable and low-income housing sector. BUILD offers technical assistance to support project planning and educate developers, architects, contractors and other stakeholders about new technologies and all-electric building design. A new adopter design award provides an eligible applicant constructing their first all-electric, low-income multifamily building with up to a \$100,000 design award to defray direct design costs. This award is provided with the goal of impacting a developer's early decision-making towards low-carbon choices in the housing development process.

To ensure the BUILD Program reduces GHG emissions and results in reduced utility costs for building occupants, Program guidelines, initially adopted in 2022, include a methodology to evaluate project design, evaluate the energy measures required, estimate the GHG reduction value, and calculate the incentive amount. The incentive amount considers the design of a project and is scaled to the estimated GHG reduction. This estimate considers efficiency measures, solar systems beyond California Building Energy Efficiency Standards (Energy Code)<sup>2</sup> requirements, and other technologies that further reduce GHG emissions. In addition, the program is designed to be flexible to accommodate the complexity and challenges of the low-income housing market, by offering extended reservation periods and progress payments for costs incurred throughout the process of planning and constructing an eligible building.

The approach to the statutory requirements, technical assistance, outreach strategies, and incentive awards of the BUILD Program were developed with the goal of

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1 [SB-1477 Low-emissions buildings and sources of heat energy, 2017-2018](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB1477),  
[https://leginfo.ca.gov/faces/billNavClient.xhtml?bill\\_id=201720180SB1477](https://leginfo.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB1477)

2 Building Energy Efficiency Standards adopted by the CEC in Title 24, Part 6, of the California Code of Regulations.

transforming and decarbonizing the low-income residential building market space and providing clean energy homes to California’s vulnerable populations.

## **B. Background**

In 2018, [SB 1477](#) authorized two building decarbonization programs: (1) Building Initiative for Low-Emissions Development Program (BUILD) and (2) Technology and Equipment for Clean Heating Initiative (TECH). These two programs encourage the development and deployment of near-zero-emission building technologies to reduce GHG emissions from residential buildings.

SB 1477 requires the CPUC, in consultation with the CEC, to develop and supervise the administration of the BUILD Program, codified under Public Utilities Code (PUC) Sections 748.6, 921, and 921.1. The BUILD Program provides incentives for installing near-zero emission building technologies in new low-income residential buildings to reduce GHG emissions significantly beyond what otherwise would be expected from implementing the Energy Code. PUC Section 921.1, in part, places specific programmatic emphasis on “new low-income residential housing,” requires low-income residential building projects to be offered technical assistance, and further requires that occupant utility bills not increase as a result of participation in the BUILD Program. PUC Section 921.1 (d)(4) authorizes the development of program guidelines to include program eligibility and evaluation requirements and enumerates certain project requirements and minimum metrics to be included in program evaluation. PUC Section 921.1 (d)(5) requires implementation of an outreach plan to encourage participation in the program.

In January 2019, the CPUC instituted a new rulemaking on building decarbonization, R.19-01-011. Under this proceeding, the CPUC adopted D.20-03-027, on March 26, 2020, establishing a framework and requirements for the BUILD Program and Technology and Equipment for Clean Heating (TECH) Initiative authorized by SB 1477. Through this process, the CEC was named the administrator of the BUILD Program and directed to develop and submit an implementation plan and develop guidelines for CPUC consideration. Approved by the CPUC in April 2021, and updated in July 2024, the BUILD Program [Implementation Plan 2024 Update](#) contains the broad policy parameters and direction, which are expounded and clarified by these guidelines.

CPUC D.20-03-027 reserved \$80 million for the BUILD Program and established that a minimum of \$60 million of the funding must be used for incentives for low-income residential housing, as defined in PUC Section 921 (d).

## **C. Program Budget**

BUILD Program funding is authorized under SB 1477 with an overall budget for the BUILD and TECH Programs of \$200 million. Funding is derived from the revenue generated from the GHG emission allowances directly allocated to gas corporations and consigned to auction as part of the California Air Resources Board’s (CARB) Cap-and-Trade Program and accrues over a four-year period, from Fiscal Year (FY) 2019–2020 to FY 2022–2023. D.20-03-027 provided more detailed budget allocations for each of the

two programs, appropriating 40 percent of the \$200 million budget for the BUILD Program equal to \$80 million.

There is no specific restriction on annual spending. However, to meet requirements of the funding source, each year’s accrual must be committed within 10 years of allocation or returned to ratepayers as part of the residential California Climate Credit if unspent.<sup>3</sup> BUILD budget details are shown in Table 1.1.

**Table 1.1: BUILD Program Budget**

<b>Budget Item</b>	<b>Amount</b>
Program Costs (direct incentives for low-income residential housing)	\$60,000,000 (no less than)
Other BUILD Program Costs	\$10,000,000 (no less than)
Technical Assistance Provider — up to \$8 million	
New Adopter Design Award — up to \$2 million	
Administrative Costs	\$8,000,000 (no more than)
Joint Evaluation Cost Share	\$2,000,000 (no more than)
<b>Total</b>	<b>\$80,000,000</b>

Source: CPUC D.20-03-0272F<sup>4</sup>

To comply with CARB regulations regarding cap-and-trade funds and funding allocation requirements in D.20-03-027, spending for the BUILD Program must be proportionally directed to the gas corporation service territories from which the funds are derived. The percentage allocation for program spending in each gas corporation service territory will be consistent with each gas corporation’s allocation of cap-and-trade allowances, as shown in Table 1.2.

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<sup>3</sup> CPUC D.20-03-027 established that BUILD funds would be considered spent upon being set aside for approved projects (pg.104)

<sup>4</sup> [CPUC D.20-03-027](http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K772/331772660.PDF), p. 31, at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K772/331772660.PDF>.

**Table 1.2: BUILD Program Budget Allocation by Natural Gas Territory**

<b>Natural Gas IOU Territory</b>	<b>Allocation Percentage</b>
Southern California Gas Company	49.26%
Pacific Gas and Electric Company	42.34%
San Diego Gas & Electric Company	6.77%
Southwest Gas Corporation	1.63%
<b>Total</b>	<b>100%</b>

Source: CPUC D.20-03-027

Spending for the BUILD Program with statewide or cross-territory benefits, including administrative and evaluation spending, shall be attributed to the gas corporation service territories in proportion to their original funding contribution. Unspent funds remaining as of July 1, 2033, will be returned to the ratepayers of the respective gas corporations.



# CHAPTER 2: Eligibility

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## A. BUILD Program Eligibility

### 1. Eligible Applicant

An eligible applicant is a private, nonprofit, tribal government, California tribal organization, or public owner or developer of an eligible residential building that meets the BUILD Program Guidelines requirements.

- a. The applicant must collectively demonstrate at least five years of development experience and developed and received a certificate of occupancy for at least one deed-restricted multifamily residential property in California, or at least one residence, which meets the income requirements in Chapter 2 Section A.4 below.
- b. The applicant must be the legal entity or combination of legal entities with continuing control of the residential building that is deed restricted. For properties meeting the definition of PUC Section 921 (d)(2) that are subject to a resale restriction or equity-sharing agreement, the applicant must be the public entity or nonprofit housing provider organized under Section 501(c)(3) of the Internal Revenue Code with whom the homeowner has executed the resale restriction or equity-sharing agreement. Where the applicant is or will be organized as a limited partnership, the applicant with "continuing control" of the building is defined as the general partner or general partners who have effective control over the operation of the partnership, or, if the general partner is controlled by another entity, the controlling entity.
- c. An eligible applicant does not include the seller of the real property to be developed as the residential building unless the seller will retain control of the project for the period through project construction to completion and all BUILD Program requirements have been met.

### 2. Eligible Buildings

BUILD incentives are available only to residential buildings that meet one of the following:

- a. A planned or newly constructed building never-before used or occupied for any purpose.<sup>5</sup>
- b. Any work, addition to, remodel, repair, renovation, or alteration of any building(s) or structure(s) when 50 percent or more of the exterior weight bearing walls are removed or demolished.<sup>6</sup>

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<sup>5</sup> Energy Code Section 100.1.

<sup>6</sup> Chapter 15.06.030 Section R202 of the California Residential Building Code.

- c. An existing building repurposed for housing, whose original use was not residential.<sup>7</sup>

Within the preceding three categories, eligible residential building types include the following, subject to the other limitations in these guidelines:

- Single-family homes
- Duplexes
- Triplexes
- Condominiums
- Multifamily buildings
- Dormitories
- Residence hotels
- Assisted living facilities
- Homeless or transient housing
- Farmworker housing
- Mixed-use buildings, which include residential units. Only the residential portion, including the associated common areas, will be included in the calculation of incentives.

Ineligible residential homes are building types that are not included in the Energy Code.

### **3. Required Project Fuel Source**

D.20-03-027 requires projects receiving BUILD incentives to be eligible residential projects that are all-electric and have no hookups to the gas distribution system.<sup>8</sup> Therefore, electricity shall be the energy supply or fuel source for all space heating and cooling, water heating, cooking, and clothes drying. Under the BUILD Program Guidelines, the use of other fuels as the site energy of a building, including, but not limited to, natural gas, renewable gas, and propane, is prohibited unless required by the California Fire Code for emergency building safety.

- a. Eligible residential buildings cannot have gas service lines installed to the building from any main gas lines located on-site that preexisted construction of the project.
- b. Existing buildings, consistent with Sections A.2.b. and A.2.c. above, must cap or remove the gas lines connected to the building.
- c. Outdoor community spaces, not attached to the building envelope (for example, spaces for BBQs, fire pits), are excluded from this provision.

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<sup>7</sup> [CPUC D.20-03-027](#), Ordering Para 19, p. 110, at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K772/331772660.PDF>

<sup>8</sup> Id.

#### 4. Low-Income Residential Housing Income Limit Requirements

- a. **Multifamily.** A building of at least two rental housing units that is operated to provide deed-restricted low-income residential housing and meets one or more of the following conditions:
- i. The property is in a disadvantaged community as defined under Section 39711 of the Health and Safety Code.<sup>9</sup>
  - ii. The property is in a low-income community, defined as a census tract or equivalent geographic area defined by the United States Census Bureau in which at least 50 percent of households have an income less than 60 percent of the area median gross income.<sup>10</sup>
  - iii. At least 80 percent of the households living in the building have incomes at or below 60 percent of the area median income.<sup>11</sup>
- b. **Consistency with affordable multifamily financing sources.** For the income requirements for Sections 4.a.i., and 4.a.ii., the affordable income limits of the projects must be consistent with the requirements of the affordable multifamily financing source or financial assistance for the project, as described by PUC Section 2852(a)(3)(A)(i). This provision accommodates the income limits of commonly used affordable housing financing and assistance programs, including but not limited to, those administered by
- California Tax Credit Allocation Committee,
  - California Debt Limit Allocation Committee,
  - Federal Housing Financing Agency,
  - California Department of Housing and Community Development,
  - California Strategic Growth Council,
  - California Housing Finance Agency,
  - United States Department of Housing and Urban Development,
  - United States Department of Agriculture,
  - local government, and
  - tribal housing authorities.

Notwithstanding the foregoing, the length of any affordability deed restriction of low-income residential housing for a multifamily project receiving BUILD incentives cannot be less than 15 years.<sup>12</sup>

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9 A community identified as a disadvantaged community under Section 39711 of the Health and Safety Code.

10 A census tract or equivalent geographic area defined by the United States Census Bureau in which at least 50 percent of households have an income less than 60 percent of the area median gross income.

11 As defined in subdivision (f) of [Section 50052.5 of the Health and Safety Code](#).

12 Project meeting Chapter 2, Section A.4.a.iii please refer to Appendix A Section F.5 for project requirements regarding the required recorded regulatory agreement and deed restriction.

- c. **Single-family.** A low-income residence, as defined in PUC Section 2852 (a)(3)(C), is a residence sold at an affordable housing cost to a lower-income household that is subject to a resale restriction or equity-sharing agreement for which the homeowner does not receive a greater share of equity than described in Section 65915(c)(2) of the Government Code,<sup>13</sup> with a public entity or nonprofit housing provider organized under Section 501(c)(3) of the Internal Revenue Code<sup>14</sup> that has as the stated purpose in the associated articles of incorporation on file with the office of the Secretary of State to provide affordable housing to lower-income households.

## 5. Utility Territory Limits for Program Incentives

- a. To receive incentives through the BUILD Program, the project must be in one of the identified gas corporation territories. See Figure E.1 in Appendix E for a general map of service territories for reference. Incentive awards shall be allocated proportionally to the gas corporation service territories from which the funds are derived.
- b. Projects may be served by any electricity supplier, including investor-owned or publicly owned utilities, community choice aggregators, or other retail suppliers.

## 6. Modeled Resident Utility Costs

Under PUC Section 921.1 (d)(3), projects receiving incentives under BUILD must not result in higher utility bills for building occupants than would have otherwise been realized without the program.

To comply with PUC Section 921.1(d)(3), eligible applicants must demonstrate that the project will result in at least a 5 percent reduction of modeled residents' utility cost savings in the first year of building occupancy.

- a. **Resident utility cost modeling options.** Eligible applicants must use the Custom Path Tool pathway to demonstrate compliance with this program requirement. The BUILD Calculator pathway is available only for new adopters for Step 1 (Design Reservation). For more information on the pathways, please see the Incentive Calculations section (Chapter 4 Section B).

Should the project model not demonstrate a 5 percent reduction in resident utility costs compared to a new mixed-fuel building at the time of design or construction reservation (see Chapter 5), the building design must be modified to comply with the resident utility costs savings requirements. Modifications should consider envelope improvements, high-performance materials and appliances, and the installation of photovoltaic (PV) solar energy equipment that directly offsets and is assigned to the future residents' utility costs, or a combination of these to achieve

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13 Public Utilities Code Section 2852 (a)(3)(C) further references [Government Code Section 65915 \(c\)\(2\)](#) in defining the share of equity.

14 Public Utilities Code Section 2852 (a)(3)(C) further references [Internal Revenue Code Section 501\(c\)\(3\)](#).

the required result. A project is not eligible for reservation approval until an approved model demonstrates this statutory requirement is met.

- i. This requirement does not apply to eligible applicants that are developing a project under which the housing owner pays all residents' utility costs directly, or when utility costs are not paid by the residents, as in certain cases of supportive and transitional housing.<sup>15</sup> The eligible applicant will be required to submit documentation demonstrating this utility payment arrangement, as outlined below.
- ii. Additional information on this process and methodologies are in Chapter 5 (Program Participation) and Appendices C and D.

## **7. Home Energy Rating System (HERS) Registry**

BUILD projects are eligible residential buildings and must comply with the Energy Code, which requires the energy efficiency measures of the buildings to be tested and verified by a certified Home Energy Rating System (HERS) Rater and the results entered in a HERS Provider Registry approved by the CEC. Each project must have the certificates of installation (CF2Rs, LMCIs, or NRCIs) accurately filled out, reflecting the actual installed equipment and that the products match the building department approved CF1R-PRF-01E, LMCC-PRF-01E, or NRCC-PRF-01-E. The appropriate field verifications must be performed by a qualified HERS Rater and have the certificates of verification (CF3Rs, LMCVs, or NRCVs) accurately completed. The CEC may review the CF2Rs, CF3Rs, LMCIs, LMCVs, NRCIs, and NRCVs at any time to verify that the installed equipment and products match the descriptions in the project application.

## **8. Projects in Tribal Communities**

[CPUC Resolution E-5116](#) encourages the inclusion of tribal communities (both within and outside Indian Country) in the BUILD Program. For projects serving tribal communities (both within and outside Indian Country), the following will apply.

- a. In all cases, approved projects must satisfy the requirements established by SB 1477 and these guidelines.
- b. The project must comply with the Energy Code in effect at the time the project applies for a building permit and through project completion, even if the project is in Indian Country.
- c. For this provision, a *tribal government* is the governing body of a California Native American tribe that is in California and that is on the contact list maintained by the Native American Heritage Commission for Chapter 905 of the Statutes of 2004 (Senate Bill 18, Burton 2004).

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<sup>15</sup> As [defined by the California Department of Housing and Community Development](https://www.hcd.ca.gov/planning-and-community-development/housing-elements/building-blocks/people-experiencing-homelessness), <https://www.hcd.ca.gov/planning-and-community-development/housing-elements/building-blocks/people-experiencing-homelessness>.

- d. If an applicant is a federally recognized California tribe or tribal entity, the applicant shall provide with its application:
  - (1) Documentation establishing that the applicant has authority to submit the application, in the form of a resolution or other formally authorized document in accordance with the tribe’s applicable decision-making structure stating so; and
  - (2) Evidence of a limited waiver of sovereign immunity and consent to jurisdiction in any court in the State of California and any federal court sitting in the State of California fully executed by the tribal government pursuant to tribal law. If an authorizing document other than a formal resolution is provided, the applicant shall provide tribal governance documentation demonstrating that such authorization has the same full force and effect as a resolution.
- e. Documentation for projects in tribal communities. In cases where alternative documentation to that typically required by a city or county government to meet building requirements is issued by a tribal government entity, CEC staff will accept the equivalent documentation or action taken by the tribal government with jurisdiction over the land where the project is located.

## **9. Eligible Costs**

All BUILD incentives must be used to reimburse or pay for eligible costs, as further outlined in Chapter 5. Except when more specific requirements apply — such as for payment of kicker incentives (See Chapter 4 for more information on kicker incentives.) or new adopter design awards — eligible costs include those associated with the research, design, associated third-party fees (such as architecture, engineering, electrician, energy consultants), local permitting, gas-disconnection and safety measures (if applicable), construction, alteration, demolition, installation, materials, appliances, equipment, technologies, and other labor costs specific to developing and constructing an all-electric, low-income residential building, or project, that meet the requirements of these guidelines.

## **10. Funding Maximum for Eligible Applicants**

Eligible applicants are limited to receiving no more than \$2 million total in BUILD incentives and reservations. The new adopter design award does not count against this limit.

## **11. New Adopter Eligibility**

Eligible new adopters may apply for a new adopter design award under the program, as described in Chapter 3.

## **CHAPTER 3:**

# **Technical Assistance and New Adopter Design Award**

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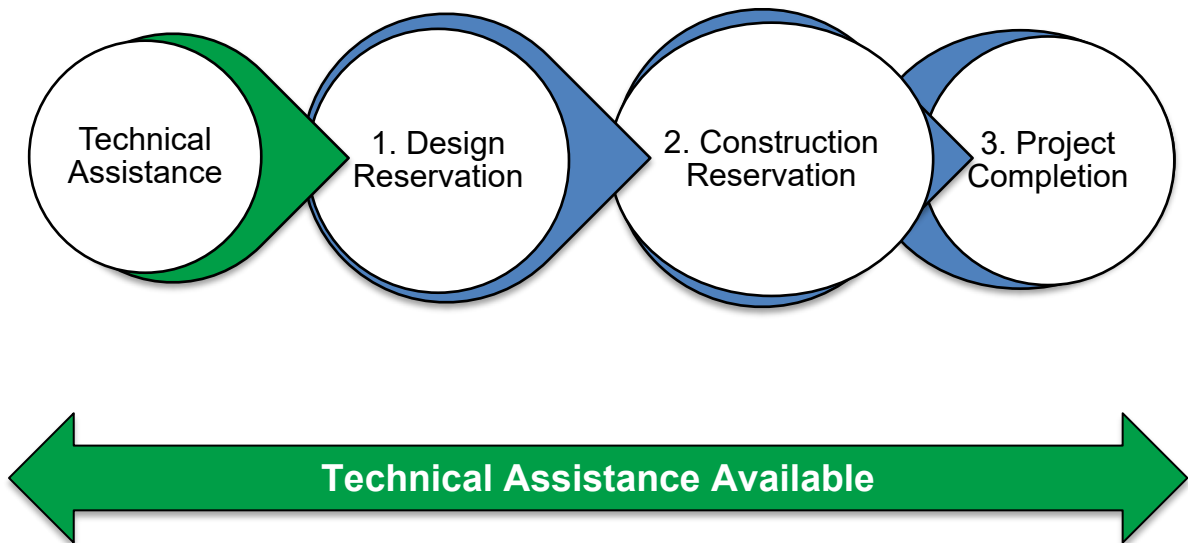
Except as required by PUC 921.1 (d)(1), technical assistance is provided under the BUILD Program at the CEC's sole discretion to support the low-income housing industry's transformation to all-electric development that incorporates near-zero emission technologies in accordance with D.20-03-027 and SB 1477.

The BUILD Technical Assistance Provider (TAP) provides support to the developers, architects, engineers, energy consultants, and staff of an eligible applicant before and throughout the BUILD participation process. Services include:

- Education, outreach, and stakeholder engagement with potential eligible applicants and related industry groups and associations. Education and outreach include the development of educational materials, fact sheets, and technology-specific trainings.
- Technical assistance for potential eligible applicants throughout all phases of building design and construction, supporting building design and installation considerations of near-zero emission equipment and technologies, and helping fill knowledge gaps in the local permitting of all-electric residential buildings.
- Assistance to support the submission of applications to, and compliance with, the BUILD Program.

Additional information identifying the application process and technical assistant services will be made available by the CEC and the BUILD TAP and provided to users on the CEC's website.

**Figure 3.1: Anticipated Program Participation Roadmap**



Source: California Energy Commission

## **A. Technical Assistance Availability**

Except as required by PUC 921.1(d)(1) and within the limits of available funding and the CEC's sole discretion, technical assistance will be available as a service to all potential eligible applicants and their staff and subcontractors responsible for the design, development, and construction of an eligible project.

- Applicants are not required to use technical assistance.
- Recipients of technical assistance are not required to apply for a BUILD incentive or award.
- The TAP is not responsible for the performance of eligible applicants' design decisions or any other consequence of eligible applicants' project designs.
- The use of technical assistance does not guarantee an eligible applicant will receive BUILD funds.
- The CEC has limited resources to provide technical assistance and retains full control over when and how it is applied.

### **1. Limits Per Applicant**

- a. Each eligible applicant can be approved for up to 300 hours of technical assistance under the program. Applications for technical assistance services will be provided on the CEC website. Request for assistance will be screened for eligibility by the TAP in consultation with CEC staff and approved or denied on a first-come, first-served basis, according to the date and time of the electronic submission of a complete technical assistance application.



- b. The CEC reserves the right to refuse, limit, or end technical assistance in part or whole to any entity for any reason. The CEC also reserves the right to provide technical assistance simultaneously, if possible, to multiple entities.

## **2. New Adopter Design Award**

A total of \$2 million of non-incentive program funding, in increments of up to \$100,000 per applicant, is available to new adopters, proportionally allocated to the gas territory contributions outlined in Table 1.2 above.

- a. For this award, new adopters are eligible applicants, as defined in Chapter 2, that have never received a permit for the development and construction of an all-electric residential building in California at the time of applying for the new adopter design award.
- b. This award is limited to the development of multifamily residential buildings (including mixed-use) with at least 10 dwelling units.
- c. This award must reimburse new adopters for their direct costs and paid invoices for architectural, engineering, energy consultation, or other building-design services for an eligible project. Proof of eligible reimbursable costs of at least \$100,000 shall be required for payment of this incentive.
- d. Eligible applicants must indicate whether they are requesting this award at the time they submit their application for a design reservation, and approval and payment of the new adopter design award is contingent upon the CEC's approval of the design reservation package.

Applications for this award are reviewed on a first-come, first-served basis. They are submitted and evaluated according to the date and time of the electronic submission of a complete design reservation application package that indicates whether an applicant is requesting a new adopter award, as described in Chapter 5: Program Participation.

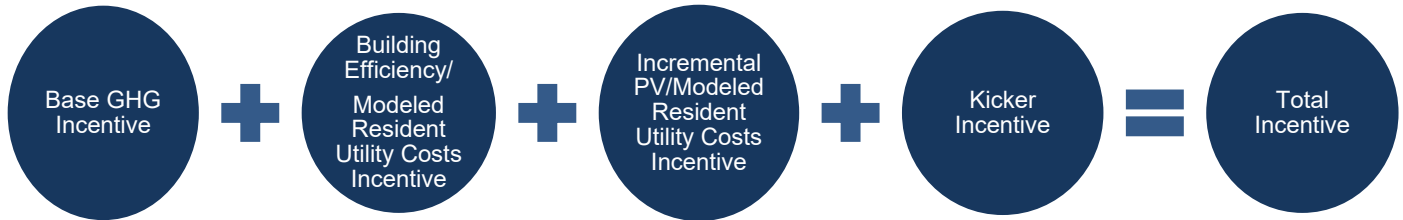
# CHAPTER 4:

## BUILD Incentives

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Figure 4.1 below provides a graphical representation of the various incentive types that comprise the potential total incentive value available to approved applicants.

**Figure 4.1: Total Development Incentive Equation**



Source: California Energy Commission

### A. Incentive Types

The BUILD Program has the following four components that contribute to a total incentive value.

#### 1. Base GHG Incentive

The base GHG incentive is calculated at a flat rate of \$150/metric ton (MT) of avoided GHG emissions.<sup>16</sup>

- a. Calculated for whole-building GHG performance modeling using the CEC’s California Building Energy Code Compliance (CBECC) software as compared to the Energy Code standard design for that building.<sup>17</sup>
- b. Avoided GHG emissions will vary by building design and climate zone because of the variations in modeled building performance.

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16 Consistent with the GHG planning prices for 2030 used in CPUC's Integrated Resource Plan (Decision 18-02-018).

17 The current baseline is either a 2019 or 2022 Energy Code-compliant prescriptive building with gas-fired space heating, water heating, clothes dryer, and cooktop, consistent with prescriptive requirements as specified in the 2019 or 2022 Residential and Nonresidential ACM Reference Manuals. The CBECC software can be accessed at [Building Energy Efficiency Webpage](https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency-2), <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency-2>. As discussed below, the baseline will change every three years as the Energy Code is updated.

## **2. Increased Building Efficiency**

If the developer chooses to increase the building envelope and efficiency measures beyond the Energy Code, using the performance method as specified by the Residential and Nonresidential ACM Reference Manuals, the project will be eligible to receive additional incentives up to \$1,000 per bedroom, based on the compliance margin percentage from the CF1R-PRF-01E or NRCC-PRF-01-E, as identified in the Custom Path Tool and the methodology identified in Appendices C and D.

## **3. Modeled Resident Utility Costs and Incremental PV**

If the project installs additional PV beyond the Energy Code to meet the modeled resident utility costs requirement for the program, an incentive will be provided to offset the incremental costs of the additional PV attributed to the residents.

- a. Single-family and low-rise multifamily (three or fewer habitable stories above grade): \$1.30/watt (W).
- b. Midrise and high-rise multifamily (four or more habitable stories above grade): \$3.00/W will be applied if the Energy Code does not require any PV installation on the building; \$1.30/W will be applied if the Energy Code requires any PV installation on the building.
- c. The program will not offer incentives for PV required by the Energy Code or for PV installation beyond what is needed to address the modeled resident utility costs requirement for the project.
- d. The program incentives will not exceed the applicants' PV costs.

## **4. Specific Equipment for Kicker Incentives**

The program provides kicker incentives for technologies that further reduce GHG emissions, the benefits of which are not included in the modeled GHG reductions in the base incentive. See Table B.3 in Appendix B for a detailed list of equipment requirements.

**Table 4.1: Incentive Level for Technologies**

<b>Technology Kicker</b>	<b>Incentive Level</b>
Grid Flexibility	\$50/smart thermostat \$500/JA13-compliant unitary HPWH
Refrigerants < 750 GWP	\$500/lb of refrigerant
Refrigerants < 150 GWP	\$1,500/lb of refrigerant
Induction Cooktop	\$300/induction cooktop unit
Heat Pump Clothes Dryer	\$150/heat pump clothes dryer
On-Site Energy Storage	\$250/kWh storage capacity
Electric Vehicle Supply Equipment (EVSE)	\$200/EVSE (single family) \$300/EVSE (multifamily)
Smart Electric Vehicle Supply Equipment (Smart EVSE) <sup>18</sup>	\$500/EVSE (single family) \$600/EVSE (multifamily)
Bi-Directional Electric Vehicle Supply Equipment (Bi-Directional EVSE)	\$1000/EVSE

Source: California Energy Commission

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18 For the BUILD Program, smart EVSE are EVSE capable of managing charging based on electricity rates, greenhouse gas signals, or other dynamic grid signals. See Appendix B, Table B.4 for minimum requirements.

## **B. Incentive Calculations**

The BUILD Program provides a flexible participation process for applicants that enables projects to be eligible in different stages of their development cycle (further described in Chapter 5), including:

- Availability of early and ongoing technical assistance services (optional)
- Step 1: Design Reservation (optional)
- Step 2: Construction (required)
- Step 3: Completion (required)

The BUILD program provides both the BUILD Calculator and the Custom Path Tool to estimate project incentive values, as described below. New Adopters may choose to initially use the BUILD Calculator in the program participation process. All other applicants must use the Custom Path Tool to submit an incentive application as it ensures building design and Energy Code changes are accurately reflected over the progress of the project. (See also Chapter 5)

### **1. BUILD Calculator Pathway (Step 1, for New Adopters Only)**

The BUILD Calculator estimates incentives based on the building performance of predetermined building prototypes. This includes calculating the values of the base GHG, increased building efficiency, and incremental PV incentive. The BUILD Calculator is intended for estimation purposes only, and design decisions and expenses should not be made based on the results of this calculator.

Applicants may not use this calculator for any incentive reservation steps unless they are a new adopter. (See Chapter 3 Section A.2 for more details on new adopters.) New adopters may use the BUILD Calculator at step 1 (Design Reservation) and must submit the results with their BUILD application. The instructions and calculator can be found on the [BUILD Incentives web page](#).

### **2. Custom Path Tool Pathway (Step 1, Step 2, and Step 3)**

The Custom Path Tool calculates incentives based on the performance of the project's energy model(s). Applicants may run the Custom Path Tool themselves or request for assistance from the TAP to calculate incentives prior to application submittal. The tool's results must be submitted as part of the application package. Applicants must also submit their energy model(s), created with a CEC approved compliance software, with their BUILD application. The CEC Building Standards Office maintains the list of approved compliance software for the Energy Code. The incentive amount and any modeled resident utility cost saving requirements will be identified and confirmed by the results of the submitted data.

CEC staff updated the Custom Path Tool in March of 2024 to reflect updated rates and PV generation compensation rules. (See Appendix C.) This updated tool is required for all applicants, regardless of when they initially submitted a BUILD application. The instructions and tool can be found on the [BUILD Incentives web page](#).

The Custom Path Tool will continue to be enhanced while maintaining the analytical approach to improve effective program implementation.

As the Energy Code is updated on a three-year cycle, so will the comparison baseline, which could change as an applicant moves through the BUILD participation steps. The baseline comparison for the incentives awarded to an applicant will be based on the Energy Code in effect at the time the applicant applies for the building permit with the applicable local agency or tribal government.

Additional information on the calculation approaches under the BUILD Program are explained in Appendices C and D. BUILD kicker incentives apply the same to either pathway and are calculated separately.

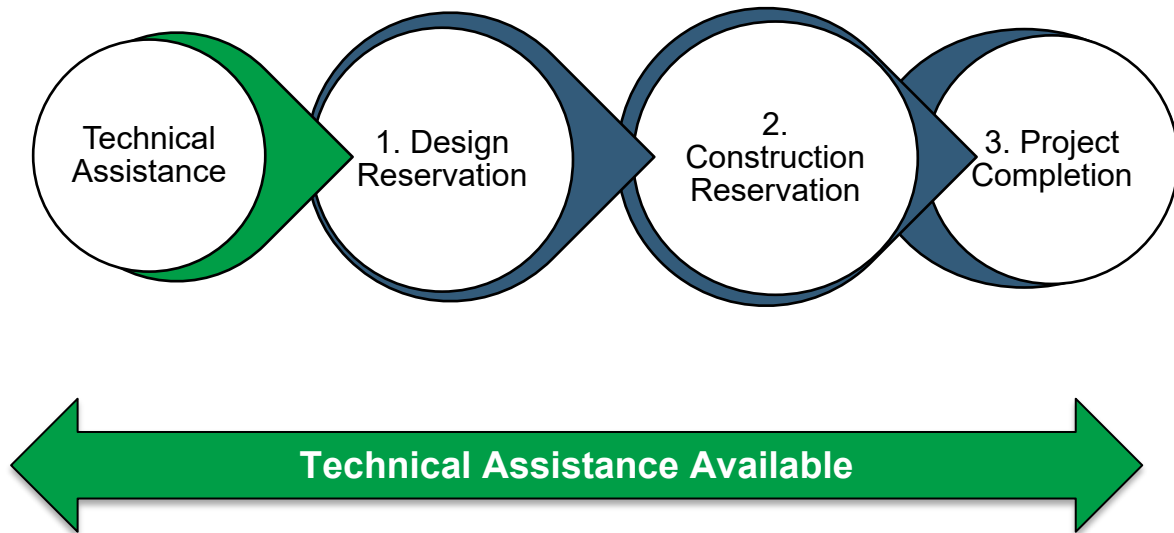
# CHAPTER 5:

## Program Participation

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Figure 5.1 below provides a graphical representation of the BUILD Program’s participation process including optional technical assistance services and the Step 1: Design Reservation, and the mandatory Step 2: Construction and Step 3: Completion processes required to obtain an incentive.

**Figure 5.1: Program Participation Process Steps**



Source: California Energy Commission

The program participation process is designed to recognize the funding and regulatory processes required for developing low-income housing projects in California and provide flexibility to better support the unique challenges such developments face.

### A. Building Incentive Application and Approval Process

#### 1. BUILD Incentive Application Process Overview

This broad description of the three-step process for BUILD incentives is followed by a detailed description of the program requirements.

- **Step 1: Design reservation process.** After working with the technical assistance provider, as applicable, the applicant will have the initial building design developed and meet the criteria to apply for a design reservation. The eligible applicant will provide the information outlined in Section A.2.b. and, upon review and approval by CEC staff, will receive a design reservation. This step may be

completed before or after receiving construction financing for the project but must be completed before the project receives the construction permit. The initial term of the design reservation is 18 months, by which time eligible applicants must meet the readiness requirements outlined below.

- If applicable, new adopter design award requests must also be submitted at this time, as an optional part of the design reservation process.
- While most eligible applicants will apply for BUILD incentives at step 1, the BUILD program provides flexibility to allow applicants that are further along in their project development timetable to apply for BUILD incentives under step 2. Applying at step 2 will not provide any funding priority or advantage to applying at step 1.
- **Step 2: Construction reservation process.** Once an applicant has obtained its project financing, obtained all necessary building and other preconstruction permits, finalized its design, and met the other requirements described in these guidelines, the applicant shall notify the CEC that the project is moving forward and identify any changes to the project or design. CEC staff will verify continued eligibility and adjust the incentive value if necessary. The applicant shall provide this notification to CEC staff and submit all applicable information required listed in Section A.3.b. within 30 days of the initial project reservation period of 18 months (and any extensions allowed pursuant to Chapter 6, Section P of these guidelines).
  - Following CEC staff's approval of the construction reservation, the applicant has 36 months to complete the construction of the project and meet the progress payment milestones listed below.
  - Progress payments.
    - Payment 1: Upon CEC staff's approval of the construction reservation, up to 25 percent of the calculated base GHG incentive value, or actual eligible costs, whichever is less, may be requested by an eligible applicant to reimburse for eligible costs if eligible costs have been incurred by the applicant.
    - Payment 2: Upon the applicant's submittal of a payment claim and demonstration that the project foundation has been built and completed, up to 50 percent of the calculated base GHG incentive, or actual eligible costs, whichever is less, may be requested by an eligible applicant to reimburse for eligible costs incurred by the applicant.
- **Step 3: Project completion process.** When construction is completed, all measures and systems are installed, a temporary or final certificate of occupancy is obtained, and the low-income deed or resale restriction has been recorded on the property and fully executed, the applicants shall submit a project completion package. Upon review and approval of a complete and accurate funding request that contains all required items from Section A.4.a., CEC staff will authorize payment of the remaining incentive funding. An applicant may seek a lump-sum payment at project completion in lieu of progress payments.



## 2. Step 1: Design Reservation Requirements

Eligible applicants may apply and be approved for a design reservation.

- a. Design reservation timing:** Applications are accepted on a first-come, first-served basis. Design reservations will be approved in accordance with funding amounts attributed to each specific gas utility territory (Table 1.2.) while funds are available.
  - i. The date and time of the electronically submitted completed application will establish the order of the queue for review of BUILD incentives and awards.
  - ii. Eligible applicants will be notified if applications are incomplete and will have 10 business days to supplement the incomplete application. Failure to respond within the 10 business days will result in the CEC's cancellation of the incentive application.
  - iii. The cancellation of an incentive application does not preclude an eligible applicant from reapplying.
  - iv. Applications must be submitted before the applicant receives a building permit that reflects an all-electric building design.
- b. Design reservation application package:** Eligible applicants must submit the following information in a format provided by the CEC:
  - i. Name and legal structure, for example, nonprofit, government, LLC of the applicant.
  - ii. Project contact name, title, employer, email address, and phone number.
  - iii. Project address(es) and gas and electric utility service territory(ies).
  - iv. Project funding details. Description of project budget, anticipated funding sources, application and award dates for those funding sources, and a projection of the expenditure of project costs.
  - v. Anticipated project schedule and key development milestones.
  - vi. Building type, number of stories above and below grade, anticipated number of units and bedrooms and total conditioned floor area of the project (in square feet).
  - vii. Demonstration of the eligible applicant's five years of collective experience with at least one successful construction of at least one low-income residential building (any fuel source) in California outlined in Chapter 2.A.4 that includes a project address, description, funding sources, and date of the associated certificate of occupancy.
  - viii. If applicable, demonstrate the project provides single or multifamily rental housing meeting at least one of the following requirements:

- a) The property is in a disadvantaged community as defined under [Section 39711 of the Health and Safety Code](#).<sup>19</sup>
- b) The property is in a low-income community, defined as a census tract or equivalent geographic area defined by the United States Census Bureau in which at least 50 percent of households have an income less than 60 percent of the area median gross income.
- c) At least 80 percent of the households living in the building will have incomes at or below 60 percent of the area median income (AMI).
- ix. Anticipated affordability and resident income limit restrictions for the project, which will be the subject of a future deed restriction; or, for single-family residences and condominiums, the anticipated approach to resale restrictions or equity sharing agreements required as a condition of the sale of the home, including eligibility criteria for potential homebuyers. For multifamily buildings, a complete submittal shall include, at a minimum, the expected number of units with income restrictions and their respective anticipated restricted affordability level (percentage AMI).
- x. Indication of how the project qualifies as a new “eligible building” as described above in Chapter 2, Section A.2.
- xi. Energy model input file, created with CEC approved compliance software, to demonstrate incentive value and compliance with the modeled resident utility cost savings. As established in Chapter 4, new adopters do not need to provide an energy model if they are following the BUILD Calculator pathway.
- xii. Identify the estimated modeled resident utility cost savings, or indicate that the residents will not be paying their utility bills because of the occupancy type (for example, transitional or supportive housing) and terms of the financing or deed restriction. This identification must include the default time-of-use (TOU) rate tariff for the project location, if applicable (described in Table C.2).
- xiii. Identification of whether the project is in a tribal community.
- xiv. Identify the incentive values, as calculated (outlined in Chapter 4).
  - a) Base GHG incentive
  - b) Building efficiency incentive
  - c) Modeled resident utility costs/incremental PV
  - d) Kicker incentive
- xv. Building design documentation (CF1R-PRF-01E or [LMCC-PRF-01E](#), or [NRCC-PRF-01-E](#)). *Note: At this step the CF1R, LMCC, or NRCC does not need to be HERS registered or signed by a certified energy analyst (CEA).*
- xvi. Payee data record (STD-204).
- xvii. New adopter design award requirements, if applicable.

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<sup>19</sup> [California Office of Environmental Health Hazard Assessment SB 535 CalEnviroScreen Tool](#).

- a) An attestation that the eligible applicant qualifies as a new adopter under the program.
  - b) Copies of paid invoices for eligible design costs.
- xviii. Signed attestation, submitted under penalty of perjury, that the proposed project meets the requirements of the BUILD Program Guidelines and to the accuracy and completeness of the information submitted.
  - a) The CEC agrees to accept an electronically signed attestation to satisfy this requirement.
- c. Design reservation commitment letter.** When a complete design reservation application is approved, staff will provide an electronic design reservation commitment letter to the project contact that includes the incentive reservation amount and expiration date for the reservation.
- d. Design reservation term.** The design reservation is valid for 18 months from the date on the design reservation commitment letter. Within 18 months, the applicant must confirm the project has received construction and permanent financing commitments and has met the readiness and milestone requirements for CEC staff to approve the construction reservation (described below).
  - i. Extension. If submitted in accordance with the procedures in Chapter 6, Section P, a one-time extension of the design reservation for a period no greater than six (6) months will be approved upon the applicant's demonstration that:
    - a) Any barriers or delays will be resolved within the extension period and the updated project timetable is viable and consistent with the terms within these guidelines.
    - b) Applicant has applied for low-income housing financing and is awaiting approval, if applicable.
    - c) A statement that applicant expects to learn of whether their low-income housing financing is approved within the extended period, if applicable.
- e. Design reservation transfer.** The applicant may be approved by CEC staff to transfer a design reservation from the initial project to a new project by submitting an electronic request to CEC staff in a format provided when all the following conditions are met:
  - i. The eligible applicant submits a request to transfer the reservation no later than 30 days before the expiration of the initial reservation.
  - ii. The transfer of the reservation is allowed under the program funding caps available for the specific gas territory of the new project.
  - iii. The new project complies with all BUILD Program Guidelines requirements, the modeled resident utility costs and incentive values are recalculated, and the incentive amount for the new project is less than or equal to the initial reservation amount.

If approved, a transfer of a design reservation does not extend the initial 18-month reservation term.

- f. Design reservation withdrawal.** An eligible applicant can voluntarily withdraw a reservation by notifying the CEC electronically in writing.
- g. Design reservation cancellation:** All applicants that do not meet the project requirements for step 2 (construction reservation) within 18 months, and do not have an approved extension, will have their design reservations cancelled by the CEC and will have to reapply to seek BUILD incentives. Eligible applicants will be notified electronically in writing in a format prescribed by the CEC.

### **3. Step 2: Construction Reservation Requirements**

#### **a. Construction Reservation Timing**

- i. If an applicant was approved for a design reservation, within its term (standard of 18 months plus any extensions granted pursuant to Chapter 6, Section P) and after the applicant receives its project financing commitments, the applicant shall confirm to the CEC that the project is moving forward and identify any project modifications. The BUILD incentive amount shall be recalculated based on modifications to the project that affect GHG emissions (as demonstrated in models provided by the applicant and confirmed by the CEC).
- ii. If an applicant is submitting its initial application for a BUILD incentive at the time of construction reservation:
  - a) The construction reservation application will be reviewed consistent with Chapter 5, Section A.2.a. (excluding subpart iv). Applying at step 2 will not provide any funding priority or advantage to applying at step 1.
  - b) In addition to the items identified in Section A.3.b., the applicant shall provide all the information in Chapter 5, Sections A.2.b.i-iii, 5.A.2.b.vii-viii, 5.A.2.b.x, 5.A.2.b.xiii, and 5.A.2.b.xvi in a format provided by the CEC.
  - c) Projects that have already received a temporary or final certificate of occupancy may not be included in an application under this subdivision.

#### **b. Construction Reservation Application Package**

Eligible applicants must submit the following information in a format provided by the CEC:

- i. Current project summary identifying any revisions to building design and project information that have occurred since the design reservation approval, if applicable. These revisions will include building type, number of stories above and below grade, number of units, number of bedrooms per unit, size of units, total conditioned floor area, resident income restrictions, PV system size and how the PV benefit will be assigned to the residents (if applicable to meet the Modeled Resident Utility Cost requirement).

- ii. Project funding details demonstrating sufficient funding to advance to project construction.
  - a) Current summary of the project budget identified and committed funding sources, and a timetable of the expenditure of project costs.
  - b) Demonstration that the construction and permanent financing has been committed through commitment letters or similar resolutions.
- iii. Anticipated affordability and resident income limit restrictions for the project, which will be the subject of a future deed restriction, and the duration of the deed restriction. Or, for single-family residences, draft copies of resale restrictions or equity sharing agreements that will be entered into with future eligible homebuyers.
- iv. Anticipated project schedule and key developments milestones.
- v. Energy model input file used to obtain the building permit, created with CEC approved compliance software, to demonstrate incentive value and compliance with the modeled resident utility cost savings.
  - a) Model must demonstrate compliance with all program requirements.
  - b) Models must be created by a certified energy analyst (CEA).<sup>20</sup>
- vi. Energy efficiency documentation (CF1R-PRF-01E, LMCC-PRF-01E, or NRCC-PRF-01-E).
- vii. Identification of the calculated incentive values based on the current building design, as calculated in Chapter 4.
  - a) Base GHG incentive
  - b) Building efficiency incentive
  - c) Modeled resident utility costs/incremental PV
  - d) Kicker Incentive
- viii. Copy of the approved building permit.
- ix. Statement of whether the applicant is requesting a progress payment (see item f below and Appendix A) and includes a payment claim, and an indication whether the payment will be assigned to a third party
- x. Attestation, submitted under penalty of perjury, that the proposed project meets the requirements of the BUILD Program Guidelines and to the accuracy and completeness of information submitted.

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20 A CEA's 2019 certification will be accepted during a construction reservation for 2022 Energy Code with verification of 2022 certification during the completion reservation process of the project.

**c. Review of Incentive Amounts**

- i. Incentive reservation modifications. The incentive reservation amount may be modified by CEC staff because of:
  - a) Changes in the project characteristics made by the applicant between the design reservation (step 1) and construction reservation (step 2) that modified the building design and equipment to be installed, or otherwise impact the GHG emissions or eligibility of the project.
  - b) Changes in the Energy Code that may have taken effect between the time the project was approved for a design reservation and when the building permit application was submitted.
  - c) Depending on the factors listed in subsections and above, the amount of the incentive may decrease or increase (subject to availability of program funds).
  - d) No changes in utility rates (Appendix C) will be made after the construction reservation to modify the modeled resident utility costs.

**d. Approval of construction reservation.** CEC staff will review the package to verify whether the project remains eligible for BUILD incentives consistent with BUILD Program Guidelines. Projects that meet the eligibility requirements will receive approval of the construction reservation through a commitment letter transmitted electronically.

**e. Term of construction reservation.** The construction reservation is valid for 36 months from the date of the construction reservation commitment letter.

- i. If submitted in accordance with the procedures in Chapter 6, Section P.1, a one-time extension of the term of the construction reservation shall be granted by CEC staff, for up to 12 months, upon an applicant's demonstration that:
  - a) The extension is necessary due to unforeseen circumstances beyond the applicant's control that are not the fault of, or caused by, the applicant, and
  - b) The unforeseen circumstances identified have been remedied, and the project timetable is now consistent with the terms within these guidelines and on track to advance to step 3 within the extension period.
- ii. Any extension requests beyond 12 months must be considered by the CEC, as discussed in Chapter 6, Section P.2.

**f. Progress payments and payment claims:** Eligible applicants may request progress payments of the Base GHG Incentive to reimburse applicant's eligible project costs, as defined in Chapter 2, that have been incurred at or before step 2.

- i. Payment 1: Upon CEC staff's approval of the construction reservation, up to 25 percent of the calculated base GHG incentive value or actual eligible costs, whichever is less, may be released to reimburse eligible costs.
- ii. Payment 2: Upon the applicant's submittal of a payment claim and demonstration that the project foundation has been constructed, up to 50

percent of the calculated base GHG incentive or actual eligible costs, whichever is less, may be released to reimburse eligible costs.

- iii. Payment 3: Upon approval of the project completion documentation, the remainder of the calculated GHG incentive will be released.

More detailed information on the payment process and progress payments is provided in Appendix A.

#### **4. Step 3: Project Completion Requirements**

Upon completion of project construction, the applicant will submit a payment claim in the form prescribed by CEC staff and the project completion documentation listed below to receive final incentive funding.

##### **a. Project Completion Required Documentation**

- i. Temporary or final certificate of occupancy.<sup>21</sup>
- ii. Recorded deed restriction or regulatory agreement demonstrating corresponding number of low-income units and bedrooms, or an executed resale restriction or equity-sharing agreement,<sup>22</sup> that has been filed with the local county recorder for the property being funded.
- iii. Permission to operate PV, if applicable. Identification of the total actual costs of PV in the project and the portion of PV assigned to the residents.
- iv. Demonstration of complying with the Modeled Resident Utility Cost Savings. CEC staff will confirm compliance in its review of the energy model in Section 4.a.vii.
  - a) If PV is included in the building design to comply with the modeled resident utility cost savings, the applicants must provide one of the following:
    - 1) A copy of the virtual net energy metering (VNEM) agreement assigning PV benefits to the residents, if applicable; or
    - 2) A demonstration of the individual meters connected to PV systems directly benefitting the tenants; or
    - 3) Proof of a measure installation and a rental/lease agreement provision/addendum template for all units subject to BUILD Program affordability requirements. The provision/addendum will provide the Custom Path Tool's monthly modeled resident utility cost difference(s) as a utility rent/lease credit for no less than five (5) years, effective upon the approval of Step 3: Project Completion application. This provision is only for projects requiring a Custom Path Tool tenant PV

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21 A temporary certificate of occupancy will only be accepted at step 3 if the unfinished portion of the project does not include any of the residential portion of the project or any portion of the project associated with a kicker incentive.

22 Required only for low-income homes developed for sale at an affordable cost to an eligible low-income household. See PUC 921(d)(2) and PUC 2852(a)(3)(C)

allocation and located in a utility service territory without a VNEM or equivalent program.

Please note, demonstrating compliance for modeled resident utility cost savings requirement will not take into account the PV allocated to loads not paid by tenants (e.g., common area loads).

- b) If residents will not pay their utility bills because of the type of project developed (for example, transitional or supportive housing), a copy of the deed restriction or a similar legal agreement or covenant.
- v. Proof of purchase and installation for equipment eligible for kicker incentives as listed in Table 4.1. These must include manufacturer and model numbers.
- vi. Narrative description of any modifications to the building design that have occurred after step 2.
- vii. Final energy model approved by local jurisdiction reflecting any design changes made since the step 2 energy model, created with CEC-approved compliance software.
  - a) Model must demonstrate compliance with all program requirements.
  - b) Models must be created by a certified energy analyst (CEA).<sup>23</sup>
- viii. CF2R, CF3R, LMCI, LMCV, NRCI, and NRCV documents completed by installers and qualified HERS Raters.
- ix. Recalculate incentive values identified in step 2.
  - a) Base GHG incentive
  - b) Building efficiency incentive
  - c) Modeled resident utility costs/incremental PV
  - d) Kicker incentive
- x. The final incentive amount may:
  - a) Decrease if there were changes in the project design or equipment installed that would impact the incentive value and any progress payments previously paid to the applicant will be assigned to the total final incentive value, so that the applicant is not overpaid; or
  - b) Increase to address improved building design and performance that cause further GHG reduction if funds are available.
- xi. Verification of the project completion survey if administered by the third-party evaluation, measurement, and verification (EM&V) team.
- xii. Attestations submitted under penalty of perjury that the proposed project meets the requirements of the BUILD Program Guidelines, to the accuracy and completeness of the new information submitted, and to cooperate with the

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<sup>23</sup> A CEA's 2019 certification will be accepted during a completion reservation for 2022 Energy Code until 2022 certifications are published.



CPUC's EM&V process in accordance with Appendix F of the BUILD Program Guidelines.

- xiii. A listing of the Meter ID(s) of the common areas and residential units of the project as provided by the applicable electricity provider of the site, unless infeasible to obtain by certificate of occupancy issuance.
- xiv. Payee data record (STD-204).

# CHAPTER 6:

## Administration

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### A. Guidelines Authority

CPUC building decarbonization rulemaking (R.19-01-011) and adopted decision (D.20-03-027) establishes a framework and requirements for the BUILD and TECH Programs authorized by SB 1477. D.20-03-027 designated the CEC as the third-party BUILD program administrator, and CPUC Resolution E-5116 approved the CEC's revised BUILD Implementation Plan<sup>24</sup> and established a process for the CEC to develop and submit these BUILD Program Guidelines to the CPUC.

Regarding the authority and process for the adoption of these guidelines, and subsequent changes to the guidelines, CPUC Resolution E-5116 states in relevant part:

Following adoption of the Implementation Plan described in this Resolution, the CEC may obtain CPUC approval of program guidelines by filing a Tier 2 Business Letter following the procedures set forth in General Order 96-B.

Pursuant to CEC's own practices and procedures, the proposed guidelines would first be subject to a CEC-led public notice and comment process following publishing of the guidelines to the CEC's BUILD Program docket. This process would include a public workshop where the draft guidelines would be presented and discussed. Public comment would be accepted in writing and during the workshop consistent with the direction set out in the notice for the proceeding and the workshop. The CEC would approve the guidelines for submission to the CPUC at a duly noticed business meeting prior to submitting the guidelines to the CPUC. The CEC's process provides stakeholders and the public with an opportunity to review and comment on the guidelines prior to the CPUC's review process.

Given that the proposed guidelines will be based on the Implementation Plan previously authorized by a CPUC resolution and given that the CEC's own practices will have provided the public with an opportunity for comment, a Tier 2 Business Letter is appropriate. This approach will allow Energy Division the flexibility to approve the guidelines more expeditiously. Thus, the CPUC finds it appropriate for the CEC to submit program guidelines as a Tier 2 Business Letter prior to program commencement.

The Energy Division Director is authorized to order the Business Letter to go into effect on a date different from that otherwise provided by GO 96(b). If the protest and reply period is shortened in accordance with Rule 1.3, then the Energy

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24 Chac, Erica, Geoffrey Dodson, and Tiffany Wilson. September 2020. [Building Initiative for Low-Emissions Development \(BUILD\) Program Implementation Plan \(Revised September 2020\)](https://efiling.energy.ca.gov/GetDocument.aspx?tn=234936&DocumentContentId=67802). California Energy Commission, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=234936&DocumentContentId=67802>.

Division Director may also order the Business Letter to go into effect on a date different from that otherwise provided by GO 96(b).

Any subsequent changes to the CPUC-approved program guidelines shall be approved through a Tier 1 Business Letter, which shall be the same process as a Tier 1 Advice Letter set forth in General Order 96-B.

## **B. Effective Date of Guidelines**

The BUILD Program Guidelines, and any future iterations, will take effect only after they have been approved at a CEC business meeting for submission to the CPUC and subsequently ordered to take effect by the CPUC's Energy Division director in accordance with the process provided in CPUC Resolution E-5116. Once finalized, the CEC will post the adopted [BUILD Program Guidelines on its website](https://www.energy.ca.gov/programs-and-topics/programs/building-initiative-low-emissions-development-program) at <https://www.energy.ca.gov/programs-and-topics/programs/building-initiative-low-emissions-development-program>. The CEC will publicly notice the commencement or an update of the BUILD Program and signal applications for the program are being accepted.

Applicants and interested persons may also obtain the guidelines by contacting [BUILD@energy.ca.gov](mailto:BUILD@energy.ca.gov).

## **C. Interpretation**

Nothing in these guidelines shall be construed to abridge the powers or authority of the CEC or any CEC-designated committee as specified in Division 15 of the Public Resources Code, commencing with Section 25000, or Division 2 of Title 20 of the California Code of Regulations, commencing with Section 1001.

## **D. Compliance and Verification**

As a condition of applying for a BUILD incentive, all applicants must agree to provide CEC staff with access to relevant project-related documents and access to the project site, subject to reasonable safety and availability limitations. This access is required in order to verify the details of a project reservation application and confirm that funding is being used as directed by BUILD Program Guidelines. CEC staff, and its agents, may take various steps, as needed, to ensure compliance with program requirements.

Eligible applicants must agree to provide information, access to project records, access to project site, and timely project updates as reasonably requested by CEC staff to verify compliance and ongoing eligibility for BUILD incentives. These steps may include:

1. Requesting relevant documents, photos, or other materials from the applicant.
2. Requesting additional data to inform the CPUC's EM&V process.
3. Contacting the local building department.
4. Contacting the gas or electric utility serving the territory of the project.
5. Conducting a virtual or onsite verification.
6. Performing an audit, as discussed below in Section F.

## **E. Enforcement**

In addition to any other rights the CEC has, the CEC may take any of the following actions necessary to enforce the CEC's rights and program requirements.

### **1. Recovery of Overpayment**

In addition to all rights and remedies available to the CEC, the CEC may direct its chief counsel to commence formal legal action against any applicant, former applicant, or recipient to recover any portion of an incentive payment that the CEC's executive director determines the applicant, former applicant, or recipient was not otherwise entitled to receive, retain, or spend in the manner it was spent.

### **2. Fraud and Misrepresentation**

The executive director may initiate an investigation of any applicant that the executive director has reason to believe may have misstated, falsified, or misrepresented information in submitting an application, payment request, or any reporting of other information required under the program. Based on the results of the investigation, the executive director may take any action deemed appropriate, including, but not limited to, cancellation of the reservation of funds, termination of the incentive award(s), recovery of any overpayment. With the concurrence of the CEC, the executive director may also recommend the Attorney General initiate an investigation and prosecution under Government Code Section 12650, et seq., or other provisions of law.

### **3. Noncompliance With Guidelines**

The CEC may seek remedies for noncompliance with guidelines requirements and terms, including, but not limited to, termination of design reservation or construction reservation, withholding requested payments, recovery of funds, or any other administrative or civil action.

Without limiting any of its other remedies, the CEC may, for an eligible applicant's noncompliance with any guidelines requirement, withhold future reimbursement payments, demand and be entitled to repayment of past reimbursements, and suspend or cancel the applicant's design reservation or construction reservation. Completion of the approved project is material to an award under the BUILD Program. Thus, the CEC, without limiting its other remedies, is entitled to repayment of all funds paid to applicant if the applicant does not timely comply with the guidelines and complete the approved project.

By applying for funds under this program, applicants agree that any effort to enforce this funding arrangement in court shall be heard in Sacramento County, and this funding arrangement shall be interpreted in accordance with and governed in all respects by California law.

#### **4. Modifications to Project and Project Timetable**

Eligible applicants must affirmatively notify CEC staff, in writing electronically, in a format provided by the CEC, within 15 days of a substantive schedule or project modification that impacts project eligibility for BUILD or anticipated incentive amount.

#### **F. Audits**

The CEC or its authorized agents may audit any applicant to verify the accuracy of any information included as part of the reservation application, payment claim, or report required under these guidelines. As part of an audit, an applicant may be required to provide the CEC or its authorized agents with all information and records necessary to verify the accuracy of any information included in the applicant's reservation application, payment claims, or reports. An applicant may also be required to open its business records for on-site inspections and audit by the CEC or its authorized agents to verify the accuracy of any information included therein. An audit may be performed at any time within three (3) years after payment by the CEC of the applicant's final incentive payment.

If an audit finds that an applicant has incorrectly stated or falsified information included in the applicant's reservation application, payment claims, or reports, the CEC shall notify the applicant of its findings in writing within 30 days of completing the audit. Based on the audit results, an applicant may be required to refund all or a portion of the BUILD incentive payments it has received. In addition, the applicant's reservation may be terminated and enforcement actions initiated in accordance with Chapter 6, Section E, of these guidelines.

#### **G. Authorized Third Parties**

Authorized third parties may complete applications on behalf of an eligible applicant but may not sign attestations on their behalf. A letter of authorization from the owner/developer specifying any authority or responsibility delegated to the third party is required as part of the application package. No funding will be provided for the costs of completing an application for funding or for third-party consultant fees for the application process.

#### **H. Tax Consequences**

To process payment claims, applicants must provide a completed STD-204 payee data record to the CEC. The name identified in this form must be the payee as identified in the reservation application. Applicants should carefully consider the tax consequences of receiving a BUILD incentive when applying to the BUILD Program. Applicants are responsible for any federal, state, and local taxes associated with the receipt of incentive payments. Applicants who assign their BUILD incentive(s) to third parties will be reported as the recipient of said payment.

#### **I. Records Retention: Use and Disclosure of Information and Records and Confidentiality**

Any entity receiving a BUILD incentive payment from the CEC must retain all records required to be submitted to the CEC in Chapter 5 of these guidelines for a period of five (5) years after the date the project receives the final, or most recent, incentive payment from the CEC. Unless an applicable exception or exemption to public disclosure applies, all project documents submitted to the CEC or its technical assistance providers(s), including as part of any audit, are considered public records subject to disclosure under the California Public Records Act. The CEC or other state agencies may also use any of these documents or information for any purpose, including, but not limited to, (1) to determine eligibility and compliance with the BUILD Program, applicable law, or a particular solicitation or guideline document; (2) to evaluate related or relevant programs or program elements; or (3) to prepare reports. These documents and information include, but are not limited to, incentive, construction, or project completion applications, invoices, and any documentation submitted in support of the applications; all incentive deliverables; documents prepared for other reporting requirements; and materials and documents developed as part of technology transfer activities.

If the CEC requires an applicant or recipient to provide copies of records that the recipient believes contain confidential, proprietary, or any other information entitled to protection under the California Public Records Act or other law, the recipient may request that such records be designated confidential according to the CEC's regulations for confidential designation, Title 20, California Code of Regulations, Section 2505. If the confidential information within a document can be redacted without removing the portion of the record that is required for verification of compliance with these guidelines, the applicant or recipient shall submit versions of documents submitted with the confidential information masked or redacted rather than requesting confidential designation. Questions regarding whether redactions may inhibit verification of compliance with these guidelines should be submitted to CEC staff with sufficient time to resolve the question before the expiration of a funding reservation.

Applicants considering confidentiality should note that BUILD funds are subject to information disclosure requirements to ensure transparency. Information concerning the identity of recipients and the incentive amount is public information and will be published in CEC reports and disclosed in response to requests filed under the California Public Records Act. This information, as well as other public information, may also be disclosed through the CEC's website, another state agency website, or other means.

In addition to any other disclosure requirements under the law, the CEC can disclose confidential information and records to other governmental entities, including other local, state, or federal agencies that are funding eligible projects and law enforcement authorities for civil and criminal investigation and enforcement.

## **J. BUILD Guidelines Changes**

### **1. Substantive Changes**

After adoption, substantive changes to the adopted program guidelines may be made with the approval of the CEC at a publicly noticed meeting with no fewer than 15 days public notice. All substantive changes will be posted to the BUILD docket<sup>25</sup> and emailed to the BUILD subscription list at least 15 days prior to approval by the CEC. For more detailed updates containing substantive changes, CEC staff may opt to provide a longer notice period and host one or more staff workshops to discuss the proposed changes.

Unless stated otherwise in the CEC resolution approving substantive changes, or otherwise directed by the CPUC, substantive changes shall take effect upon adoption by the CEC and submittal of the revised program guidelines to the CPUC through a Tier 1 Business Letter. Substantive changes to program design or requirements include, but are not limited to, changes to program eligibility criteria. Any changes to program design requirements or eligibility criteria shall be prospective unless otherwise noted in future guidelines. Moreover, the applicable edition of the BUILD Program Guidelines shall be the edition in effect at the time a complete design reservation or construction (initial reservation) reservation application is submitted to the CEC, unless otherwise specified in future guidelines.

All changes will remain consistent with statute, the governing CPUC decision(s), and the BUILD Implementation Plan.

### **2. Nonsubstantive Changes**

If the program guidelines require nonsubstantive changes such as changes that do not materially affect the obligations of eligible applicants, CEC staff will provide a notice of the changes to the subscription list (BUILD) and post the amended guidelines on the program web page and docket. The changes will take effect upon CEC staff's submittal of a Tier 1 Business Letter to the CPUC.

## **K. Prevailing Wage**

Applicants are responsible for complying with all applicable laws, which can include public works requirements under the California Labor Code. Applicants acknowledge acceptance that BUILD technical assistance or incentives may trigger public works laws (Labor Code Section 1720 et seq.), a requirement of which is to pay prevailing wages applying to their entire project. If the project is public works, then it is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Applicants receiving BUILD technical assistance or incentives shall sign an attestation confirming that they comply with all applicable laws, which can include prevailing wage exemptions provided under the Labor Code.

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<sup>25</sup> [BUILD Program Docket](https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-DECARB-01) is at <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-DECARB-01>.

## L. Incentive Layering and Multiple Sources of Funding

The CEC recognizes that several programs are being implemented or developed by agencies and utilities to address building decarbonization, including the Technology and Equipment for Clean Heating (TECH) Initiative, the Wildfire and Natural Disaster Resiliency Rebuild (WNDRR) program, and several other local, state, federal, and utility-led programs. Unless prohibited by these guidelines or the requirements for another program, participation in another program does not prevent participation in the BUILD Program. However, an applicant for program funding may not accept BUILD funds if, when combined with funds from another local, state, federal, or utility incentive program, cumulative incentive funding exceeds the total cost of the project. Furthermore, program funds shall be used only for distinct, eligible costs described in these guidelines that are not funded by another funding source. The CEC reserves the right to review and audit all incentive and funding award documents to ensure compliance with this requirement.

The CEC's approach to incentive layering for the BUILD Program is aligned with the CPUC's nonbinding guiding principles for incentive layering adopted on November 4, 2021, as part of the Building Decarbonization proceeding (R.19-01-011).<sup>26</sup> Specifically, the CEC has drafted these guidelines to adhere to the following principles:

- Principle 1. Ease of participation as a central priority;
- Principle 2. CEC's incentives are not permitted to be combined with other incentives to exceed actual costs;
- Principle 3. The avoided GHG emissions resulting from BUILD incentives identified in Chapter 4 may not be attributed to any other program or counted toward any other program or requirement as determined by the CPUC; and
- Principle 4. the CEC is committed to ongoing data sharing with the CPUC and collaboration with the administrators and implementers of other complementary incentive programs.

To the extent that there is inconsistency between these guidelines and the CPUC's nonbinding guiding principles for incentive layering, the requirements of the BUILD Program Guidelines shall control. The CPUC may apply additional requirements and restrictions on incentive layering under other proceedings, such as restriction in the Wildfire and Natural Disaster Resiliency Rebuild Program, established in CPUC Decision 21-11-002.

## M. Information Practices Act

The Information Practices Act (IPA) is codified at California Civil Code Sections 1798 et seq. Personal information is defined in the IPA at Civil Code Section 1798.3(a). The applicant shall comply and ensure that all of its subcontractors and project partners shall comply with the IPA relative to the activities under its project. This includes, but is not

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<sup>26</sup> California Public Utilities Commission. [Appendix A: Adopted Incentive Layering Guiding Principles and Requirements](https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M420/K586/420586781.PDF), <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M420/K586/420586781.PDF>.



limited to complying with Section 1798.16 (Personal Information; maintaining sources of information) and Section 1798.17 (Notice; periodic provision; contents).

1. **Sources of information.** The applicant, and applicant's subcontractors and project partners, shall maintain a record of the source of an individual's personal information in accordance with Section 1798.16. Per IPA Section 1798.16, this requirement does not apply if the data subject is the source of the personal information.
2. **Use of information.** Pursuant to IPA Section 1798.14, the applicant, and applicant's subcontractors and project partners, shall use personal information only for the purposes of the approved project. Applicant, and applicant's subcontractors and project partners shall not disclose any personal information to any person or entity other than the CEC and CEC employees except as required by CPUC D.20-03-027, Ordering Paragraph 26.
3. **Security.** Pursuant to IPA Section 1798.21, the applicant, and applicant's subcontractors and project partners, shall employ appropriate and reasonable safeguards to ensure the security and confidentiality of personal information and protect against anticipated threats or hazards to their security or integrity, which could result in any injury.
4. **Notice.** On or with any form used to collect personal information from individuals, the applicant, and applicant's subcontractors and project partners, shall provide the notice required in IPA Section 1798.17. At the time of these guidelines, Section 1798.17 requires:
  - a. The name of the agency and the division within the agency that is requesting the information.
  - b. The title, business address, and telephone number of the agency official who is responsible for the system of records and who shall, upon request, inform an individual regarding the location of their records and the categories of any persons who use the information in those records.
  - c. The authority, whether granted by statute, regulation, or executive order that authorizes the maintenance of the information.
  - d. With respect to each item of information, whether submission of such information is mandatory or voluntary.
  - e. The consequences, if any, of not providing all or any part of the requested information.
  - f. The principal purpose or purposes within the agency for which the information is to be used.
  - g. Any known or foreseeable disclosures which may be made of the information pursuant to subdivision (e) or (f) of Section 1798.24.
  - h. The individual's right of access to records containing personal information which are maintained by the agency.
5. **Survival.** The IPA requirements of these guidelines shall remain in full force and effect in perpetuity.

6. **Flow-down.** The applicant shall flow-down these IPA requirements to its subcontractors and project partners.
7. **Priority.** In the event of a conflict between these IPA provisions and other terms in these guidelines and applications or claim forms, these IPA provisions shall govern.

## **N. California Environmental Quality Act**

In general, the CEC must comply with California Environmental Quality Act (CEQA),<sup>27</sup> which requires public agencies to identify and consider potential environmental impacts of proposed projects when the CEC supports proposed projects with grants or other subsidies.<sup>28</sup> CEQA does not apply to projects over which public agencies exercise only ministerial authority.<sup>29</sup> Under the BUILD Program Guidelines, the BUILD incentives and technical assistance will be provided to future development projects through a purely ministerial process, and the CEC's authority over these projects is solely ministerial. Because of the limited scope of the CEC's oversight authority and the timelines built into these guidelines, the CEC will not fund any project under BUILD that would result in the CEC becoming a lead agency under CEQA. Applicants for BUILD funding should consult with local planning and building departments to ensure development projects are otherwise consistent with CEQA requirements.

## **O. Disclaimer of Warranty**

Eligible applicants must attest at submittal of their design or construction reservation application that the CEC, the State of California, its employees, contractors, and subcontractors make no warrant, express or implied, and assume no legal liability for the information provided to applicants, including, but not limited to, in any analysis of building performance or technical assistance; nor does any party represent that the uses of this information will not infringe upon privately owned rights. The specific content of the technical assistance has not been approved or disapproved by the CEC nor has the CEC passed upon the accuracy or adequacy of the information in such technical assistance.

## **P. Reservation Extension and Appeals Process**

### **1. Staff Extensions of a Design Reservation or Construction Reservation**

As noted above in Chapter 5, Sections A.2.d. and A.3.e, applicants may obtain CEC staff approval of two separate kinds of reservation extensions under these guidelines, a six- (6) month extension of the incentive reservation and a twelve- (12) month extension of the construction reservation. Such extensions must comply with the following requirements.

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27 Public Resources Code Section 21000 et seq.; see also California Code of Regulations, Title 14, Section 15000 et seq.

28 Public Resources Code Section 21065(b).

29 Public Resources Code Section 21080(d)(1); California Code of Regulations, Title 14, Section 15300.1.

**a. Design Reservation Extensions**

- i. At least 30 days prior to the design reservation expiration date identified in the design reservation commitment letter, any applicant seeking an extension of their design reservation shall submit a letter requesting an extension of up to six (6) months and setting forward the basis for the request to the BUILD Program email inbox at [BUILD@energy.ca.gov](mailto:BUILD@energy.ca.gov).
- ii. At a minimum, the letter shall contain:
  - a) A discussion of any barriers or delays that will be resolved within the extension period and that the updated project timetable is viable and consistent with the terms within these guidelines.
  - b) A statement that applicant has applied for low-income housing financing and is awaiting approval, if applicable.
  - c) A statement that applicant expects to learn whether their low-income housing financing is approved within the extended period, if applicable.
- iii. Prior to the expiration of any design reservation extension requested under this section, CEC staff will notify the applicant of whether their extension request contains the required elements of this section and, if so, of their new design reservation expiration date.

No design reservation extensions may be granted beyond this one-time, six- (6) month extension. However, eligible applicants may reapply for BUILD incentives after the expiration of design reservations.

**b. Construction Reservation Extensions**

- i. At least 30 days prior to the expiration date identified in the construction reservation commitment letter, any applicant seeking an extension of their construction reservation shall submit a letter requesting an extension of up to twelve (12) months and setting forward the basis for the request to the BUILD Program email inbox at [BUILD@energy.ca.gov](mailto:BUILD@energy.ca.gov).
- ii. At a minimum, the letter shall contain both:
  - a) A statement that the extension is necessary due to unforeseen circumstances beyond the applicant’s control that are not the fault of, or caused by, the applicant, and a summary of the unforeseen circumstances.
  - b) A statement that the unforeseen circumstances identified above have been remedied and that the project timetable is now consistent with the terms within these guidelines and on track to advance to project completion (step 3 of Chapter 5) within the extended period.
- iii. Prior to the expiration of any construction reservation extension requested under this section, CEC staff will notify the applicant whether their extension request contains the required elements of this section and, if so, of their new construction reservation expiration date.

As noted in Section P.2 below, construction reservation extension requests beyond 12 months may be granted for extraordinary circumstances. However, any

construction incentive extension requests beyond 12 months must be considered by the CEC.

## **2. Commission Extension of a Construction Reservation**

The CEC, by vote at a business meeting, may waive and extend the BUILD construction reservation (36 months) period beyond 12 months under limited circumstances based on the following criteria and process. Under no circumstances may a time extension be granted beyond July 1, 2033.

- a. The BUILD applicant shall submit an electronic request for an extension of time to the BUILD Program email inbox at [BUILD@energy.ca.gov](mailto:BUILD@energy.ca.gov). Staff will forward the request to the Executive Office for date stamping.
- b. The request shall include the following information:
  - i. The name and address of the applicant.
  - ii. The project name and BUILD project reservation number.
  - iii. The amount of additional time requested by the applicant to extend the construction reservation period, to complete the project and submit a final project completion package.
  - iv. An explanation of why there is good cause to grant the extension, including:
    - a) Why the applicant is or was unable to provide the required documentation or complete the project on time and submit a project completion package before the applicable expiration date.
    - b) Whether these circumstances were beyond the applicant's control.
  - v. An explanation of any other good cause that exists for granting the request for an extension of time.
  - vi. Documentation, if available, to support the information provided in Items i. through v.
- c. The CEC may grant an extension of time upon a showing of good cause, based on the documented factors submitted along with the applicant's request.
  - a) Examples of the circumstances that constitute good cause include natural events or disasters, such as wildfires, or unanticipated construction-related delays that could not be avoided by the applicant.
  - b) Poor planning, carelessness, or negligence of the applicant or the applicant's agents or ignorance of the applicable BUILD Program Guidelines requirements or deadlines does not constitute good cause for an extension.
- d. The extension of time granted by the CEC shall be limited to that time reasonably necessary for the applicant to complete the project and submit the applicable documentation or complete the project and submit the final incentive award documentation. Under no circumstances shall an extension of time extend beyond July 1, 2033.
- e. Requests for time extensions may be submitted only for projects with an approved construction reservation that have previously obtained a staff-approved

Construction Reservation Extension pursuant to Chapter 6, Section P.1. and must be submitted in accordance with this section at least 90 days before the expiration of the construction reservation, as extended.

Under no circumstances will more than one extension request be granted per reservation application under this Section P.2.

### **3. Executive Director Reconsideration of a Reservation Application**

An applicant or an applicant's designee may petition the CEC executive director for reconsideration if a BUILD design reservation application or construction reservation was denied, the reservation was cancelled, or if a request for a staff extension of a design reservation or construction reservation is denied. The petition for reconsideration shall be in an electronic email request and submitted, with any supporting documentation, to the BUILD Program email inbox at [BUILD@energy.ca.gov](mailto:BUILD@energy.ca.gov) within 30 days of the date of the notice of the reservation denial, cancellation, or revocation.

The petition shall:

- Specify the basis for the petition.
- State why the petitioner believes the denial, cancellation, or revocation is improper given the eligibility criteria for the reservation, extension, or payment claim.
- Explain any supporting documentation filed with the petition.
- Identify any legal authority or other basis supporting the petitioner's position, and identify the remedy sought.

If the petition for reconsideration is complete, the executive director or the executive director's designee shall direct staff to evaluate the petition. Within 30 days of receiving a complete petition, the executive director or the designee shall provide a written response, by email, to the petition that identifies the action the executive director or the designee is taking and the basis for that action. This action may include (1) denying the petition based on the lack of merit, lack of jurisdiction, or insufficient evidence; (2) conducting further investigation; (3) correcting or modifying prior staff action; or (4) taking other appropriate action, including rejecting the petition for being incomplete.

If the executive director or the designee denies the petition for lack of merit, lack of jurisdiction, or insufficient evidence, the petitioner may appeal the denial to the CEC in accordance with Section P.4 below.

### **4. Energy Commission Appeals**

If an applicant's petition for reconsideration is denied by the executive director, the petitioner may file a letter of appeal to the CEC chair within 30 days of the date of the executive director or the designee's written response denying the petition. The letter of appeal shall be submitted to the CEC chair and processed as an appeal from a request for investigation following the CEC's regulations in Title 20, California Code of

Regulations, Section 1232.5. The letter of appeal shall state the basis for challenging the executive director or the designee's denial.

In addition, the letter of appeal shall include a copy of the petition for reconsideration, all supporting documentation submitted with the petition, and a copy of the executive director or the designee's written response.

Within 45 days of the filing of a complete letter of appeal, the CEC chair shall issue a written order sustaining the executive director or the designee's denial, modifying it, overturning it, or referring the matter to a CEC committee or the full Commission for further evaluation.

An applicant seeking to file a petition for reconsideration or appeal pursuant to this section may contact the Public Advisor's Office for information on the filing process. The contact information for the Public Advisor's Office is [publicadvisor@energy.ca.gov](mailto:publicadvisor@energy.ca.gov).

## **Q. Participation in the CPUC's Evaluation, Measurement, and Verification Process**

The data and information collected in implementation of these guidelines will inform the CPUC's EM&V, as further delineated in D.20-03-027 and the implementation plan. In addition, as described in Chapter 6 Section D above, the CEC and the CPUC's third-party evaluator may request additional information to further inform the CPUC's EM&V pilot program evaluation. Appendix F of these guidelines contains the EM&V participation requirements for BUILD incentive recipients.

## **R. Waitlist**

CEC staff may establish and administer a waitlist as necessary to ensure approved reservations do not exceed the approved BUILD Program Budget (Table 1.1), BUILD Program Budget Allocation by Natural Gas Territory (Table 1.2), and other funding requirements. Waitlist priority shall be determined in a manner consistent with the Design and Construction Reservation Requirements in Chapter 5, Section A.2(a) and Section A.3(a) respectively.

## **S. Nondiscrimination of Compliance**

During the performance of the project, the applicant and its subcontractors shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of sex, sexual orientation, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), mental disability, medical condition, age, marital status, or denial of family care leave. The applicant and its subcontractors shall ensure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. The applicant and its subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Sections 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 11000 et seq.). The applicable regulations of the Fair Employment and Housing

Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4.1 of Title 2 of the California Code of Regulations, are incorporated into these guidelines by reference and made a part of it as if set forth in full. The applicant and its subcontractors shall give written notice of their obligations under this section to labor organizations with which they have a collective bargaining or other agreement. The applicant shall include the nondiscrimination and compliance provisions of this section in all subcontracts in performance of the project.

## **T. Drug-Free Workplace Certification**

By accepting BUILD funds, the applicant certifies under penalty of perjury under the laws of the State of California that it will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

1. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited, and specifying actions to be taken against employees for violations as required by Government Code Section 8355(a).
2. Establish a drug-free awareness program as required by Government Code Section 8355(b) to inform employees about all the following:
3. The dangers of drug abuse in the workplace.
  - The person's or organization's policy of maintaining a drug-free workplace.
  - Any available counseling, rehabilitation, and employee assistance programs.
  - Penalties that may be imposed upon employees for drug abuse violations.
4. Provide, as required by Government Code Section 8355(c), that every employee who works on the proposed project:
  - Will receive a copy of the company's drug-free policy statement.
  - Will agree to abide by the terms of the company's statement as a condition of employment on the project.

Failure to comply with these requirements may result in suspension of project payments or termination of the award or both. The applicant may become ineligible for any future state awards if the CEC determines that any of the following has occurred: (1) the applicant has made false certification, or (2) the applicant violates the certification by failing to carry out the requirements as noted above.

## **U. Americans with Disabilities Act Certification**

By applying for and accepting BUILD funds, the applicant assures the State of California that it complies with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. Section 12101, et seq.), which prohibits discrimination based on disability, as well as applicable regulations and guidelines issued pursuant to the ADA.

## **V. Worker's Compensation Insurance**

1. The applicant warrants that it carries Worker's Compensation Insurance for all its employees who will be engaged in the performance of the project and agrees to furnish to the CEC satisfactory evidence of this insurance upon the CEC's request.
2. If the applicant is self-insured for worker's compensation, it warrants that the self-insurance is permissible under the laws of the State of California and agrees to furnish to the CEC satisfactory evidence of the insurance upon the CEC's request.

## **W. Severability**

If any provision of these guidelines is unenforceable or held to be unenforceable, all other provisions of these guidelines will remain in full force and effect.

## **X. Waiver**

No waiver of any breach of these guidelines constitutes waiver of any other breach. All remedies in these guidelines will be taken and construed as cumulative, meaning in addition to every other remedy provided in the guidelines or by law.

## **Y. National Labor Relations Board Certification (Not Applicable to Public Entities)**

The applicant swears under penalty of perjury that no more than one final unappealable finding of contempt of court by a federal court has been issued against the applicant within the immediately preceding two-year period because of the applicant's failure to comply with an order of a federal court that orders the applicant to comply with an order of the National Labor Relations Board.

## **Z. Child Support Compliance Act**

For any award in excess of \$100,000, the applicant acknowledges in accordance with Public Contract Code 7110, that (a.) The applicant recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with Section 5200) of Part 5 of Division 9 of the Family Code; and (b) the applicant, to the best of its knowledge, is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.



## **AA. Air or Water Pollution Violation**

Under state laws, the applicant will not be:

1. In violation of any order or resolution not subject to review promulgated by the California Air Resources Board or an air pollution control district.
2. Subject to a cease-and-desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions.
3. Or finally determined to be in violation of provisions of federal law relating to air or water pollution.

## **BB. Applicant's Obligations to Subcontractors**

- (1) The applicant is responsible for handling all contractual and administrative issues arising out of or related to any subcontracts it enters for the performance of the project.
- (2) A BUILD award does not create any contractual relation between the CEC and any of the applicant's subcontractors, and no subcontract may relieve the applicant of its responsibilities under these guidelines. The applicant agrees to be as fully responsible to the CEC for the acts and omissions of its subcontractors or persons directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the applicant.

The applicant's obligation to pay its subcontractors is an independent obligation from the CEC's obligation to make payments to the applicant. As a result, the CEC has no obligation to pay or enforce the payment of any funds to any subcontractor.

- (3) The applicant is responsible for establishing and maintaining contractual agreements with and reimbursing each subcontractor for work performed in accordance with the terms of these guidelines.

## **CC. Change in Business**

1. The applicant will promptly notify the CEC of the occurrence of:
  - a. A change of address.
  - b. A change in business name or ownership.
  - c. Any litigation or other legal proceeding affecting the project or applicant's ability to adhere to these guidelines.
  - d. Any casualty or other loss to project personnel, equipment, or third parties.
2. The applicant must provide the CEC with written notice of a planned change or reorganization of the type of business entity under which it does business. A change of business entity or name change requires an assignment of the applicant's award to the changed entity. If the CEC does not permit the assignment as set forth in Appendix A, Paragraph B, for any reason (including that the assignee is ineligible), it may terminate the award.

## **DD. Flowdown Provisions**

Subcontracts funded in whole or in part by a BUILD award must include language conforming to the provisions below.

- Compliance and Verification (Chapter 6, Section D)
- Audits (Chapter 6, Section F)
- Records Retention: Use and Disclosure of Information and Records and Confidentiality (Chapter 6, Section I)
- Prevailing Wage (Chapter 6, Section K)
- Information Practices Act (Chapter 6, Section M)
- Nondiscrimination of Compliance (Chapter 6, Section S)

### 1. Audits

All subcontracts entered for the performance of an awarded project are subject to examination and audit by the CEC, the Bureau of State Audits, or the CPUC for a period of three (3) years after payment of the recipient's final invoice under this agreement.

### 2. Conflicting Subcontract Terms

Prior to an award, the applicant will notify the CEC of any known or reasonably foreseeable conflicts between these guidelines and its agreements with any subcontractors, for example, payment terms. If the applicant discovers any such conflicts after receipt of the award, it will notify the CEC of the conflict within fifteen (15) days of discovery. The CEC may, without prejudice to its other remedies, terminate the award if any conflict impairs or diminishes the value of the award.

### 3. Penalties for Noncompliance

Without limiting the CEC's other remedies, failure to comply with the above requirements may result in the termination of a BUILD award.

## **EE. Survival of Terms**

Certain provisions will survive the completion or termination date of an awarded project for any reason. The provisions include but are not limited to:

- Compliance and Verification (Chapter 6, Section D)
- Enforcement (Chapter 6, Section E)
- Audits (Chapter 6, Section F)
- Records Retention: Use and Disclosure of Information and Records and Confidentiality (Chapter 6, Section I)
- Information Practices Act (Chapter 6, Section M)
- Change in Business (Chapter 6, Section CC)
- Payment Process (Appendix A).

## REFERENCE DOCUMENTS

[BUILD Implementation Plan, Revised September 2020 CEC-300-2020-010-REV](https://efiling.energy.ca.gov/getdocument.aspx?tn=234936)

[https://efiling.energy.ca.gov/getdocument.aspx?tn=234936.](https://efiling.energy.ca.gov/getdocument.aspx?tn=234936)

[CPUC Decision 20-03-027 for BUILD](https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K772/331772660.PDF)

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K772/331772660.PDF>

[CPUC Resolution E-5116 for BUILD, approving the Implementation Plan](https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M376/K936/376936477.PDF)

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M376/K936/376936477.PDF>

[Senate Bill SB 1477 \(Stern, 2018\)](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1477)

[https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill\\_id=201720180SB1477](https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB1477)

[The TECH Initiative Program](https://energy-solution.com/tech/)

<https://energy-solution.com/tech/>

[CPUC Decision 21-11-002, Incentive Layering, the Wildfire and Natural Disaster Resiliency Rebuild Program, Data Sharing, Rate Adjustments for Electric Heat Pump Water Heaters, and Propane Usage](https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M421/K107/421107786.PDF)

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M421/K107/421107786.PDF>

[Appendix A to CPUC Decision 21-11-002, Adopted Incentive Layering Guiding Principles and Requirements](https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M420/K586/420586781.PDF)

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M420/K586/420586781.PDF>

Opinion Dynamics. (2022). Evaluation of the Building Initiative for Low-Emissions Development (BUILD) Program. Evaluation Plan. <https://pda.energydataweb.com/#!/documents/2585/view>

# GLOSSARY

## Key Words and Terms

<b>Word/Term</b>	<b>Definition</b>
AEA	Association for Energy Affordability
AHSC	Affordable Housing and Sustainable Communities
American National Standards Institute (ANSI)	Private, nonprofit organization that administers and coordinates the U.S. voluntary standards and conformity assessment system.
Area median income (AMI)	Means the median household income based on household size of a geographic area of the state, as annually updated by the California Department of Housing and Community Development (HCD), pursuant to Health and Safety Code Section 50093.
Air-source heat pump (ASHP)	An appliance that consists of one or more factory-made assemblies, that includes an indoor conditioning coil, a compressor, and a refrigerant-to-air heat exchanger, and that provides heating and cooling functions.
Advance Water Heating Initiative (AWHI)	An initiative that seeks to advance the development and adoption of heat pump water heating technologies.
CalEnviroScreen	A screening method that can be used to help identify California communities that are disproportionately burdened by multiple sources of pollution. The CalEnviroScreen tool combines different types of census tract-specific information into a score to determine which communities are the most burdened or "disadvantaged."
California Housing Finance Agency (CalHFA)	State agency that provides loan financing for affordable multifamily rental housing developments and provide first-time homebuyers with down payment and closing cost assistance and access to first mortgage loans.
California Native American Tribe	A Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission for the purposes of Chapter 905 of the Statutes of 2004 (Senate Bill 18, Burton 2004)
California Tribal Organization	A corporation, association, or group controlled, sanctioned, or chartered by a California Native American tribe that is subject to its laws, the laws of the State of California, or the laws of the United States

California Air Resources Board (CARB)	State agency primarily responsible for actions to protect public health from harmful effects of air pollution.
California Alternative Rates for Energy (CARE)	Program that offers a discount on electric bills and natural gas bills for income qualified households.
California Building Energy Code Compliance (CBECC)	A free software developed by the CEC for demonstrating compliance with the Energy Code. This software is available on the CEC website.
California Debt Limit Allocation Committee (CDLAC)	Administers the State's tax-exempt bond program to allocate the debt authority financing affordable housing developments for low-income Californians, solid waste disposal and waste recycling facilities, industrial development projects.
Certified energy analysts (CEAs)	Certified energy analysts (CEAs) are individuals who have demonstrated their mastery of the Residential California Energy Standards for single-family and low-rise residential buildings or Nonresidential California Energy Standards for high-rise residential buildings by completing a comprehensive certification examination administered by the California Association of Building Energy Consultants (CABEC).
State Energy Resources Conservation and Development Commission, commonly called the California Energy Commission (CEC)	State Energy Resources Conservation and Development Commission, commonly called the California Energy Commission, the Energy Commission, or the CEC is responsible for advancing state energy policy, developing renewable energy, transforming transportation, increasing energy efficiency, investing in energy innovation, certifying thermal power plants, and preparing for energy emergencies.
Central Heat Pump Water Heater (cHPWH) System	A central heat pump water heater system serves two or more dwelling units or spaces.

Certificate of occupancy	The certificate of occupancy is issued by the appropriate local building authority pursuant to a building permit for new construction, additions, and changes of occupancy after all the necessary construction has been approved and facilities have been inspected by inspection personnel. This certificate can be obtained through the local building authority. The requirement for a certificate of occupancy varies among municipalities.
Residential certificate of compliance (CF1R-PRF-01E)	CF1R-PRF-01E document demonstrates the project design and equipment are compliant with the Energy Code at time of permit application. This document is required to show compliance with the Energy Code and when submitting for a building permit. This document is required to be registered with a HERS Provider.
Residential certificate of installation (CF2R)	CF2R document demonstrates installations are compliant with the Energy Code at the time of construction. This document is required and generated by a HERS Provider to be completed by the installers.
Residential certificate of verification (CF3R)	CF3R document demonstrates field testing and verifications that are compliant with the Energy Code at the time of construction. This document is required and generated by a HERS Provider to be completed by a HERS rater.
Community choice aggregation or aggregator (CCA)	Community choice aggregation (or CCA) lets local jurisdictions aggregate, or combine, their electricity load to purchase power on behalf of their residents. In California, community choice aggregators are defined in PUC Section 331.1 and work together with the region's existing utility, which continues to provide customer services (for example, grid maintenance and power delivery).
Coefficient of Performance (COP), Heat Pump	The ratio of the rate of useful heat output delivered by the complete heat pump unit (exclusive of supplementary heating) to the corresponding rate of energy input, in consistent units and as determined using the applicable test method in Appliance Efficiency Regulations or Section 110.2.
California Public Utilities Commission (CPUC)	Regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises.
Contractor State Licensing Board (CSLB)	Issues contractor licenses and regulates the state's construction industry.

Disadvantaged community	A community identified as a disadvantaged community under Section 39711 of the Health and Safety Code. A map of California disadvantaged communities designated pursuant to Senate Bill 535 (De León, Chapter 830, Statutes of 2012) can be accessed on the California Office of Environmental Health Hazard Assessment website. <sup>30</sup>
DACAG	Disadvantaged Communities Advisory Group
DIR/DOSH	Department of Industrial Relations Division of Occupational Safety and Health
Drain Water Heat Recovery (DWHR)	A system that uses a heat exchanger to transfer heat from warm drain water to incoming cold water.
Energy Efficiency Ratio (EER)	The ratio of net cooling capacity (in Btu/hr) to total rate of electrical energy input (in watts), of a cooling system under designated operating conditions, as determined using the applicable test method in the Appliance Efficiency Regulations or Section 110.2.
EM&V	Evaluation measurement and verification efforts
Electric Vehicle (EV)	A vehicle that is powered by an electric motor that draws electricity from a battery and is capable of being charged from an external source.
FY	Fiscal year
Greenhouse Gas (GHG)	Any gas that absorbs infrared radiation in the atmosphere. Common examples of greenhouse gases include water vapor, carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), halogenated fluorocarbons (HCFCs), ozone (O <sub>3</sub> ), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs). The programs methodology of evaluating GHG is in Appendix D
Global Warming potential (GWP)	A measure of how much energy the emissions of 1 ton of a greenhouse gas will absorb over a given period of time (usually 100 years), relative to the emissions of 1 ton of carbon dioxide.
HERS	The California Home Energy Rating System as described in Title 20, Chapter 4, Article 8, Section 1670.
Heating Seasonal Performance Factor (HSPF)	The HSPF is specifically used to measure the efficiency of air source heat pumps. HSPF is defined as the ratio of heat output (measured in BTUs) over the heating season to electricity used (measured in watt-hours).

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<sup>30</sup> See SB 535 Disadvantaged Communities, <https://oehha.ca.gov/calenviroscreen/sb535>.

Heat pump	An appliance that uses electricity to transfer heat from a cool space to a warm space, providing an energy-efficient way to heat and cool buildings or to heat water.
Heat Pump Water Heater (HPWH)	Heat pump water heaters use electricity to move heat from one place to another instead of generating heat directly. <sup>31</sup>
U.S. Department of Housing and Urban Development (HUD)	An executive department of the U.S federal government responsible for administering federal housing and urban development laws.
Heating, Ventilation, and Air Conditioning (HVAC)	A space-conditioning system or a ventilation system.
Integrated Energy Policy Report (IEPR)	A report prepared by the CEC that provides a cohesive approach to identifying and solving the state’s pressing energy needs and issues
Investor-owned utility (IOU)	As used in this document, investor-owned utilities refer to Pacific Gas and Electric Company (PG&E), Southern California Edison, and San Diego Gas & Electric Company (SDG&E) for electric service, and Southern California Gas Company (SoCalGas), PG&E, SDG&E, and Southwest Gas Corporation for gas service.
Low-income community	Defined as a census tract or equivalent geographic as defined by the United States Census Bureau in which at least 50 percent of households have an income less than 60 percent of the area median gross income.
Low-rise multifamily certificate of compliance (LMCC)	LMCC document demonstrates the project design and equipment are compliant with the Energy Code at time of permit application. This document is required to show compliance with the Energy Code and when submitting for a building permit. Additionally, this document is required to be registered with a HERS Provider.
Low-rise multifamily certificate of installation (LMCI)	LMCI document demonstrates installations are compliant with the Energy Code at the time of construction. This document is required and generated by a HERS Provider to be completed by the installers.

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31 See the Department of Energy HPWH webpage for more information, <https://www.energy.gov/energysaver/heat-pump-water-heaters>



Low-rise multifamily certificate of verification (LMCV)	LMCV document demonstrates field testing and verifications that are compliant with the Energy Code at the time of construction. This documented is required and generated by a HERS Provider to be completed by a HERS rater.
Meter ID	Uniquely identifies an electric or natural gas meter. This is the meter equipment itself, and not an associated locational entity like premise or service point.
Metric ton of carbon dioxide equivalent (MTCO2e)	A unit of measurement for GHG emission produced by an activity.
Natural Gas	A hydrocarbon gas found in the earth composed of methane, ethane, butane, propane, and other gases.
Net Billing Tariff (NBT)	A program for determining customer compensation for excess electricity generation exported to the grid by rooftop PV systems.
Northwest Energy Efficiency Alliance (NEEA)	An alliance of more than 140 northwest utilities and energy efficiency organizations working to cost-effectively deliver energy efficiency through market transformation.
Northeast Energy Efficiency Partnership (NEEP)	A nonprofit that works to accelerate energy efficiency, electrification, and grid flexibility in the building sector.
Nonresidential certificate of compliance (NRCC-PRF-01-E)	NRCC-PRF-01-E document demonstrates the project design and equipment are compliant with the Energy Code at time of permit application. This document is required to show compliance with the Energy Code and when submitting for a building permit.
Nonresidential certificate of installation (NRCI)	NRCI document demonstrates installations are compliant with the Energy Code at the time of construction. This document is required to be completed by the installers.
Nonresidential certificate of verification (NRCV)	NRCV document demonstrates field testing and verifications that are compliant with the Energy Code at the time of construction. This document is required to be completed by a HERS rater.
Nationally Recognized Testing Laboratory (NRTL)	Laboratories that have been recognized by the U.S. Department of Labor, Occupational Safety & Health Administration (OSHA), in accordance with Title 29 of the Code of Federal Regulations, Section 1910.7.

Occupant	An occupant is a person that resides in a residential building and referred to interchangeably in this document as “resident.” These terms do not include nonresident building owners or management companies.
Packaged Terminal Heat Pump (PTHP)	A packaged terminal air conditioner that uses reverse cycle refrigeration as its prime heat source, that has a supplementary heating source available, with the choice of electric resistant heat.
Premise ID	Uniquely identifies a premise. A premise is a contiguous geographic area used by a utility to track billing and usage. It contains service points and meters, and should have an address assigned to it.
Project	Pursuant to the BUILD Program Guidelines, a “project” refers to new, all electric, low-income, single, or multifamily residential housing unit(s) located within an eligible natural gas utility service area. Only “eligible buildings,” as defined in Chapter 2, may be projects. A project must be constructed consistent with Energy Code and with contractors licensed to conduct the work.
Permission to Operate (PTO)	A local electric utility's written authorization to interconnect a photovoltaic system to the Local Electric Utility’s electrical grid.
Publicly Owned Utility (POU)	A local publicly owned electric utility as defined by Public Utilities Code Section 224.3 <sup>32</sup>
PUC	Public Utilities Code
Photovoltaic (PV)	Technology that converts solar energy into electricity.
RDA	Redevelopment Agency
RFP	Request for proposal
SB	Senate Bill
Seasonal Energy Efficiency Ratio (SEER)	The efficiency of central air conditioning systems is rated by a Seasonal Energy Efficiency Ratio (SEER). In general, the higher the SEER, the less electricity the system needs to operate.
Service Point ID	Uniquely identifies a service point. A service point is a physical point in a utilities infrastructure through which energy is delivered to the end user. It is the point at which a meter or meters are connected, such as a meter socket or electrical panel.
TAP	Technical assistance provider

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32 For list of POUs, please see the [Electric Load-Serving Entities \(LSEs\) in California webpage](https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-load-serving-entities-lses) under POUs. <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/electric-load-serving-entities-lses>

California Tax Credit Allocation Committee (TCAC)	Administers the federal and state Low-Income Housing Tax Credit Programs.
Tier 1 Business Letter	A CPUC Tier 1 business letter is an informal request by a consulting agency for the CPUC’s approval, authorization, or other relief, including a request to approve a program administrator’s design elements, guidelines, or other terms or conditions.
Technology and Equipment for Clean Heating Initiative (TECH)	Initiative to accelerate the adoption of clean space and water heating technology across California homes.
Tribal Communities	A group of people living within reservation or allotment boundaries, living on land that otherwise falls under the ownership or jurisdiction of a California Native American tribe, or that is served by a California Native American tribe or other California tribal organization, regardless of whether those people are tribal members of one or another tribe or are not tribal members
Time-of-Use (TOU) Rates	Time-of-use rates fall within a broader category of innovative utility rate structures that adjust the rate you pay for electricity over the course of the day and between seasons.
Uniform Energy Factor (UEF)	The uniform energy descriptor used to describe the overall water heater efficiency as determined using the applicable test method in the Appliance Efficiency Regulations. Typical gas storage water heaters have typical UEFs of about 0.60–0.76, electric storage water heaters of about 0.90, and gas instantaneous units approximately 0.80–0.94. It replaced the “energy factor” metric previously used for residential water heaters.
Unitary Heat Pump Water Heater (HPWH) System	A unitary heat pump water heater system serves a dwelling unit or space.
Variable Capacity Heat Pump (VCHP)	A type of heat pump that can vary its delivery capacity depending on space load.
Virtual Net Energy Metering (VNEM)	A program that allows multi-tenant building owners to install a solar energy system to cover the electricity load of both common and tenant areas connected at the same service delivery point.

Variable  
Refrigerant Flow  
(VRF)

A large-scale type of heat pump system that can vary the flow of refrigerant and delivery capacity to multiple indoor air handlers serving multiple individual zones.

# APPENDIX A:

## Payment Process

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This appendix identifies the information and steps to receive a new adopter design award and incentive payments. To be eligible, all applicants must comply with these guidelines. Awards and incentives must reimburse the applicant’s accrued direct eligible costs to complete the project.

**Table A.1: BUILD Project-Specific Funding Milestones**  
**BUILD Funding Available to Be Released at Specific Project Milestones**

<b>Award &amp; Incentive Type</b>	<b>Design Reservation Approval</b>	<b>Construction Reservation Approval</b>	<b>Building Foundation Poured</b>	<b>Project Completion</b>
New Adopter Design Award	100% Up to \$100,000	Intentionally Left Blank	Intentionally Left Blank	Intentionally Left Blank
Base GHG Incentive	Intentionally Left Blank	Up to 25% Project-Specific	Up to 50% Project-Specific	Remaining amount Project-Specific (or 100% for those not electing progress payments)
Increased Energy Efficiency	Intentionally Left Blank	Intentionally Left Blank	Intentionally Left Blank	100% Project-Specific
Modeled Resident Utility Costs/Incremental PV	Intentionally Left Blank	Intentionally Left Blank	Intentionally Left Blank	100% Project-Specific
Kicker Incentives	Intentionally Left Blank	Intentionally Left Blank	Intentionally Left Blank	100% Project-Specific

Source: California Energy Commission

## **A. Payment Claims**

No applicant may submit more than four payment claims specific to any project under the program. This includes the payment of the new adopter design award, if applicable.

No additional claims, or amendments to claims, will be accepted after the final payment claim after the project completion package is approved. Once the final incentive is paid, changes to expand or improve the expected performance of a building are not eligible for BUILD funding.

## **B. Assignment of Incentives and Payment Claims**

The applicant may assign an award or incentive payment(s) to another party. Applicants may assign their incentive payment to another party on each specific payment claim form and will still be reported as the recipients of the incentive payments for tax purposes. One assignment or recipient is allowed for each payment, and with each new assignee, the applicant must file a new appropriate payee data record (STD-204).

## **C. New Adopter Design Award of \$100,000**

Applicants seeking a new adopter design award must apply for this award concurrent with their design reservation. Applicants submitting their initial application for a BUILD incentive at the time of step 2, construction reservation, are ineligible to apply for and receive a new adopter design award. CEC approval of the new adopter design award is subject to the approval of the associated design reservation. The payment claim package for a new adopter design award consists of the following items:

- Payment claim form.
- Attestations, submitted under penalty of perjury, that:
  - The applicant qualifies as a new adopter, defined as an applicant that has not yet submitted a permit for the development and construction of a multi-family all-electric residential building in California, at the time of applying for the award.
  - The project is a multifamily residential building of at least 10 units.
  - The award will reimburse direct costs and paid invoices for architectural, engineering, and energy consultation design services for the eligible project.
- Copy of paid invoices and proof of payment for third-party architectural, engineering, or energy consultation design services for the eligible project.

## **D. Base GHG Incentive Payments**

The BUILD incentive consists of four components or types: (1) base GHG incentive, (2) building efficiency incentive, (3) modeled resident utility costs/incremental PV, and (4) kicker incentives (Chapter 4). The CEC will provide progress payments derived from the base GHG incentive in recognition that a large portion of the GHG benefits are realized when a developer commits to building an all-electric instead of a mixed-fuel building.

The base GHG incentive will be made available in progress payments to eligible applicants that have incurred eligible costs in an amount greater or equal to the comprehensive incentive payments made by the CEC, according to the schedule listed below.

To be eligible for progress payments, the applicant must attest at the time of a progress payment request that:

- The applicant is unaware of anything that might reasonably be expected to materially impact the applicant's ability to perform the proposed project that the applicant has not yet communicated to the CEC's BUILD Program staff.
- The applicant still fully intends and is able to complete the proposed project.

## **1. Incentive Payment Options**

The applicant has two options:

### **a. Option A (Progress Payments)**

- **Payment 1:** Upon CEC staff's approval of the construction reservation.
  - Up to 25 percent of the calculated base GHG incentive value, or actual eligible costs, whichever is less, may be released to reimburse for eligible costs.
- **Payment 2:** Upon the applicant's submittal of a payment claim and demonstration that the project's foundation (geotagged photograph) has been constructed.
  - Up to 50 percent of the calculated base GHG incentive or actual eligible costs, whichever is less, may be released to reimburse for eligible costs.
- **Payment 3:** Upon the applicant's submittal of a payment claim and the project completion package.
  - Remaining portion of base GHG incentive amount and remaining incentive funding will be released to reimburse for actual eligible costs.

### **b. Option B (Lump Sum Payment)**

Lump sum payment at project completion upon the applicant's submittal of a payment claim package.

## **2. Payment Claim Packages**

Payment claim packages will consist of:

- Payment claim form.
- Attestation that the incentive will reimburse eligible costs. Specifically, that applicant has incurred eligible costs in an amount greater than or equal to the proportionate percentage amount of the progress payment, or otherwise actual eligible costs, whichever is less.
- Copy of paid invoices and proof of payment for local permitting, gas-disconnection and safety measures (if applicable), construction, alteration, demolition,

installation, materials, appliances, equipment, technologies, and other labor costs specific to developing and constructing an all-electric, low-income residential building or project.

## **E. Project Completion and Final Payment**

The applicant must complete the final payment claim form and submit it on or before the construction reservation expiration date, that is, 36 months plus a possible extension after the Step 2: Construction application is approved.

The payment claim packages will consist of:

- Payment claim form.
- Attestation that the incentive will reimburse eligible costs.
- Proof of equipment procurement for kickers and PV installed on the project.
- PTO (Permission to operate for solar systems).
- Certificate of occupancy (or temporary certificate).<sup>33</sup>
- Recorded regulatory agreement/deed restriction, resale restriction or equity-sharing agreement.<sup>34</sup>
- Energy efficiency verifications (CF2R, CF3R, LMCI, LMCV, NRCI, NRCV).

Detailed information on each of the required forms and documentation is listed below.

## **F. Forms and Documentation**

### **1. Payment Claim Form**

The applicant submits a payment claim form to request funding of the incentives as the project reaches different completion milestones. The payment claim form must include a description of program requirements and milestones being met, as well as notification of any changes to the project design or timetable.

The payment claim form and associated materials will be submitted electronically.

### **2. Proof of Equipment Procurement**

The applicant must demonstrate that costs have been incurred and paid for the solar equipment and kicker incentives. This requirement can be demonstrated with paid invoices, purchase or installation contracts, and other appropriate documentation.

The proof of equipment purchase must specify the price charged for the installation of equipment and should include:

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<sup>33</sup> A temporary certificate of occupancy will be accepted only as part of a final payment claim if the unfinished portion of the project does not include any of the residential portion of the project or any portion of the project associated with a kicker incentive.

<sup>34</sup> California Public Utilities Code Section 921(d)



- Name, address, and contractor’s license number of the company performing the installation.
- Site address for the project.
- Description of the work performed.
- Quantity, make, and specific model of the equipment installed. If an incomplete model number is listed, the CEC will assume the lowest efficiency model number will be installed.

### **3. PTO (Permission to Operate for Solar Systems)**

The applicant must provide the PTO received from the electric utility for the project for any installed solar energy system as part of a project funded under BUILD.

Any installed solar energy system must be interconnected before the construction reservation expiration date. CEC staff will verify that the system has been approved for interconnection by the utility prior to issuance of the final payment (or lump sum payment) for project completion. This verification must occur prior to approval of the final payment claim and dispersal of funding for the project.

Each utility may have different requirements to get permission to operate the solar systems. Applicants are strongly encouraged to contact their utility interconnection department for specific requirements early in project development. The applicant must provide the entire PTO as part of a payment claim, which usually requires the interconnection application, a line diagram of the system, and a copy of the final building permit.

If the system is virtual net-metered, CEC staff will verify that the system generation allocation percentages provided on the BUILD application forms match the system generation allocation percentages provided to the utility interconnection department, if PV was required to meet the modeled resident utility cost requirements. To ensure timely payments, applicants should indicate for CEC staff where allocation percentages are located in final project documentation.

### **4. Temporary or Final Certificate of Occupancy**

The temporary or final certificate of occupancy is issued by the appropriate local building authority pursuant to a building permit for new construction, additions, and changes of occupancy after all the necessary construction has been approved and facilities have been inspected by inspection personnel. The applicant may submit only a temporary certificate of occupancy as part of a final payment claim if the unfinished portion of the project does not include any of the residential portion of the project or any portion of the project associated with a kicker incentive.

### **5. Recorded Regulatory Agreement and Deed Restriction; Resale Restriction or Equity-Sharing Agreement**

Applicants developing a low-income single-family project must provide a copy of resale restriction or equity-sharing agreements that are required of developers constructing single-family low-income residences for sale at an affordable cost to an

eligible low-income household. Resale restrictions or equity sharing agreements are eligible for consideration only if they are between the homeowner and a public entity or nonprofit housing provider organized under Section 501(c)(3) of the Internal Revenue Code. The nonprofit housing provider must have, as its stated purpose (in its articles of incorporation on file with the office of the Secretary of State) to provide affordable housing to lower income households. Additionally, the resale restriction or equity sharing agreement must specify that the purchaser of the residence at an affordable cost may not receive a greater share of equity than described in Government Code Section 65915(c)(2) upon resale of the residence. PUC Section 921(d)(2), PUC Section 2852(a)(3)(C), and Government Code Section 65915(c)(2) contain additional information on the statutory criteria applicable to this category of projects.

Applicants developing a low-income multifamily project must provide a copy of the recorded regulatory agreement, deed restriction, or restrictive covenant for the project that identifies, at a minimum:

- (1) the project;
- (2) the number of residential units in the project subject to the affordability requirements;
- (3) the applicable affordability requirements for these residential units; and
- (4) the duration of the recorded regulatory agreement, deed restriction, or restrictive covenant.

The regulatory agreement must be with a housing agency qualified to enter into such an agreement, such as:

- Tax Credit Allocation Committee (TCAC).
- California Debt Limit Allocation Committee (CDLAC).
- California Department of Housing and Community Development/California Housing Finance Agency (HCD/CalHFA).
- U.S. Department of Housing and Urban Development (HUD).
- Redevelopment agency (RDA) or RDA successor agency, such as a community development commission.
- Local housing authority.
- Tribal housing authority.
- City or county in the case of a project funded by the HUD HOME Investment Partnerships Program.

## **6. Energy Efficiency Verifications (CF2R, CF3R, LMCI, LMCV, NRCI, and NRCV)**

Applicants must identify a HERS Rater for the energy efficiency measures verification in addition to the solar energy system. A HERS Rater will verify the installation of the energy efficiency measures for compliance with BUILD requirements in Form CF2R, LMCI, or NRCI. The energy efficiency measures include all applicable Title 24 HERS

measures and the BUILD-specific additional energy features. Additionally, a certificate of field verification and diagnostics testing (CF3R, LMCV, or NRCV) is required for Title 24 compliance in an approved HERS Provider Registry. Applicants may select a different HERS Rater for verification of Title 24 HERS measures, BUILD energy efficiency requirements, and the solar energy system, but the documentation must be submitted to the same HERS Provider. There may be energy efficiency inspections that need to take place early in construction. Therefore, it is critical that there is good communication among the applicant, builder, solar installer, and HERS Rater to coordinate Title 24 or BUILD energy efficiency requirement verifications.

## **7. Payee Data Record (STD-204)**

The designated payee identified on the BUILD reservation application form must complete the payee data record (STD-204). If the designated payee has already submitted a complete STD-204 form with a prior application and has received an incentive payment within the past year from the CEC, a new STD-204 is not needed. In these cases, CEC staff will use data from the previously submitted STD-204 form. If the data provided in a previously submitted STD-204 have changed, the designated payee must submit a new STD-204. This form can be downloaded from the BUILD Program homepage.

When the payee is a corporation or limited liability entity, the payee must also submit proof of good standing with the California Secretary of State. Only one payee may be the recipient of any incentive or progress payment.

## **G. Additional Information on Payment Claims**

Applicants must ensure that all program requirements have been met before submitting a complete payment claim package. A payment claim package consists of the forms and documentation identified in this appendix.

If, during the CEC staff review, a complete and timely submitted payment claim package is found to contain minor errors, discrepancies, or omissions, CEC staff will request clarification from the applicant. The applicant will be responsible for obtaining all information requested by CEC staff from contractors, equipment sellers and installers, or electric utility providers to process the request. CEC staff may impose a reasonable deadline for applicants to respond to and provide any information requested under this section.

If the complete payment claim form is submitted after the expiration date for project completion, or the payment claim package demonstrates that the project is ineligible for BUILD incentives, the CEC will not approve the payment claim package, the incentive award will be cancelled, and the reserved incentive will be returned to BUILD.

Payment will be made to the payee according to the Payee Data Record (STD-204).

## **H. Adjustment of Incentive Amount by Eligible Applicant**

Eligible applicants may choose to accept a lower incentive amount than calculated by the CEC under the BUILD program and should indicate this at the time of the construction reservation.

# APPENDIX B:

## Required and Eligible Technologies

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### A. Title 24 Code Compliance

Buildings must comply with Title 24, Part 6, and use performance method approved compliance software to be eligible for BUILD incentives. Projects must be installed by contractors certified to do the work.

All appliances and equipment must be installed per manufacturer's instructions and applicable code requirements. Included in this appendix are the equipment lists required by the CEC for each technology type in the BUILD Program. All appliances installed in BUILD projects must be listed in the CEC's online Modernized Appliance Efficiency Database System (MAEDbS), which contains publicly accessible lists of appliances that have been certified to the CEC.<sup>35</sup>

### B. Base GHG Incentives

#### 1. BUILD Calculator Pathway

An applicant can use the BUILD calculator to estimate incentive amounts. Please note, the BUILD Calculator is no longer updated by CEC staff and the Custom Path Tool is required for all applicants, except New Adopters, when calculating incentives. This pathway requires installation of space-heating and water-heating equipment that use the specified core technologies and meet the minimum requirements in Table B.1 for single-family and Table B.2 for multifamily buildings. Additional technologies may be added as they are incorporated into CBECC. For more information on the process for adding new technologies into CBECC, see Appendix B, Section D.

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<sup>35</sup> In California, manufacturers of federally and state-regulated appliances are required to certify their appliance efficiency data and other information to the CEC. [Modernized Appliance Efficiency Database System \(MAEDbS\)](https://www.energy.ca.gov/programs-and-topics/programs/appliance-efficiency-program-outreach-and-education/modernized), <https://www.energy.ca.gov/programs-and-topics/programs/appliance-efficiency-program-outreach-and-education/modernized>.

**Table B.1: Technologies for BUILD Base Incentives — Single-Family Residential**

Energy End Use	Core Technologies	Minimum Requirements
Space Conditioning	Air-Source Split Central Heat Pump <sup>1</sup>	HSPF2 ≥ 7.5 EER2 ≥ 11.7 (for < 45,000 Btu/h) EER2 ≥ 11.2 (for ≥ 45,000 Btu/h)
	Variable Capacity Heat Pump <sup>3</sup>	Must meet all the requirements of the VCHP Compliance Option or meets performance values specified in the Northeast Energy Efficiency Partnerships, Inc. (NEEP) database for a detailed analysis.
Water Heating	Unitary Heat Pump Water Heater	NEEA Tier 3
	Drain Water Heat Recovery (DWHR) (for two stories and above)	Unequal to shower, 43% CSA Rated Efficiency

Source: California Energy Commission

**Table B.2: Technologies for BUILD Base Incentives —Multifamily Residential**

Energy End Use	Core Technologies	Minimum Requirements
Space Conditioning	Air-Source Split Central Heat Pump <sup>1</sup>	HSPF2 $\geq$ 7.5 EER2 $\geq$ 11.7 (for < 45,000 Btu/h) EER2 $\geq$ 11.2 (for $\geq$ 45,000 Btu/h)
	Packaged Terminal Heat Pump <sup>2</sup>	COP $\geq$ 3.0
	Single Packaged Vertical Heat Pump <sup>4</sup>	COP $\geq$ 3.0
	Variable-Capacity Heat Pump <sup>3</sup>	Must meet all the requirements of the VCHP Compliance Option or meets performance values specified in the Northeast Energy Efficiency Partnerships, Inc. (NEEP) database for a detailed analysis.
Water Heating	Variable-Refrigerant-Flow (VRF) <sup>5</sup>	HSPF2 $\geq$ 7.5 (for capacity <65,000 Btu/h) COP $\geq$ 3.3 (for capacity $\geq$ 65,000 Btu/h)
	Unitary Heat Pump Water Heater	NEEA Tier 3
	Central On-site Heat Pump Water Heater	CEC-Certified <sup>6</sup> Or Available in the CEC-approved compliance software Or Cluster of NEEA Tier 3 unitary heat pump water heaters (compressor should be listed) Or NEEA Tier 2 commercial heat pump water heater <sup>7</sup>
Drain Water Heat Recovery (DWHR)	Unequal to shower, 43% CSA Rated Efficiency	

Source: California Energy Commission

1. Qualifying air-source heat pumps shall have ANSI/AHRI Standard 210/240 rating.
2. Qualifying packaged terminal heat pumps shall have ANSI/AHRI Standard 310/380 ratings at 47°F dry-bulb.
3. Qualifying variable-capacity heat pumps shall meet the requirements of publication [CEC-400-2019-012](#).
4. Qualifying single packaged vertical heat pumps shall have ANSI/AHRI Standard 390 ratings at 47°F dry-bulb.
5. Qualifying variable-capacity heat pumps shall have ANSI/AHRI Standard 1230 rating at 47°F dry-bulb.
6. Qualifying central heat pump water heater shall be certified and on the CEC's [certification list](#).
7. Qualifying central heat pump water heater is listed on [NEEA's Commercial Heat Pump Water Heaters Qualified Product List](#)

## 2. Custom Path Tool Pathway

An applicant can also submit an energy model for any equipment and features available within the software and is not limited to Table B.1 or Table B.2, such as high-performance building envelope features or other types of ventilation, space-heating, and water-heating systems.

Residential spaces served by space- or water-heating equipment with electric resistance as the primary technology do not qualify for incentives. These spaces will be removed from the incentive calculations.

## C. Kicker Incentives

The program also provides kicker incentives for technologies that further reduce GHG emissions.

**Table B.3: Eligible Technologies for BUILD Kicker Incentives**

Eligible Technologies	Minimum Requirement
Grid Flexibility	For smart thermostats, ENERGY STAR®-certified smart thermostats  For unitary HPWHs, must comply with Title 24 Part 6 Joint Appendix 13
Refrigerant	Lower-GWP (GWP<750)  Low GWP (GWP<150)
Cooktop	Induction, permanent fixture (this includes slide-in ranges)
Clothes Dryer	Heat-pump clothes dryer, ENERGY STAR-certified
On-Site Energy Storage	Listed on the Solar Equipment Lists and JA 12-compliant



Electric Vehicle Supply Equipment (EVSE)	<p>For AC EVSE only, must be capable of delivering electricity to a plug-in electric vehicle at a minimum rate of 6.2 kilowatts (kW)</p> <p>Listed on the CALeVIP Eligible Equipment List (or future CEC equivalent list) or ENERGY STAR-certified</p>
Smart Electric Vehicle Supply Equipment (Smart EVSE)	<p>For AC EVSE only, must be capable of delivering electricity to a plug-in electric vehicle at a minimum rate of 6.2 kW</p> <p>Listed on <a href="#">Southern California Edison’s Approved Product List</a></p>
Bidirectional Electric Vehicle Supply Equipment (Bidirectional EVSE)	<p>Meet the smart EVSE requirements listed above.</p> <p>Demonstrate that the electric utility serving the project allows installing bidirectional EVSE by submitting an approved interconnection agreement or an equivalent approval from the electric utility.</p> <p>(For projects in electric IOU territories only) Shall be safety certified to the applicable UL standard for utility interconnection in California. As of November 2023, EVSE must be certified to UL 1741 Supplement SB as a prerequisite for interconnection. Please refer to the applicable utility’s interconnection tariff (Rule 21) for the latest requirements. The CEC maintains a list of UL 1741 Supplement SB certified equipment on the <a href="#">V2G Equipment List</a>.</p>

Source: California Energy Commission

## D. Process for Evaluating New Technologies

The CEC requires the use of California Building Energy Code Compliance (CBECC) software to calculate GHG emissions and incentives. For new technologies to be considered under the program for base incentives, they must be included in CBECC.

1. There are two existing processes available to add new technologies in the software:
  - a. During the standard three-year iterative Energy Code update process, some new technologies may already be field-tested and vetted with enough documentation to be incorporated into the software. As the next generation of compliance software is developed, the qualified new technologies may be included in the software.; or
  - b. There is the compliance option process. The compliance option process begins by working with CEC staff anytime during an Energy Code cycle to present the proposed technology. The technologies must have reliable performance data based on field studies, usually conducted by a neutral third party, for a typical California year. The data are then vetted by staff and, when found acceptable, can be

incorporated into the software. More information about the compliance option process can be found at the CEC's Special Cases for Building Energy Efficiency Standards website.<sup>36</sup>

## **E. Eligible Equipment Lists**

As administrator of the BUILD Program, the CEC aims to develop program guidelines that not only achieve program GHG emissions reductions and the Modeled Resident Utility Cost goals but simplify participation. The CEC acknowledges that there are existing processes for evaluating the safety and performance of the range of technologies employed in meeting the GHG emissions reduction goals of BUILD. Rather than create a new evaluation process, the CEC intends to use existing evaluation processes and sources of information. This use will simplify participation and support the efforts of organizations that have similar goals to promote the design, manufacturing, and installation of high-quality, energy-efficient products. Table B.4 provides the eligible equipment list sources for each technology type.

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36 California Energy Commission. "[Special Cases for Building Energy Efficiency Standards,](https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/special-cases-building-energy)" <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/special-cases-building-energy>.

**Table B.4: Eligible Equipment Lists**

Technology	Eligible Equipment Lists
Heat Pump HVAC	AHRI <a href="#">Directory of Certified Products</a> DOE <a href="#">Compliance Certification Database</a>
Heat-Pump Water Heater	NEEA's <a href="#">Advanced Water Heater Specification Qualified Products List for Heat Pump Water Heaters</a> <a href="#">NEEA's Commercial HPWH Qualified Products List</a>
Central Heat-Pump Water Heater	CEC's <a href="#">Central HPWH Performance Map Certification List</a>
Heat-Pump Clothes Dryer and Smart Thermostats	ENERGY STAR's <a href="#">Product Finder</a>
PV Modules and Grid Support Inverters	CEC's <a href="#">Solar Equipment Lists</a>
Battery Storage System (Battery or Energy Storage System)	CEC's <a href="#">Solar Equipment Lists</a>
Electric Vehicle Supply Equipment	CALeVIP's <a href="#">Eligible Equipment List</a> ENERGY STAR's <a href="#">Product Finder</a> Southern California Edison's <a href="#">Approved Product List</a>

Source: California Energy Commission

### **1. Air Conditioning, Heating, and Refrigeration Institute's Directory of Certified Products**

The Air Conditioning, Heating, and Refrigeration Institute (AHRI) is an organization that has an equipment certification program that is globally recognized. It assures that manufacturers produce products with consistent and valid ratings and provides a level playing field for manufacturers in that competing products are tested and rated to the same standard or specification. AHRI maintains a searchable database that can easily find products.

The U.S. Department of Energy (DOE) also houses a database of certified equipment called the Compliance Certification Database. The database houses certification reports and compliance statements submitted by manufacturers for covered products and equipment subject to federal conservation standards. The database offers consumers an easy-to-use search function for existing records in a readily downloadable format and has a consumer-friendly selection tool as well as a search-by-model function.

## 2. Advanced Water Heating Specification Qualified Products List for Heat Pump Water Heaters

The Northwest Energy Efficiency Alliance (NEEA) is an alliance of more than 140 northwestern utilities and energy efficiency organizations working to deliver energy efficiency cost-effectively through market transformation. One of NEEA's area of work is advancing the market for heat pump water heaters. Utilities, energy efficiency organizations, and market partners developed the Advanced Water Heating Specification<sup>37</sup> to advance higher-performing water heaters. While the specification aims to ensuring performance in cooler northern climates, the applicability and benefits extends beyond the Northwest.

Because the BUILD Program is a residential building decarbonization program, the specification to evaluate technologies eligible under the BUILD Program will be the Electric Advanced Water Heating Specification<sup>38</sup> for residential water heaters. This specification provides guidance to manufacturers and market actors interested in developing products that not only meet ENERGY STAR criteria but also are able to provide high levels of consumer satisfaction and energy performance in a range of climates. The specification includes requirements for energy efficiency, noise, condensate management, minimum warranty, and testing guidelines.

Manufacturers who wish to include their products on the qualified products list<sup>39</sup> must submit an assessment that shows the product meeting all the requirements. A third-party lab also independently tests the products to verify performance results. NEEA updates the product list often.

Products meeting the specification are in the 40- to 80-gallon range. Most commonly, systems of this size are used in single-family homes or multifamily dwelling units. The CEC is setting design criteria, performance specifications, and installation guidelines for heat pump water heaters with larger capacity.

The Advanced Water Heating Initiative (AWHI) seeks to advance the development and adoption of heat pump water-heating technologies, including central heat-pump water-heating systems. The AWHI aims to encourage low-GWP refrigerants, plug-and-play packed systems, ability for load shifting, reliability, and cost-effectiveness. This effort will lead to better guidelines for central heat-pump water systems used in larger multifamily buildings.

A central heat-pump water specification is under development with NEEA, and the CEC will consider adopting these specifications when they are available.

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37 [NEEA's Advanced Water Heating Specification](https://neea.org/our-work/advanced-water-heating-specification), <https://neea.org/our-work/advanced-water-heating-specification>.

38 [NEEA's Advanced Water Heating Specification for Residential Water Heaters](https://neea.org/img/documents/Advanced-Water-Heating-Specification.pdf), <https://neea.org/img/documents/Advanced-Water-Heating-Specification.pdf>.

39 [NEEA's Qualified Products List](https://neea.org/img/documents/qualified-products-list.pdf), <https://neea.org/img/documents/qualified-products-list.pdf>.

### 3. Central HPWH Performance Map Certification List

Central heat-pump water heaters that are approved in CBECC will be eligible for the BUILD Program. The Central Heat Pump Water Heater (HPWH) Performance Map Certification List<sup>40</sup> can be referenced for approved equipment. To be listed, manufacturers are required to submit performance data from a third-party test lab, bench tests by third-party consultants, test carried out in the factory, or data collected from working field demonstrations.

### 4. ENERGY STAR

ENERGY STAR is the trusted, government-backed labeling program for energy efficiency. The U.S. Environmental Protection Agency (EPA) established the ENERGY STAR label to reduce GHG emissions and other pollutants caused by the inefficient use of energy and make it easy for consumers to identify and purchase energy-efficient products that offer savings on energy bills without sacrificing performance, features, and comfort.

The EPA established the ENERGY STAR specification<sup>41</sup> based on the following set of key guiding principles:

- Product categories must contribute significant energy savings nationwide.
- Certified products must deliver the features and performance demanded by consumers, in addition to increased energy efficiency.
- If the certified product costs more than a conventional, less-efficient counterpart, purchasers will recover their investment in increased energy efficiency through utility costs savings within a reasonable period.
- Energy efficiency can be achieved through broadly available, nonproprietary technologies offered by more than one manufacturer.
- Product energy consumption and performance can be measured and verified with testing.
- Labeling would effectively differentiate products and be visible for purchasers.

The EPA will consider ENERGY STAR specification revision based on these factors:

- A change in the federal minimum efficiency standards.
- Technological changes with advances in energy efficiency that allow a revised ENERGY STAR specification to capture additional savings.
- Product availability.
- Significant issues with consumers realizing expected energy savings.
- Performance or quality issues.

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40 [CEC's Central HPWH Performance Map Certification List](https://www.energy.ca.gov/media/4026), <https://www.energy.ca.gov/media/4026>.

41 [How Product Earns Energy STAR Label](https://www.energystar.gov/products/how-product-earns-energy-star-label), <https://www.energystar.gov/products/how-product-earns-energy-star-label>.

- Issues with test procedures.

There are established ENERGY STAR specifications clothes dryers, which include heat-pump clothes dryers. For the BUILD Program, the ENERGY STAR rating will be used for evaluating heat-pump clothes dryers. Home appliance products that earn the ENERGY STAR label are independently certified to save energy and save money to the consumer.

## 5. CEC Solar Equipment Lists and Energy Storage Systems

The CEC maintains lists of solar and storage equipment that includes photovoltaic (PV) modules, inverters, batteries, energy storage systems, meters, performance monitoring and reporting systems, and other solar energy-generating systems. The CEC's Solar Equipment Lists<sup>42</sup> establish criteria and standards for solar projects applying for ratepayer-funded incentive programs under the California Solar Initiative. The purpose and use of these lists have expanded over time and provide information that supports solar incentive programs, utility grid connection services, consumers, and many other state and local programs.

Manufacturers who wish to include their equipment on the Solar Equipment Lists must submit all required documentation showing their equipment meets all safety and performance standards outlined in the *Guidelines for California's Solar Electric Incentive Programs* (Senate Bill 1).<sup>43</sup>

For energy storage systems, the safety certification must be from an NRTL, and performance characteristics are provided from manufacturers. The Energy Storage System List reflects equipment certified to UL 9540, advanced inverter functions, and the approval status of the equipment for JA 12 requirements.

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42 California Energy Commission. "[Solar Equipment Lists](http://www.energy.ca.gov/programs-and-topics/topics/renewable-energy/solar-equipment-lists)," [www.energy.ca.gov/programs-and-topics/topics/renewable-energy/solar-equipment-lists](http://www.energy.ca.gov/programs-and-topics/topics/renewable-energy/solar-equipment-lists).

43 Mehrshashi, Abtin and Joseph Omoletski. December 2018. [Guidelines for California's Solar Electric Incentive Programs \(Senate Bill 1\), Seventh Edition](https://efiling.energy.ca.gov/GetDocument.aspx?tn=226057&DocumentContentId=56796). California Energy Commission, <https://efiling.energy.ca.gov/GetDocument.aspx?tn=226057&DocumentContentId=56796>.

# APPENDIX C:

## Modeled Resident Utility Costs Method

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SB 1477 directs the CPUC, in supervising the administration of the BUILD Program, to ensure that new low-income all-electric homes receiving BUILD incentives do not result in higher utility bills for building occupants.

D.20-03-027 directs the CEC to develop or adopt a tool or method to measure bill savings as a result of the BUILD Program. Rather than developing a new calculation tool, CEC staff used existing tools and information to model resident utility costs.<sup>44</sup>

This section describes the method CEC staff developed for project applicants to analyze resident utility costs for projects receiving incentives through the BUILD Program. The method seeks to accurately estimate modeled resident utility costs to better estimate the statutory required savings. Moreover, the method relies on the modeled estimate of the designed energy of a building and applicable utility rates to calculate the expected resident utility costs.

### A. Modeled Resident Utility Costs Methodology

CEC staff developed the modeled resident utility costs method using the following guiding principles:

- **Ensures Compliance with Statutory Requirement Specific to BUILD to Avoid Utility Bill Increases for Building Residents**

SB 1477 and the CPUC require projects receiving incentives under the program to not result in higher utility bills for low-income building occupants and owners. CEC staff designed this method to incorporate an additional 5 percent safeguard in the calculation of modeled utility cost as compared to the modeled baseline cost to ensure the resulting projects complies with the statutory requirement. This safeguard is to account for uncertainties due to modeling assumptions.

- **Easy and Flexible for Builders**

To help simplify the process for builders that are new adopters to demonstrate the modeled resident utility costs, CEC staff developed a BUILD Calculator to assist builders and developers in estimating their incentives. Flexibility is given to all builders by providing them with a custom pathway.

- **Accurate and Repeatable**

To accurately estimate utility costs across a diverse set of potential projects, the modeled resident utility costs method accounts for California's diverse climates, building types, and utility rates. CEC staff developed an automated process to simplify repeated analyses for future updates to the method, such as utility rate updates.

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<sup>44</sup> "Occupant" utility costs are referred to interchangeably in this document as "resident" costs to distinguish them from utility costs typically paid by nonresident building owners or management companies.

## B. Building Energy Modeling

CBECC software is a free energy analysis computer program developed by the CEC for demonstrating compliance with the Energy Code. CBECC takes inputs on building envelope and mechanical system design and calculates energy usage of the building. CBECC outputs hourly energy use profiles, which are the estimated therms and kilowatt-hours used by the designed building each hour of a calendar year. By applying the estimated therms used by the building to natural gas utility rates, the natural gas bill can be calculated. Likewise, by applying the kilowatt-hours to electric utility rates, the electric bill can be calculated. The total of these bill calculations model resident utility costs.

## C. Modeling Assumptions

The following assumptions were made to simplify the modeled resident utility cost savings analysis:

- Residents will be on a default TOU rate or an electrification rate, where applicable. It is likely BUILD projects will need a PV system to either meet the Energy Code or BUILD minimum requirements. Under Net Energy Metering 2.0<sup>45</sup> or the net billing tariff,<sup>46</sup> residential PV customers in IOU service territories are required to be on a TOU or electrification rate, respectively.
- Residents do not exceed the baseline allowance. The baseline allowance is the amount of energy a utility customer can pay at the lowest (baseline) price. Based on the energy usage modelled in CBECC, there are few instances when building occupants exceeded the allowance. In addition, in the instances when the baseline was exceeded, the amount of energy usage exceeding the baseline was minimal.
- The California Climate Credit is not applied. The value of the California Climate Credit changes year to year, and the continuation of the credit is not definite. To be conservative, the credit will not be accounted for in the modeled resident utility costs analysis.
- Central water heating and laundry energy is not included in the modeled resident utility cost savings analysis. In projects with central water heating and laundry, it is likely that tenants do not pay for the energy usage.
- Single-family homes are individually metered for gas and electricity.
- Multifamily homes are individually metered for gas and electricity.
- Hourly interval netting is used.

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45 California Public Utilities Commission (CPUC). "[Net Energy Metering 2.0](https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/net-energy-metering)," <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/net-energy-metering>.

46 CPUC. "[Net Billing Tariff](https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/customer-generation/nem-revisit/net-billing-tariff)," <https://www.cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/customer-generation/nem-revisit/net-billing-tariff>.



## 1. Results

All-electric new construction built to minimum code compliance will almost always produce bill savings compared to an average utility bill for existing homes in 2019.<sup>47</sup> Using the 2019 Energy Code mixed fuel baseline will ensure that bills are even lower than the mixed-fuel new construction alternative. In the BUILD Calculator, if the modeled all-electric building achieves 5 percent or greater energy cost savings than the baseline, the CEC will treat the modeled project as meeting the statutory requirement for bill savings.

In many utility areas and climate zones, to achieve modeled resident utility cost savings against the baseline, projects may need to allocate some PV to benefit tenants directly, increase energy efficiency measures, or both to overcome the current difference between electricity rates and gas rates in the first year of building occupancy. Despite the higher energy-efficient electric appliances in all-electric homes, allocating some PV to directly benefit tenants is needed in most single-family and multifamily projects to overcome the difference in current rates and ensure modeled first-year resident utility bill savings.

## D. Annual Resident Utility Costs

Resident utility costs can be assessed monthly, seasonally, or annually. Staff determined analyzing the bills on an annual basis is reasonable. An annual analysis gathers and averages the seasonal fluctuations in energy bills.

### 1. Establishing the Baseline

Energy costs are estimated for a mixed-fuel building meeting the 2019 or 2022 Energy Code prescriptive standards as specified by the 2019 or 2022 Residential and Nonresidential ACM Reference Manuals.<sup>48</sup> These estimates are consistent with the statutorily required baseline set for GHG emissions under the BUILD Program and CPUC D.20-03-027.

### 2. Rates

The rates used in this method are default TOU, tiered, or electrification rates. Any California Alternative Rates for Energy (CARE) rates (or an equivalent low-income rate) or discounts are accounted for in the method. The CARE<sup>49</sup> program offers qualifying low-income IOU customers a 30–35 percent discount on their electric rate and a 20 percent discount on their natural gas rate. Many POUs offer similar discounts

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<sup>47</sup> [Resolution E-5105](#) provides data requirements to PG&E, SDG&E, SCE, Southwest Gas Corp, and Southern California Gas Company. As part of the data requirements, the average customer bill, organized by rate schedule and climate zone, is published.

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M348/K071/348071702.PDF>.

<sup>48</sup> As the Energy Code is updated on a three-year cycle, so will the comparison baseline. The baseline comparison for the incentives awarded to an applicant will be based on the Energy Code in effect at the time the applicant applies for the building permit with the applicable local agency or tribal government.

<sup>49</sup> CPUC. ["CARE/FERA Program,"](#) <https://www.cpuc.ca.gov/lowincomerates/>.

to their qualifying low-income customers. It is reasonable to assume that most occupants of low-income affordable housing buildings qualify for discounted energy utility rates. However, it is possible that some low-income residents are not on CARE rates because they have not yet enrolled or are ineligible.

When an applicant completes a project analysis, the rates used to calculate the baseline must be appropriate for the characteristics of the project proposed for development and must match the current rates used to calculate modeled resident utility costs. The 2022 Load Management Standards <sup>50</sup> adopted amendments to include requirements for the largest utilities and community choice aggregators to provide and update hourly and time-varying rates in the CEC’s statewide Market Informed Demand Automation Server (MIDAS) database. CEC staff may input these rates in any updates to the BUILD modeled resident utility costs method. CEC staff will consider other approaches for rates that may be used in future updates to the modeled resident utility costs method.

Acknowledging that certain simplifying assumptions will always be necessary, it is important for utility rates to reflect current costs to residents in the modeled resident utility costs method. To reflect reasonably current utility rates, CEC staff will update the rates used in its approach no less frequently than every two years.

The following tables display the rates used for the utilities:

**Table C.1: Gas Rates**

<b>Gas Utility</b>	<b>2020 Rates*</b>	<b>2023 Rates*</b>
Pacific Gas and Electric	Gas Schedule G-1	Gas Schedule G-1
Southern California Gas	Gas Schedule GR	Gas Schedule GR
San Diego Gas & Electric	Gas Schedule GR	Gas Schedule GR
Southwest Gas Corporation	Gas Schedule GN or SLT or GS	Gas Schedule GN or SLT or GS

Source: California Energy Commission

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50 For more information, see the Load Management [Standards page](https://www.energy.ca.gov/programs-and-topics/topics/load-flexibility/load-management-standards), <https://www.energy.ca.gov/programs-and-topics/topics/load-flexibility/load-management-standards>

**Table C.2: Electric Rates**

<b>Electric Utility</b>	<b>2020 Rates*</b>	<b>2023 Rates*</b>
Pacific Gas and Electric	Electric Schedule E-TOU-C (4-9 PM)	Electric Schedule E-ELEC and Electric Schedule E-TOU-C (4-9 PM)
Southern California Edison	Schedule TOU-D (4-9PM)	Schedule TOU-D-PRIME and Schedule TOU-D (4-9PM)
San Diego Gas & Electric	Schedule TOU-DR1 (4-9 PM)	Schedule EV-TOU-5 and Schedule TOU-DR1 (4-9 PM)
Los Angeles Department of Water and Power	Schedule R-1B (TOU) or Rate R-1A** (tiered)	Rate R-1A** (tiered)
Sacramento Municipal Utility District	Time-of-Day (5-8 PM)	Time-of-Day (5-8 PM)
Liberty Utilities	Schedule No. TOU D-1	Schedule No. TOU D-1
Imperial Irrigation District	Schedule D (tiered)	Schedule D (tiered)
All other electric utilities	<p>If the rate is not available, then applicants must do one of the following:</p> <p>Applicants may accept to use the investor-owned utility results in their project’s climate zone.</p> <p>Or</p> <p>Applicants must provide their electric utility’s tariff (including any low-income rates or discounts), or any similar rate structure documentation, which will be evaluated by CEC staff in accordance with the BUILD methodology.</p>	<p>If the rate is not available, then applicants must do one of the following:</p> <p>Applicants may accept to use the investor-owned utility results in their project’s climate zone;</p> <p>Or</p> <p>Applicants must provide their electric utility’s tariff (including any low-income rates or discounts), or any similar rate structure documentation, which will be evaluated by CEC staff in accordance with the BUILD methodology.</p>

Source: California Energy Commission

\* CARE or an equivalent low-income rate or discount was applied when applicable.

\*\* For Los Angeles Department of Water and Power (LADWP), only tiered rates are available for low income.

### **3. Minimum Bill or Fixed Charges**

Most utility rates have a minimum bill or a fixed charge. Minimum charges are applied if the customer's energy usage charges are less than the minimum bill, whereas fixed charges are always applied. In mixed-fuel homes, these charges apply to both the gas and electric bill, and in all-electric homes, only the charges specific to the electric bill apply. These charges have been accounted for in the method, and low-income discounts were applied when applicable.

## **E. Calculations**

The annual bill is calculated for the all-electric model and the mixed fuel baseline model to see the percentage difference. The hourly usage utility cost is calculated by multiplying the hourly energy usage from the modeled buildings to the utility rate. For the electric bill, the hourly utility rates are used to account for any peak hours and excess PV generation. The bill is then summed for the entire year and includes any minimum or fixed charges and credits from excess PV generation.

### **1. Treatment of Excess PV Generation**

PV generation is accounted for in the modeled resident utility costs method. PV generation offsets electricity demand from the grid and, therefore, can reduce the electricity bill for the building occupants. In hours when PV generation is less than consumption, the net energy is imported from the grid and is charged the full energy rate. However, during certain times of day throughout the year, there may be excess PV generation compared to the estimated building electricity load. This net energy is exported to the grid and generates credits that can be used to offset energy purchased from the grid. The energy export credit is handled depending on the tariff the applicant is participating in.

#### **Net Energy Metering 2.0**

Under Net Energy Metering 2.0 (NEM 2.0) tariff, energy export credits are compensated based on the energy rate. A small component of the energy rate includes nonbypassable charges (NBCs) that cannot be offset by credits. NBCs are tracked separately from usage charges to not be offset by PV credits. These charges include fees for public purpose programs, nuclear decommissioning, Department of Water Resources bond charges, and competition transition charges.

#### **Net Billing Tariff**

The CPUC adopted D.22.12.056, which established the net billing tariff (NBT) as a successor to NEM 2.0 for IOU customers who submit interconnection applications on or after April 15, 2023. Under this tariff, energy export credits are compensated according to the CPUC's [Avoided Cost Calculator proceeding](#) and are generally lower than the energy rate. This credit varies hourly for each month and can be found on

the IOU's website.<sup>51</sup> NBT also implemented no netting of the imports and exports to the grid. (For virtual NBT, 15-minute unit-level netting is implemented.) The method relies on hourly interval netting and is unable to easily move away from this. Pursuant to the decision, an adjustment factor<sup>52</sup> is used on the hourly exports as a proxy for no netting in estimating bills. NBCs components remain the same as NEM 2.0.

In POU cases, the excess generation is handled according to their PV generation compensation rules. Low-income discounts are applied where applicable. In cases when tariffs allow, a net surplus compensation rate is applied if the customer's PV system produces excess energy over their entire annual billing period.

## **F. BUILD Calculator**

Chapter 4 and Appendix D of these guidelines describe how new adopter applicants can elect to use the BUILD Calculator pathway for the design reservation application process. The calculator can be used to estimate incentives and calculate the amount of increased efficiency and energy savings that may be needed to meet the modeled resident utility cost savings requirements. For example, as applicants look to design their projects, they can consider various trade-offs and interchangeable measures, such as installing increased efficiency measures instead of additional PV or bundling PV and storage to reduce utility costs and increase resiliency.

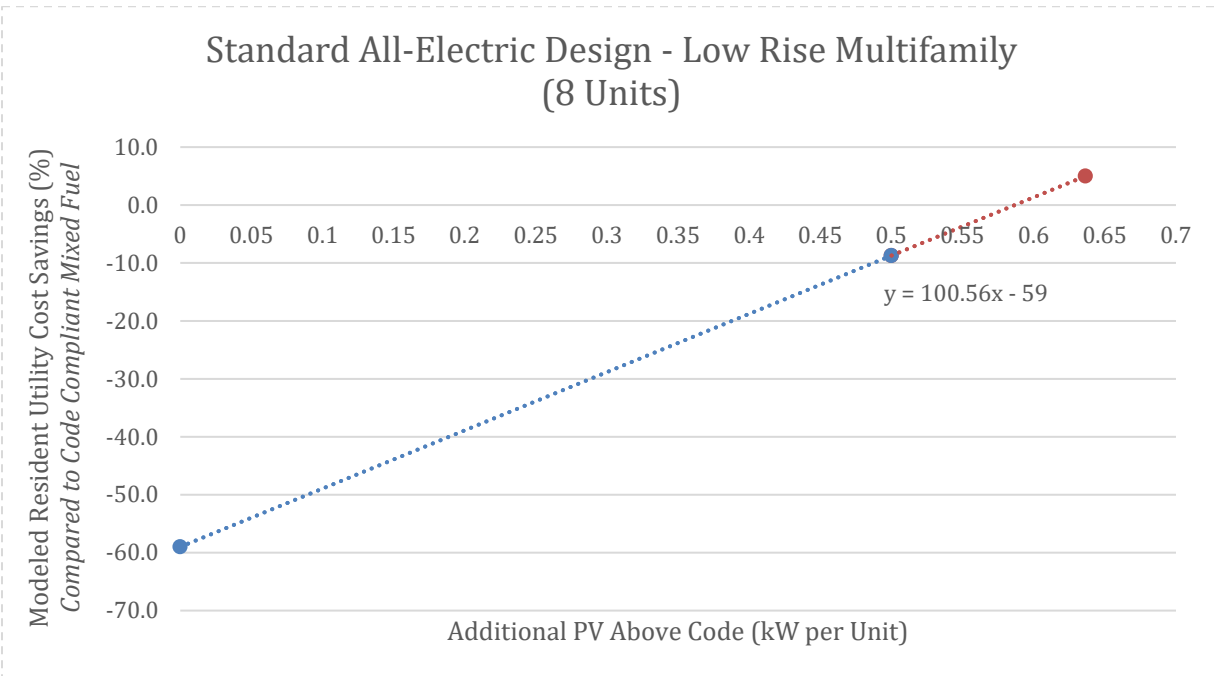
CEC staff used a regression-based approach to develop equations for calculating the modeled resident utility costs from incremental energy efficiency and renewable energy measures. For measures that are independent from one another, a linear regression curve is generated to predict the incremental energy usage savings. Independent measures include additional PV, energy storage, and domestic hot water systems. To illustrate this, a regression curve is plotted in Figure C.1 for an all-electric design in Climate Zone 12 (PG&E territory) with increasing additional PV to achieve resident utility cost savings.

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51 [PG&E Energy Export Credit](https://www.pge.com/energyexportcredit), <https://www.pge.com/energyexportcredit>;  
[SCE Energy Export Credit](https://www.sce.com/business/generating-your-own-power/solar-billing-plan), <https://www.sce.com/business/generating-your-own-power/solar-billing-plan>;  
[SDG&E Energy Export Credit](https://www.sdge.com/solar/solar-billing-plan/export-pricing), <https://www.sdge.com/solar/solar-billing-plan/export-pricing>.

52 D.22.12.056 orders joint utilities to submit a Tier 3 advice letter that proposes adjustment factors. (See CPUC D. 22-12-056, Ordering Paragraph 4.

**Figure C.1: Example Regression Curve for Additional PV**



Source: California Energy Commission

To generate the regression curve, two modeled points (in blue) are plotted: one point is the minimally all-electric code-compliant model, and the other is an incrementally improved model. The x-axis is the additional PV above code requirements. The y-axis is the modeled resident utility cost savings percentage when comparing the all-electric model to an equivalent code-compliant mixed-fuel building. The regression curve can forecast a modeled point (in orange) that reflects the amount of additional PV needed (0.636 kW per unit) to achieve 5 percent utility cost savings.

The regression-approach is a good predictor of the modeled data. When modeling the forecasted additional PV from the example of the regression curve (0.636 kW per unit), the modeled resident utility costs method calculates savings of 4.83 percent. Since the predicted curves are similar to the actual results, the regression-based approach is used for developing the calculations for the BUILD Calculator.

Please note, the BUILD Calculator is no longer maintained by CEC staff and the Custom Path Tool is recommended when calculating incentives.

## **G. Custom Path Tool**

Chapter 4 and Appendix D describes how applicants can follow the Custom Path Tool pathway for incentive reservation. This tool uses the hourly energy output files from the energy models of the project to calculate incentives and modeled resident utility cost saving requirements. Any energy efficiency measures, PV, or energy storage included in the energy model is accounted for in the Custom Path Tool.

An iterative approach is taken to calculate the modeled resident utility cost savings requirements. The tool incrementally increases a PV hourly output profile watt-by-watt

until the 5 percent modeled utility cost savings requirement is met. The PV profile varies depending on the climate zone.

## **H. Limitations**

Ensuring no increase in modeled energy bills is challenging because the CEC can model energy use but cannot accurately project individual resident usage or future usage. The method uses an average modeled energy usage and does not reflect differences in household energy usage, varying weather conditions, and other factors.

This method includes only the rates mentioned in Table C.1 (Gas Rates) and Table C.2 (Electric Rates). However, there are many rate structures/schedules and tiers within each rate depending on energy usage, and each rate can vary on a month-to-month basis. This method assumes a single tier within each rate for the annual period analyzed.

# APPENDIX D:

## BUILD Incentive Calculation Method

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### A. Base Incentive

The base incentive is calculated from the avoided GHG emissions of the building. GHG emissions are determined by applying the hourly GHG emission factors, developed for the 2022 Energy Code, to the hourly energy usage of the all-electric building and the mixed-fuel baseline building. The total avoided GHG is the difference between the total annual GHG emissions of the mixed-fuel baseline building and the all-electric building.

The incentive amount is calculated by multiplying the total avoided GHG emissions, in metric tons, by \$150 and then multiplied by 30, which represents the 30-year effective life of the building.

### B. Increased Building Efficiency

The increased building efficiency incentive is based on the performance of the building when compared to the Title 24, Part 6, standard design, known as the *compliance margin*. This margin is calculated by approved compliance software and can be found on the CF1R-PRF-01E, LMCC-PRF-01E, or NRCC-PRF-01-E shown as a percentage.

A building can receive this incentive, up to \$1,000 per bedroom, based on a sliding scale of the compliance margin from 0 percent to 10 percent. For example, if the compliance margin is 4.4 percent, the building would be eligible for \$440 per bedroom. If the compliance margin is 10 percent or greater, then the building would be eligible for the full \$1,000 per bedroom incentive.

### C. Modeled Resident Utility Costs and Incremental PV

BUILD projects are required to achieve 5 percent modeled resident utility cost savings compared to a mixed-fuel building. For projects where the modeled resident utility cost savings is less than 5 percent, some developers will choose to add PV to the building design, which lowers the amount of electricity purchased from the utility provider, until 5 percent modeled resident utility cost savings is achieved.

The incentive is calculated by multiplying the amount of additional PV, in watts DC, by \$1.30 for buildings where PV is already required by the Energy Code. For buildings where PV is not required by the Energy Code, such as multi-family buildings four-stories and higher, BUILD will offer an incentive the entire amount of the required PV. This incentive is calculated by multiplying the amount of PV by \$3.00 per watt DC. The BUILD Program will offer an incentive only for the cost of installing the additional PV required to meet the modeled resident utility costs; it will not offer an incentive the PV required by the Energy Code or any additional PV installed by the owner.



## **D. Kicker Incentives**

The program provides kicker incentives for technologies that further reduce GHG emissions. Incentives are paid per Table 4.1 (Chapter 4) after proof of purchase for the equipment is provided.

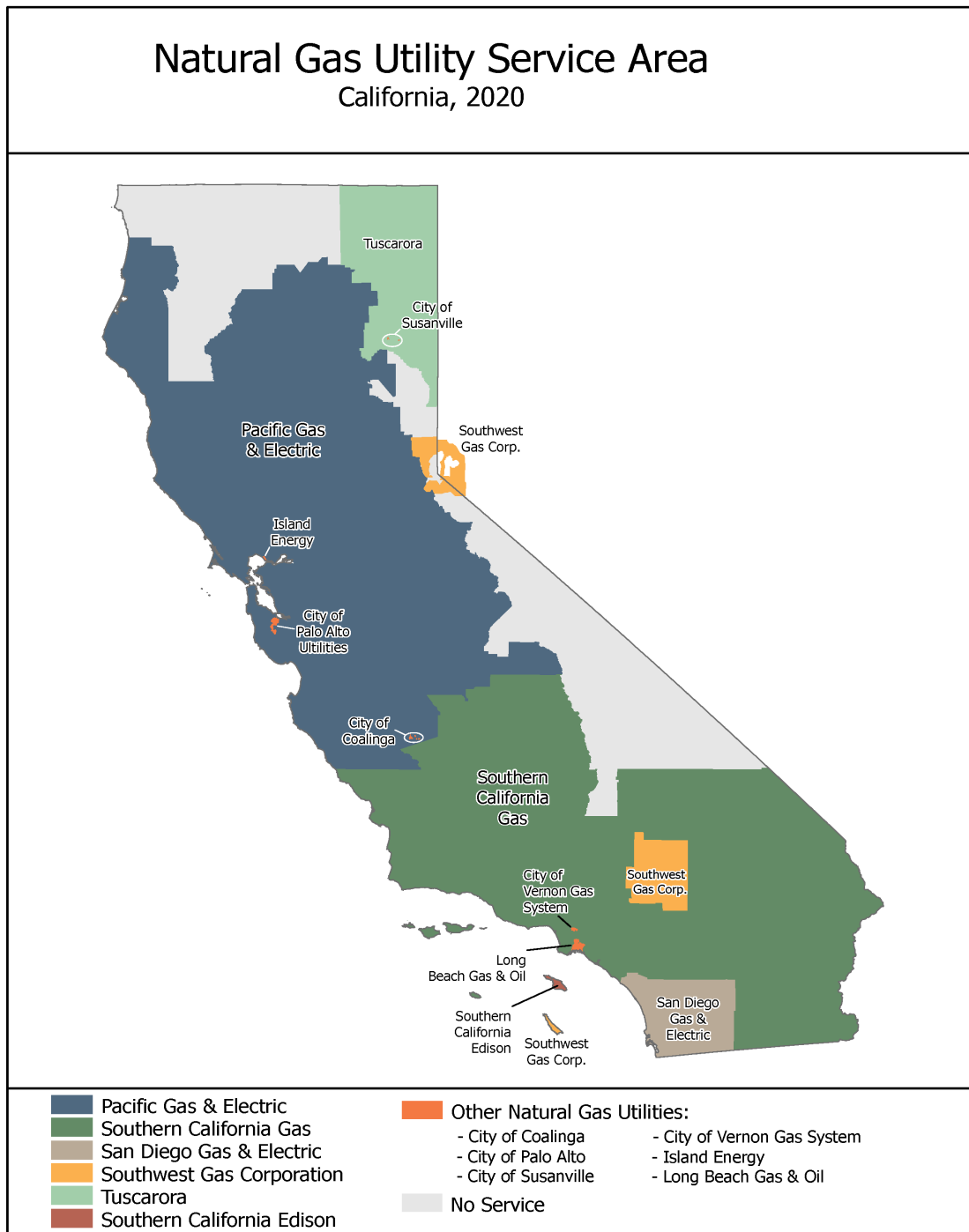
## **E. BUILD Calculator**

The BUILD Calculator pathway is available for only new adopters for step 1 (Design Reservation) and is only an estimating tool. The calculator uses energy simulation results from prototypical energy models that best represent the average building type built in California. Depending on various selections made within the tool, it will automatically calculate and display all the incentive levels mentioned above.

The BUILD Calculator uses regression curve analysis to determine the additional amount of PV that is required in addition to the amount of PV already required by the Energy Code to achieve 5 percent utility cost savings. The BUILD Calculator will also adjust the avoided GHG emissions saved by the contribution of the additional PV.

# APPENDIX E: Natural Gas Territory Map

**Figure E.1: Eligible Natural Gas Utility Service Area (California 2020)**



Source: California Energy Commission

# APPENDIX F:

## Evaluating and Tracking Program Results

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PUC Section 921.1(d)(4) requires that the BUILD Program Guidelines identify a set of metrics by which to evaluate and track the program results. The set of metrics includes:

- Number of low-emission systems installed by building type.
- Projected utility bill savings.
- Cost per metric ton of avoided gas emissions.

The CEC will rely on information provided by program participants and data collected under the program to evaluate the program and, in addition, will provide information on these and other metrics to the CPUC for their program evaluation.

In addition, the CPUC has hired a third-party program evaluator for TECH and BUILD. The CEC's BUILD Program Guidelines provide the framework for the payment of incentives to eligible applicants for eligible buildings and are not intended to constrain the CPUC's third-party evaluation process and chosen metrics for tracking the BUILD program's results.

The third-party program evaluator developed an Evaluation Plan for the BUILD program in February of 2022. The third-party program evaluator uses a developmental evaluation approach, which allows them to adapt and provide insights at key decision points. This approach creates effective feedback loops to help all parties better understand complex market adoption patterns, program strategies' effectiveness, and course correction opportunities. Given this approach, the evaluator continues supplanting the current Evaluation Plan with up-to-date program design changes, evaluation findings, and implementation timelines. Updates to the Evaluation Plan are done in coordination with the CPUC and the CEC.

The CEC and CPUC will provide access to data that will inform the program evaluation, such as participant and non-participant data, to help determine market and program baselines, provided such sharing is consistent with applicable data-sharing and nondisclosure agreements. To ensure the CPUC's program evaluator has the information needed to conduct a robust program evaluation, the following set of requirements will apply to BUILD recipients.<sup>53</sup>

- A. **Mandatory Participation in Specified EM&V Activities:** Any mandatory EM&V requirements for BUILD recipients are in the BUILD Program Guidelines. BUILD recipients shall, if requested, cooperate with the program evaluator to facilitate the CPUC's authorized program evaluation as they carry out standard EM&V activities, including:

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<sup>53</sup> For Appendix F, a BUILD recipient includes any eligible applicant that has been approved to receive BUILD assistance (technical assistance or funding), other than an eligible applicant that has received approval of an incentive reservation (design or construction) and later withdrew from participating in the BUILD program or had their reservation cancelled by the CEC.

- a. Review of project-specific documentation and building simulation model files;
  - b. Interviews and/or surveys with parties involved in the construction or operations and maintenance of the project including contractors, subcontractors and development teams, property managers and maintenance personnel;
  - c. Project and property management cooperation to assist in scheduling visits to project sites;
  - d. Facilitate introductions to residents or occupants of completed projects
- B. Future EM&V Requirements: As noted, the CPUC's third-party program evaluator may periodically revise the EM&V plan. Following finalization by the CPUC and its third-party program evaluator, the CEC may consider revisions to these guidelines, following the process set forth in Chapter 6, Section J, to incorporate additional elements of the EM&V plan into this appendix. BUILD recipients are encouraged to participate voluntarily in any EM&V efforts that are not incorporated in the BUILD Program Guidelines.