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**CALIFORNIA
ENERGY COMMISSION**



DRAFT PROGRAM GUIDELINES

Building Initiative for Low-Emissions Development (BUILD) Program, 1st Edition

(Senate Bill 1477, 2018)

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DISCLAIMER

These draft BUILD Program Guidelines were published on **December 1, 2021**, and will not become final until approval by the California Energy Commission and California Public Utilities Commission staff. The requirements in these draft Guidelines are based on applicable law, including Public Utilities Code sections 748.6, 921, and 921.1. As a draft, this document does not represent the views of the Energy Commission or of the State of California. This draft document has not been approved or disapproved by the Energy Commission, nor has the Commission passed upon the accuracy or adequacy of the information in this document.

ABSTRACT

These draft program guidelines for the Building Initiative for Low-Emissions Development (BUILD) Program establish the rules for the program, including eligibility requirements, participation process, and incentive structure. BUILD is a building decarbonization initiative established by Senate Bill (SB) 1477 (Stern, Chapter 378, Statutes of 2018) that will provide technical assistance and financial incentives for new, low-income residential building projects using near-zero-emission building technologies. BUILD is further governed by California Public Utilities Commission (CPUC) Decision (D.) 20-03-027, which also established the CEC as the program administrator. Applicants are required to adopt all-electric building design and technologies in their new housing developments for low-income Californians, reducing greenhouse gas emissions and energy demands from future buildings. Incentives are determined based on the estimated greenhouse gas emissions reduction quantities achieved through the installation of eligible technologies, with the option of increasing the incentive amounts through specific technology use. In addition, technical assistance will be provided to eligible low-income residential developers and builders.

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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TABLE OF CONTENTS

	Page
ABSTRACT	I
TABLE OF CONTENTS	II
LIST OF FIGURES.....	V
LIST OF TABLES	V
CHAPTER 1: PROGRAM OVERVIEW	1
A. SUMMARY OF KEY PROGRAM DESIGN ELEMENTS.....	1
B. BACKGROUND	1
C. PROGRAM BUDGET	2
CHAPTER 2: ELIGIBILITY	5
A. BUILD PROGRAM ELIGIBILITY	5
1. <i>Eligible Applicant</i>	5
2. <i>Eligible Buildings</i>	5
3. <i>Required Project Fuel Source</i>	6
4. <i>Low-Income Residential Housing Income Limit Requirements</i>	7
5. <i>Utility Territory Limits for Program Incentives</i>	8
6. <i>Modeled Resident Utility Costs</i>	8
7. <i>HERS Registry</i>	9
8. <i>Projects in Tribal Communities</i>	9
9. <i>Eligible Costs</i>	10
10. <i>Funding Maximum for Eligible Applicants</i>	10
11. <i>New adopter eligibility</i>	10
CHAPTER 3: TECHNICAL ASSISTANCE AND NEW ADOPTER DESIGN AWARD.....	11
A. TECHNICAL ASSISTANCE AVAILABILITY.....	12
1. <i>Limits Per Applicant</i>	12
2. <i>New Adopter Design Award</i>	12
CHAPTER 4: BUILD INCENTIVES.....	14
A. INCENTIVE TYPES.....	14
1. <i>Base GHG incentive</i>	14
2. <i>Increased building efficiency</i>	14
3. <i>Modeled resident utility costs and incremental PV</i>	15
4. <i>Specific equipment or kicker incentives</i>	15
B. INCENTIVE CALCULATIONS.....	16
1. <i>BUILD Calculator</i>	16
2. <i>Custom Energy Model</i>	16

CHAPTER 5: PROGRAM PARTICIPATION	17
A. BUILDING INCENTIVE APPLICATION AND APPROVAL PROCESS	17
1. <i>Reservation Process Overview</i>	17
2. <i>Step 1: Incentive Reservation Requirements</i>	18
3. <i>Step 2: Construction Reservation Requirements</i>	21
4. <i>Step 3: Project Completion Process</i>	24
CHAPTER 6: ADMINISTRATION	26
A. GUIDELINE AUTHORITY	26
B. EFFECTIVE DATE OF GUIDELINES	27
C. INTERPRETATION.....	27
D. COMPLIANCE AND VERIFICATION.....	27
E. ENFORCEMENT	28
F. AUDITS.....	29
G. AUTHORIZED THIRD PARTIES.....	29
H. TAX CONSEQUENCES	29
I. RECORDS RETENTION; USE AND DISCLOSURE OF INFORMATION AND RECORDS AND CONFIDENTIALITY.....	30
J. BUILD GUIDELINE CHANGES	31
K. PREVAILING WAGE	31
L. INCENTIVE LAYERING AND MULTIPLE SOURCES OF FUNDING	31
M. INFORMATION PRACTICES ACT.....	32
N. CALIFORNIA ENVIRONMENTAL QUALITY ACT	34
O. DISCLAIMER OF WARRANTY	34
P. RESERVATION EXTENSION AND APPEALS PROCESS.....	34
1. <i>Staff Extensions of an Incentive Reservation or Construction Reservation</i>	34
2. <i>Commission Extension of a Construction Reservation</i>	36
3. <i>Executive Director Reconsideration of a Reservation Application</i>	37
4. <i>Energy Commission Appeals</i>	37
Q. PARTICIPATION IN CPUC’S EVALUATION, MEASUREMENT, AND VERIFICATION PROCESS.....	38
REFERENCE DOCUMENTS	39
GLOSSARY	40
KEY WORDS AND TERMS.....	40
APPENDIX A: PAYMENT PROCESS	A-1
A. PAYMENT CLAIMS	A-1
B. ASSIGNMENT OF INCENTIVES AND PAYMENT CLAIMS	A-2
C. NEW ADOPTER DESIGN AWARD OF \$25,000	A-2
D. BASE GHG INCENTIVE PAYMENTS.....	A-2
1. <i>Incentive Payment Options</i>	A-2
2. <i>Payment Claim Packages</i>	A-2
E. PROJECT COMPLETION AND FINAL PAYMENT	A-2

F.	FORMS AND DOCUMENTATION	A-3
1.	<i>Payment Claim Form</i>	A-3
2.	<i>Proof of Equipment Procurement</i>	A-3
3.	<i>PTO (Permission to operate for solar systems)</i>	A-3
4.	<i>Certificate of Occupancy</i>	A-4
5.	<i>Recorded Regulatory Agreement & Deed Restriction; Resale restriction or Equity Sharing Agreement.</i>	A-4
6.	<i>Energy Efficiency Verifications (CF-2R, CF-3R)</i>	A-5
7.	<i>Payee Data Record (STD-204)</i>	A-5
G.	ADDITIONAL INFORMATION ON PAYMENT CLAIMS.....	A-5
H.	ADJUSTMENT OF INCENTIVE AMOUNT BY ELIGIBLE APPLICANT	A-6
APPENDIX B: REQUIRED AND ELIGIBLE TECHNOLOGIES		B-1
A.	TITLE 24 CODE COMPLIANCE	B-1
B.	BASE GHG INCENTIVES	B-1
1.	<i>The BUILD Calculator Pathway</i>	B-1
2.	<i>Custom Energy Model Pathway</i>	B-3
C.	KICKER INCENTIVES	B-3
D.	PROCESS FOR EVALUATING NEW TECHNOLOGIES,	B-4
E.	ELIGIBLE EQUIPMENT LISTS	B-4
1.	<i>Air Conditioning, Heating, and Refrigeration Institute’s Directory of Certified Products</i>	B-6
2.	<i>Advanced Water Heating Specification Qualified Products List for Heat Pump Water Heaters</i>	B-6
3.	<i>Central HPWH Performance Map Certification List</i>	B-7
4.	<i>ENERGY STAR</i>	B-7
5.	<i>CEC Solar Equipment Lists and Energy Storage Systems</i>	B-8
APPENDIX C: MODELED RESIDENT UTILITY COSTS METHOD		C-1
A.	MODELED RESIDENT UTILITY COSTS METHODOLOGY	C-1
B.	BUILDING ENERGY MODELING	C-2
C.	MODELING ASSUMPTIONS	C-2
1.	<i>Results</i>	C-3
D.	ANNUAL RESIDENT UTILITY COSTS.....	C-3
1.	<i>Establishing the Baseline</i>	C-3
2.	<i>Rates</i>	C-3
3.	<i>Minimum Bill Charges</i>	C-5
E.	CALCULATIONS	C-5
	<i>Treatment of Excess PV Generation</i>	C-5
F.	BUILD CALCULATOR PATHWAY.....	C-6
G.	LIMITATIONS.....	C-7
APPENDIX D: BUILD INCENTIVE CALCULATION METHODOLOGY		D-1
A.	BASE INCENTIVE.....	D-1
B.	INCREASED BUILDING EFFICIENCY	D-1

C. MODELED RESIDENT UTILITY COSTS AND INCREMENTAL PV	D-1
D. KICKER INCENTIVES	D-1
E. BUILD CALCULATOR	D-2
APPENDIX E: NATURAL GAS TERRITORY MAP	E-1
APPENDIX F: EVALUATING AND TRACKING PROGRAM RESULTS.....	F-2

LIST OF FIGURES

	Page
FIGURE 3.1: ANTICIPATED PROGRAM PARTICIPATION ROADMAP.....	11
FIGURE 4.1: TOTAL DEVELOPMENT INCENTIVE EQUATION	14
FIGURE 5.1: PROGRAM PARTICIPATION PROCESS.....	17
FIGURE C.1: EXAMPLE REGRESSION CURVE FOR ADDITIONAL PV.....	C-7
FIGURE E.1: ELIGIBLE NATURAL GAS UTILITY SERVICE AREA (CALIFORNIA, 2020)	E-1

LIST OF TABLES

	Page
TABLE 1.1 BUILD PROGRAM BUDGET	3
TABLE 1.2 BUILD PROGRAM BUDGET ALLOCATION BY NATURAL GAS TERRITORY.....	4
TABLE 4.1: INCENTIVE LEVEL FOR TECHNOLOGIES.....	15
TABLE A.1 BUILD PROJECT-SPECIFIC FUNDING MILESTONES.....	A-1
TABLE B.1: TECHNOLOGIES FOR BUILD BASE INCENTIVES — SINGLE FAMILY RESIDENTIAL.....	B-1
TABLE B.2: TECHNOLOGIES FOR BUILD BASE INCENTIVES — LOW-RISE MULTIFAMILY RESIDENTIAL	B-2
TABLE B.3: TECHNOLOGIES FOR BUILD BASE INCENTIVES — MID AND HIGH-RISE MULTIFAMILY RESIDENTIAL	B-2
TABLE B.4: ELIGIBLE TECHNOLOGIES FOR BUILD KICKER INCENTIVES.....	B-3
TABLE B.5: ELIGIBLE EQUIPMENT LISTS	B-5
TABLE C.1: GAS RATES.....	C-4
TABLE C.2: ELECTRIC RATES	C-5

CHAPTER 1:

Program Overview

A. Summary of Key Program Design Elements

BUILD is a residential building decarbonization program that provides 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. BUILD's governing statute and CPUC decision also requires 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 up-front 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 will provide an eligible applicant constructing their first all-electric, low-income multifamily building with a \$25,000 design award to defray direct design costs – with the goal of impacting a developer's early decision-making in the housing development process.

To ensure the BUILD program reduces GHG emissions and results in reduced utility costs for building occupants, these guidelines include a methodology to evaluate project design, the energy measures required, anticipate the GHG reduction value and calculate the incentive amount. The incentive amount considers a project's design and is scaled to the estimated GHG reduction. This estimate considers efficiency measures, solar systems beyond Energy Code requirements, and other technologies that further reduce GHGs 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 BUILD program's approach to the statutory requirements, technical assistance, outreach strategies, and incentive awards are developed with the ultimate goal of transforming and decarbonizing low-income residential building market space and providing clean energy homes to California's vulnerable populations.

B. Background

In 2018, [SB 1477](#) (Stern, Stats. 2018, Ch. 378) 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 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 will provide incentives for the installation of 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 Building Energy Efficiency Standards adopted by the CEC in Title 24, Part 6, of the California Code of Regulations (California 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 Decision 20-03-027 (D.20-03-027), on March 26, 2020, establishing a framework and requirements for both the BUILD and TECH programs authorized by SB 1477. Through this process, the CEC was named the administrator of the BUILD program and was directed to develop and submit an implementation plan and develop guidelines for CPUC consideration. Approved by the CPUC in April 2021, the BUILD Program [Implementation Plan](#) contains the broad policy parameters and direction, which will be expounded and clarified by these Guidelines. Additionally, these Guidelines incorporate feedback from stakeholders on CEC staff’s [Preliminary Program Design](#) document that was published to the BUILD docket (20-DECARB-01) on September 14, 2021, and presented at a September 15, 2021, public workshop.

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 both 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.¹ BUILD budget detail is shown in Table 1.1.

Table 1.1 BUILD Program Budget

Budget Item	Amount
Program Costs (direct incentives for low-income residential housing)	\$60,000,000 (no less than)
Other BUILD Program Costs Technical Assistance Provider - up to \$8 Million New Adopter Design Award - up to \$1 Million	\$10,000,000 (no less than)
Administrative Costs	\$8,000,000 (no more than)
Joint Evaluation Cost Share	\$2,000,000 (no more than)
Total	\$80,000,000

Source: CPUC D. 20-03-027²

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.

1 CPUC D.20-03-027 established that BUILD funds would be considered spent upon being set aside for approved project (pg.104)

2 [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

Natural Gas IOU Territory	Allocation Percentage
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%
Total	100%

Source: CPUC Decision 20-03-027

Any 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. To the extent that there are unspent GHG allowance proceeds allocated for a gas corporation’s service territory, and no remaining eligible projects within that service territory, the remaining GHG allowance proceeds may be spent outside that gas corporation’s service territory, starting two years after implementation. Any unspent funds remaining as of July 1, 2033, will be returned to the ratepayers of the respective gas corporations.

CHAPTER 2: Eligibility

A. BUILD Program Eligibility

1. Eligible Applicant

A private, nonprofit, tribal government, California tribal organization, or public owner or developer of an eligible residential building, that meets the Program Guideline requirements.

- a. The applicant must demonstrate that they have 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 individual residence, which meet 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 of time through project construction and completion and all BUILD program requirements have been met.

2. Eligible Buildings

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

- a. A newly constructed building that has never been used or occupied for any purpose, or³
- 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, or⁴

³ Section 100.1 of Part 6 of Title 24 of the California Code of Regulations (California Energy Code).

⁴ 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.⁵

Within the preceding three categories, eligible residential buildings may include the following building types, 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 Part 6 of Title 24 of the California Energy Code (Energy Code).

3. Required Project Fuel Source

D.20-03-027 requires projects receiving BUILD incentives to be limited strictly to eligible residential projects that are all-electric and have no hookups to the gas distribution system.⁶ 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 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.

- 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, BBQs, fire pits), are excluded from this provision.

⁵ [CPUC D.20-03-027](http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K772/331772660.PDF), Ordering Para 19, p. 110., at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M331/K772/331772660.PDF>
⁶ 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.⁷
 - 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.⁸
 - iii. At least 80 percent of the households living in the building have incomes at or below 60 percent of the area median income.⁹
- b. **Consistency with Affordable Multifamily Financing Sources.** For the purposes of the income requirements for sections 4.a.i. and 4.a.ii. above, projects' income limits 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 utilized affordable housing financing and assistance programs, including but not limited to those administered by: CA Tax Credit Allocation Committee, CA Debt Limit Allocation Committee, Federal Housing Financing Agency, California Department of Housing and Community Development, California Strategic Growth Council, California Housing Finance Agency, U.S. Department of Housing and Urban Development, U.S. Department of Agriculture, and 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.
- 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 paragraph (2) of subdivision (c) of Section 65915 of the Government Code,¹⁰ with a public entity or nonprofit housing provider organized under Section 501(c)(3) of the Internal Revenue Code¹¹ that has as the stated purpose in its

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

8 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.

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

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

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

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 F.1 in Appendix F 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.

For compliance with PUC section 921.1 (d)(3), and to ensure projects do not result in higher energy costs for low-income residents¹² than would otherwise occur in a new mixed-fuel building, 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 may use one of two options to demonstrate compliance with this program requirement prior to reservation approval:
 - i. The BUILD Calculator provided by the Energy Commission establishes a modeled comparison of the all-electric design of the building to the design of a mixed-fuel, code-compliant building, or
 - ii. The applicant must provide an energy model input file, created with CEC-approved compliance software, for the project's proposed building design. The CEC Building Standards Office maintains the list of the [Building Energy Efficiency Standards Approved Computer Compliance Programs](#).
- b. Should the project's model not demonstrate a 5 percent reduction in the modeled resident utility costs in comparison to a new mixed-fuel building at the time of the incentive reservation (see Chapter 5), the building design must be modified to reduce energy demand and lower anticipated utility costs for the residents. 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 the required result. A

¹² "Occupants" are referred to interchangeably in this document as "residents" these terms do not include non-resident building owners or management companies.

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, and utility costs are not paid by the residents, as in certain cases of supportive housing. The eligible applicant will be required to submit documentation demonstrating this utility payment arrangement, as further outlined below.
- ii. Additional information on this process and methodologies are in Chapter 5 (Program Participation) and Appendices C & D.

7. HERS Registry

BUILD projects are eligible residential buildings and must comply with Title 24, Part 6, of the California Code of Regulations, which requires the buildings' energy efficiency measures 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 Energy Commission. Each project must have the certificates of installation (CF2Rs) accurately filled out reflecting the actual installed equipment and that the products match the building department approved CF1R-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) accurately completed. The CEC may review the CF2Rs and CF3Rs 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 California Energy Code in effect at the time the project applies for a building permit and through project completion, even if the project is located in Indian country.
- c. For purposes of this provision, a Tribal government is the governing body of a California Native American tribe that is 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.
- d. If an applicant is a federally-recognized California tribe or tribal entity, the applicant shall provide the following 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 on 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, the 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 (e.g., 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 \$3 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 and more fully defined in Chapter 3.

CHAPTER 3: Technical Assistance and New Adopter Design Award

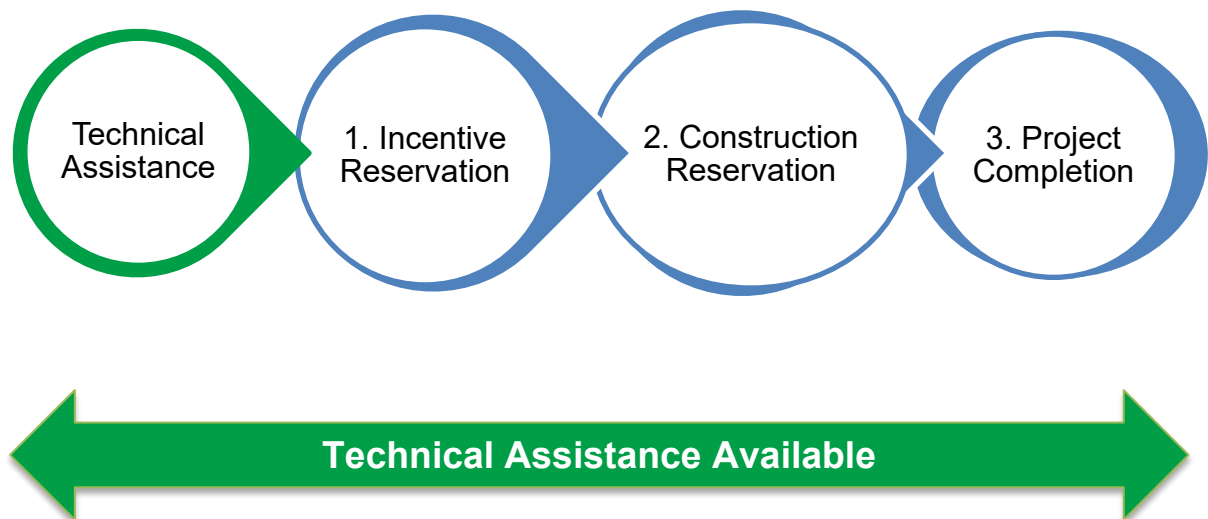
At the CEC's sole discretion, technical assistance is provided under the BUILD Program to support the low-income housing industry's transformation to all-electric development that incorporates near-zero emission technologies in accordance with D.20-03-027 and SB 1477.

Upon CEC approval, the BUILD Technical Assistance Provider (TAP) will provide support to the developers, architects, engineers, energy consultants and staff of an eligible applicant prior to and throughout the BUILD participation process. Services will include:

- Education, outreach, and stakeholder engagement with potential eligible applicants and related industry groups and associations. This includes 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 to 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 Energy Commission 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

At the sole discretion of the CEC, and within the limits of available funding, technical assistance will be available as a service to all potential eligible applicants and their various 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 technical assistance provider 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 only has limited resources to provide technical assistance and retains full control over when and how it is applied.

1. Limits Per Applicant

There are no limits on the amount of technical assistance that can be requested for the first two projects from a single eligible applicant that receive technical assistance; the third and fourth projects from an eligible applicant are limited to no more than 25 service hours each; and no technical assistance will be provided to an eligible applicant's fifth project onward.

- a. Applications for technical assistance services will be provided on the CEC website. Request for assistance will be screened for eligibility by the technical assistance provider 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 and 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 one million dollars of non-incentive program funding, in increments of up to \$25,000 per applicant, will be initially available to new adopters, proportionally allocated to the gas territory contributions outlined in Table 1.2 above.

- a. For purposes of 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 with at least 10 units.

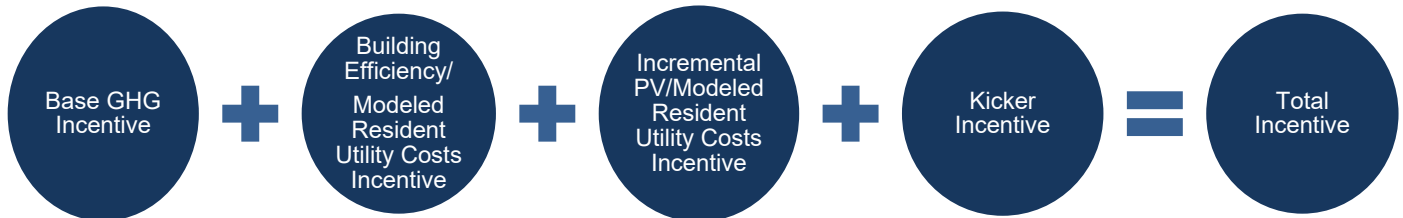
- c. This award must reimburse new adopters for their direct costs and paid invoices for architectural, engineering, energy consultation, or other building-design services for an eligible project. Proof of eligible reimbursable costs of at least \$25,000 shall be required for payment of this incentive.
- d. Eligible applicants must indicate whether they are requesting this award at the time they submit their application for a BUILD incentive reservation, and approval and payment of the new adopter design award is contingent upon the CEC's approval of the incentive reservation package.

Applications for this award will be reviewed on a first-come, first-served basis. They will be submitted and evaluated according to the date and time of the electronic submission of a complete information for the Incentive Reservation Application package and new adopter award, as further described in Chapter 5, Program Participation.

CHAPTER 4:

BUILD Incentives

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.

- a. Calculated for whole-building GHG performance modeling using CEC's California Building Energy Code Compliance (CBECC) software as compared to a standard design for that building.¹³
- b. Avoided GHG emissions will vary by building design and climate zone due to the variations in modeled building performance.

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 BUILD Calculator and the methodology identified in Appendix C and D.

¹³ The current baseline is a 2019 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 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.

3. Modeled resident utility costs and incremental PV

If the project installs additional PV beyond the applicable 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. Mid-rise and high-rise multifamily (four or more habitable stories above grade): \$3.00/W.
- 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’s incentives will not overcompensate the applicants’ PV costs.

4. Specific equipment or 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.4 in Appendix B for a more detailed list of equipment requirements.

Table 4.1: Incentive Level for Technologies

Technology Kicker	Incentive Level
Grid Flexibility	\$50/smart thermostat \$100/HPWH CTA-2045 module
GWP Refrigerants < 750	To be determined in subsequent Guidelines updates as equipment becomes available, but less than \$1,500/lb
GWP Refrigerants < 150	\$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	\$500/EVSE (single family) \$600/EVSE (multifamily)

Source: California Energy Commission

B. Incentive Calculations

As noted above, there are two options to calculate the incentive value of a project at the time of incentive reservation application. These calculations will be re-evaluated at Step 2, construction reservation (See Chapter 5, below), to address modifications to the building design and changes to Energy Code over the progress of the project.

1. BUILD Calculator

The incentive is initially estimated through the BUILD Program calculator, which will calculate the value of the base GHG, efficiency, and incremental PV incentive values. This pathway allows eligible applicants to quickly calculate the estimated incentive amount they can receive before undertaking further building modeling. When an applicant submits their construction reservation (Step 2, as detailed below in Chapter 5), the specific incentive amount will be recalculated and confirmed in CEC staff's approval of the construction reservation.

2. Custom Energy Model

The incentive is calculated by CEC staff from the applicant's submitted building energy model. The base incentive and PV capacity will be identified and confirmed by the results of the submitted data. As noted above in Chapter 2, this option is only available if the applicant submits their energy model input file, created with the CEC-approved compliance software for the project's proposed building design. The CEC Building Standards Office maintains the list of the [Building Energy Efficiency Standards Approved Computer Compliance Programs](#).

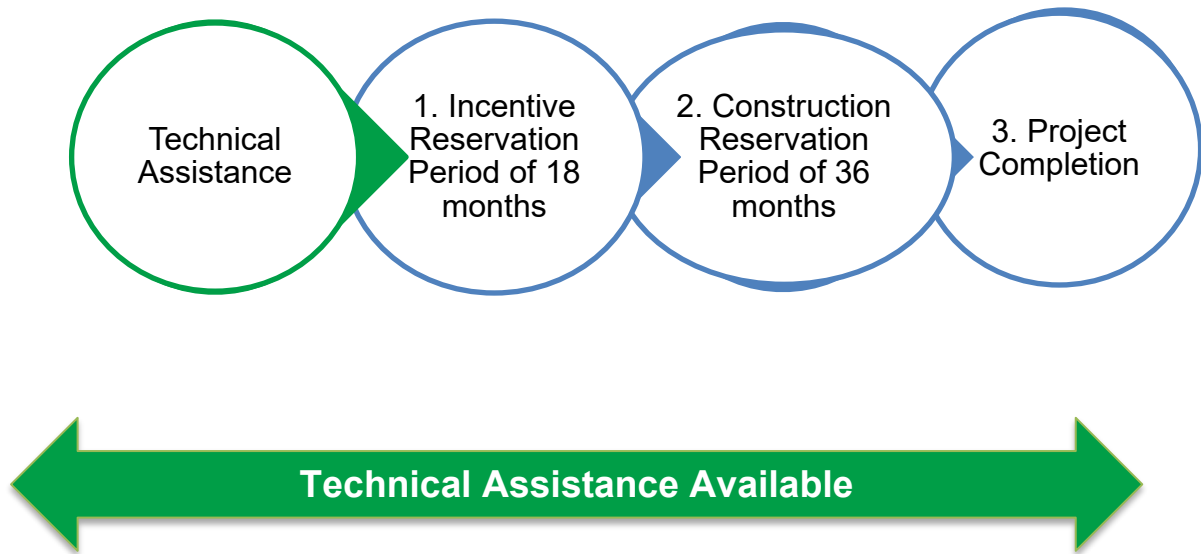
In addition, CEC staff will continue to enhance these tools while maintaining the analytical approach to improve effective program implementation.

As the Energy Code is continually updated on a three-year cycle, so will the comparison baseline, which could potentially 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 further explained in Appendix C and D. BUILD kicker incentives will apply the same to either pathway, and are calculated separately.

CHAPTER 5: Program Participation

Figure 5.1: Program Participation Process



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. Reservation Process Overview

The overview below broadly describes the three-step process for BUILD incentives and is followed by a more detailed description of the program requirements.

- **Step 1: Incentive Reservation Process.** After working with the technical assistance provider, as applicable, the applicant will have its initial building design developed and meet the criteria to apply for an incentive reservation. The eligible applicant will provide the information outlined in Section A.2.b. below and, upon review and approval by CEC staff, will receive an incentive reservation. This step may be completed before or after receiving construction financing for the project but must be completed prior to the project receiving its construction permit. The initial term of the incentive 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 incentive reservation process.
- **Step 2: Construction Reservation Process.** Once an applicant has obtained its project financing, all necessary building and other pre-construction permits, finalized its design, and met the other requirements described in these Guidelines, it 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. below 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 will have an additional 36 months to complete the construction of the project and meet the milestones further described below.
 - Progress Payments.
 - Payment 1: Upon CEC staff's approval of the construction reservation, up to 25% 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's foundation has been built and completed, up to 50% 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 the project has completed construction, installed all measures and systems, obtained a certificate of occupancy, and the low-income deed or resale restriction has been recorded on the property and fully executed, applicants shall submit a project completion package. Upon the review and approval of a complete and accurate funding request that contains all required items from section A.4.a. below, CEC will authorize payment of the remaining incentive funding. Nothing prohibits an applicant from seeking a lump-sum payment at project completion in lieu of progress payments.

2. Step 1: Incentive Reservation Requirements

Eligible applicants must first apply and be approved for an incentive reservation.

- a. **Incentive Reservation Timing:** applications are accepted on an ongoing, first-come, first-served basis. Incentive reservations will be approved in accordance with funding amounts attributed to each specific gas utility territory (See Table 1.2.) while funds are available.
 - i. The date and time of the electronically submitted completed application will establish the order for 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 cancellation of the incentive application.
- iii. The cancelation 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. Incentive Reservation Application Package: Eligible applicants must submit the following information in a format provided by the CEC:

1. Name and legal structure (e.g., non-profit, government, LLC) of the applicant.
2. Project contact name, title, employer, email address, and phone number.
3. Project address(es) and gas and electric utility service territory(ies).
4. 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.
5. Anticipated project schedule and key development milestones
6. 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).
7. Demonstration of developer's five years of experience with at least one successful construction of a 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.
8. If applicable, demonstration the project is a multifamily residential building 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](#).¹⁴
 - 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).
9. 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,

¹⁴ <https://oehha.ca.gov/calenviroscreen/sb535>

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 (% AMI).

10. Indication of how the project qualifies as a new “eligible building” as described above in Chapter 2, Section A.2 above.
 11. BUILD project modeling identifying all efficiency measures, relevant energy technologies, appliances and building design considerations. As established in these Guidelines, eligible applicants may use the BUILD Calculator or submit a Custom Energy Model.
 12. Identify the estimated Modeled Resident Utility Cost Savings, or indicate that the residents will not be paying their utility bills due to the occupancy type (e.g., transitional or supportive housing) and terms of the financing or deed restriction. This must include the default TOU rate tariff for the project location, if applicable (as described in Table C.2).
 13. Identification of whether the project is in a tribal community.
 14. 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
 15. Building design documentation (Preliminary CF1R-PRF-01E or NRCC-PRF-01-E).
 16. Payee data record (STD-204).
 17. New Adopter Design Award requirements, if applicable.
 - a. A certification that the eligible applicant qualifies as a new adopter under the program.
 - b. Copies of paid invoices for eligible design costs.
 18. Signed attestation, submitted under penalty of perjury, that the proposed project meets the requirements of the BUILD Guidelines and to the accuracy and completeness of the information submitted.
 - a. The CEC may agree to accept an electronically-signed attestation to satisfy this requirement.
- c. Incentive Reservation Commitment Letter.** When a complete incentive reservation application is approved, staff will provide an electronic incentive reservation commitment letter to the project contact that includes the incentive reservation amount and expiration date for the reservation.
- d. Incentive Reservation Term.** The incentive reservation is valid for 18 months from the date on the incentive 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).

- a) Extension. If submitted in accordance with the procedures in Chapter 6, Section P, a one-time extension of the Incentive Reservation for a period no greater than 6 months will be approved upon the applicant's demonstration that:
 - i. 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.
 - ii. Applicant has applied for low-income housing financing and will receive a decision on their financing within the extended period.

e. Incentive Reservation Transfer. The applicant may be approved by CEC staff to transfer an incentive reservation from the initial project to a new project by submitting an electronic request to CEC staff in a format provided, when all of the following conditions are met:

- a) The eligible applicant submits a request to transfer the reservation no later than 30 days before the expiration of the initial reservation.
- b) The transfer of the reservation is allowed under the program funding caps available for the specific gas territory of the new project.
- c) The new project complies with all BUILD Program Guideline requirements; and 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 an incentive reservation does not extend the initial 18-month reservation term.

f. Incentive Reservation Withdrawal. An eligible applicant can voluntarily withdraw a reservation by notifying the CEC electronically in writing.

g. Incentive Reservation Cancellation: All applicants that do not meet the project requirements for Step 2 (construction reservation) within 18 months, and any approved extension, will have their Incentive Reservations cancelled and will have to re-apply to seek BUILD incentives for the project. 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: Within the term of the incentive reservation (standard of 18 months plus any reservation extensions granted pursuant to Chapter 6, Section P), and after the applicant receives its project financing commitments, the applicant will confirm to the CEC that the project is moving forward, identify any project modifications, and the BUILD incentive amount shall be recalculated based on modifications to the project that affect GHG emissions.

b. Construction Reservation Application Package:

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

1. Cover letter with intent to retain BUILD incentive eligibility.
2. Updated project summary with confirmation that the project is unchanged, or any revisions to building design and project information that have occurred since the reservation approval. This will include building type, number of stories above 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).
3. Project funding details demonstrating sufficient funding to advance to project construction.
 - a. Updated 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.
4. 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.
5. Anticipated project schedule and key developments milestones.
6. Energy model input file used to obtain the building permit, created with CEC approved compliance software, to demonstrate incentive valued 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).
7. Energy efficiency documentation (Revised CF1R-PRF-01E or NRCC-PRF-01-E).
8. Identify the recalculated incentive values, as calculated in Chapter 4.
 - a. Base GHG Incentive
 - b. Building Efficiency Incentive
 - c. Modeled Resident Utility Costs/Incremental PV
 - d. Kicker Incentive
9. Copy of the approved building permit.
10. Statement of whether the applicant is requesting a progress payment (see item 5 below and Appendix A), and includes a payment claim, and an indication whether the payment will be assigned to a third party.

11. Updated attestation, submitted under penalty of perjury, that the proposed project meets the requirements of the BUILD Guidelines and to the accuracy and completeness of the new information submitted.

c. Review of Incentive Amounts

1. Incentive Reservation Modifications. The incentive reservation amount may be modified by CEC staff at this time due to:
 - a. Changes in the project characteristics made by the applicant between the Incentive Reservation (Step 1) and Construction Reservation (Step 2) that modified the building design and equipment to be installed, or otherwise impact the project's GHG emissions or eligibility for an incentive reservation.
 - b. Changes in the Energy Code that may have taken effect between the time the project was approved for an incentive reservation and when the building permit application was submitted.
 - c. Depending on the factors in a. and b. 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.

1. 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 an additional 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 above have been remedied, and the project timetable is now consistent with the terms within these Guidelines and on track to advance to Step 3, discussed below, within the extended period.
2. Any extension requests beyond 12 months must be considered by the Energy Commission, as discussed in Chapter 6, Section P.2 below.

f. Progress Payments and Payment Claims: Eligible applicants may request progress payments of the Base GHG Incentive to reimburse applicant's eligible costs, as defined in Chapter 2, for the project that have been incurred at or prior to Step 2.

1. Payment 1: Upon CEC staff's approval of the construction reservation, up to 25% of the calculated Base GHG Incentive value, or actual eligible costs, whichever is less, may be released to reimburse for eligible costs.
2. Payment 2: Upon the applicant's submittal of a payment claim and demonstration that the project's foundation has been constructed, up to 50% of the calculated Base GHG Incentive, or actual eligible costs, whichever is less, may be released to reimburse for eligible costs.
3. 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 Process.

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.

1. Temporary or final Certificate of Occupancy.
2. Recorded deed restriction or regulatory agreement demonstrating corresponding number of low-income units and bedrooms, or an executed resale restriction or equity-sharing agreement,¹⁵ that has been filed with the local county recorder for the property being funded.
3. Permission to operate PV, if applicable. Identification of the total actual costs of PV on the project and the portion of PV assigned to the residents.
4. 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.7 below.
 - a. If PV is included in the building design to comply with the modeled resident utility cost savings, the applicants must provide:
 - i. Copy of the VNEM agreement assigning PV benefits to the residents, if applicable, or
 - ii. Demonstration of the individual meters or proof of a measure installation and legal covenants that assign the PV benefits to residents.
 - b. If alternatively, residents will not be paying their utility bills due to the type of project is developed (e.g., transitional or supportive housing), copy of the deed restriction or a similar legal agreement or covenant.
5. Proof of purchase and installation for equipment eligible for kicker incentives as listed in Table 4.1. This must include manufacturer and model numbers.

¹⁵ Required only for individual 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)

6. Narrative description of any modifications to the building design that have occurred after Step 2.
7. Energy model input file used to obtain the building permit, 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).
8. CF2R and CF3R documents completed by installers and qualified HERS Raters.
9. 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

The final incentive value will be re-evaluated at this time, and may be decreased if:

 - e. There were changes in the project's design or equipment installed that would impact the incentive value.
 - f. Any progress payments previously paid to the applicant will be assigned to the total final incentive value, so that the applicant is not overpaid.
 - g. The amount of the incentive may decrease; it will not increase.
10. Updated attestations submitted under penalty of perjury, that the proposed project meets the requirements of the BUILD Guidelines, to the accuracy and completeness of the new information submitted, and to cooperate with the CPUC's evaluation, measurement, and verification process.
11. A listing of the Premise ID, Service Point ID, and Meter ID of the common areas and residential units of the project as provided by the applicable electricity provider of the site.
12. Payee data record (STD-204).

CHAPTER 6:

Administration

A. Guideline Authority

CPUC building decarbonization rulemaking (R.19-01-011) and adopted decision (D.20-03-027) establishes a framework and requirements for both the BUILD and TECH programs authorized by Senate Bill 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 Plan¹⁶ 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 more expeditiously approve the guidelines. 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 Division Director may also order

16 Building Initiative for Low-Emissions Development (BUILD) Program Implementation Plan (Revised September 2020), <https://efiling.energy.ca.gov/GetDocument.aspx?tn=234936&DocumentContentId=67802>

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 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): <https://www.energy.ca.gov/programs-and-topics/programs/building-initiative-low-emissions-development-program>. At this time, the CEC will publicly notice the commencement of the BUILD program to signal that applications for the program are being accepted.

Applicants and interested persons may also obtain the program guidelines by contacting BUILD@energy.ca.gov.

C. Interpretation

Nothing in these guidelines shall be construed to abridge the powers or authority of the Energy Commission 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 reservation, 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, 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, and timely project updates as reasonably requested by CEC staff to verify 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 Evaluation Measurement & Verification (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 & 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 or 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, and, with the concurrence of the CEC, recommending 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 guideline requirements and terms, including but not limited to termination of incentive 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 eligible applicant's noncompliance with any Guidelines requirement, withhold future reimbursement payments, demand and be entitled to repayment of past reimbursements, and/or suspend or cancel the applicant's incentive 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 venued 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 incentives.

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 on 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 following Section E of Chapter 6: Administration.

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

Applicants are responsible for any federal, state, and local taxes associated with the receipt of incentive payments. The CEC will report incentive payments to the Internal Revenue Service and issue the applicant an informational form (for example, 1099-Misc) when required to do so by law. To process payment claims for tax purposes, applicants must complete a STD-204 payee data record form to provide the CEC taxpayer information. The taxpayer identified in this form must be the payee as identified in the reservation application. Applicants who assign their BUILD incentive(s) to third parties will be reported as the recipient of said payment and issued the informational form when required by law. Applicants should carefully consider the tax consequences of receiving a BUILD incentive when applying to the BUILD Program.

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 for a period of five years after the date the project receives its final, or most recent, incentive payment from the CEC. With very few exceptions, 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 to determine eligibility and compliance with the BUILD Program, applicable law, or a particular solicitation or guideline document; to evaluate related or relevant programs or program elements; or 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, and documents prepared for other reporting requirements, 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 prior to 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 of California agency website, or through 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 Guideline 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 docket¹⁷ and emailed to the BUILD listserv 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 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.

2. Nonsubstantive Changes

If the program guidelines require nonsubstantive changes, such as reorganization of text, the correction of grammatical issues, or any other changes that do not materially affect the obligations of eligible applicants, the CEC will provide a notice of the changes to the associated listservs and the CEC website and post the amended guidelines on the program web page and docket.

K. Prevailing Wage

Applicants acknowledge acceptance of 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. Applicants are responsible for complying with all applicable laws, which can include public works requirements. Only the California Department of Industrial Relations (DIR)¹⁸ and courts of competent jurisdiction may issue legally binding determinations that a project is or is not a public works project. Applicants shall assume their projects are public works unless they obtain a determination to the contrary from DIR or an appropriate court. As such processes can be time-consuming, please plan accordingly. Without such a determination, applicant shall explain how they have included appropriate budgets for prevailing wages.

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

¹⁷ [BUILD Program Docket](https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-DECARB-01) is located at <https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=20-DECARB-01>

¹⁸ California Department of Industrial Relations (DIR) protects and improves the health, safety, and economic well-being of over 18 million wage earners and helps their employers comply with state labor laws. See the [DIR webpage](https://www.dir.ca.gov/aboutdir.html) for more information, <https://www.dir.ca.gov/aboutdir.html>

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. 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 non-binding guiding principles for incentive layering adopted on November 4, 2021 as part of the Building Decarbonization proceeding (R.19-01-011).¹⁹ Specifically, the CEC has drafted these guidelines with ease of participation (Principle 1) as a central priority; the CEC's incentives are not permitted to be combined with other incentives to exceed actual costs (Principle 2); 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 (Principle 3); and the CEC is committed to ongoing data sharing with the CPUC and collaboration with the administrators and implementers of other complementary incentive programs (Principle 4). To the extent that there is inconsistency between these Guidelines and the CPUC's non-binding guiding principles for incentive layering, the requirements of these Guidelines shall control.

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). 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 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 § 1798.16. Per IPA § 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 § 1798.14, the applicant, and applicant's subcontractors and project partners shall only use Personal Information 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 Energy Commission and Energy Commission employees.

¹⁹ Appendix A: Adopted Incentive Layering Guiding Principles and Requirements, <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M420/K586/420586781.PDF>

3. Security. Pursuant to IPA § 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 to 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 § 1798.17. At the time of these Guidelines, § 1798.17 requires the following:
 - (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 his or her 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 which 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)²⁰, 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.²¹ CEQA does not apply to projects over which public agencies only exercise ministerial authority.²² 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 incentive 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 and/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 an Incentive Reservation or Construction Reservation

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

Incentive Reservation Extensions

- a. At least 30 days prior to the incentive reservation expiration date identified in the incentive reservation commitment letter, any applicant seeking an extension of their incentive reservation shall submit a letter requesting an extension of up to six

20 Public Resources Code section 21000 et seq.; see also California Code of Regulations, title 14, section 15000 et seq.

21 Public Resources Code section 21065(b)

22 Public Resources Code section 21080(d)(1); California Code of Regulations, title 14, section 15300.1

months and setting forward the basis for the request to the BUILD Program email inbox at BUILD@energy.ca.gov.

- b. At a minimum, the letter shall contain:
 - i. A discussion of 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;
 - ii. A statement that applicant has applied for low-income housing financing and is awaiting approval; and
 - iii. A statement that applicant expects to learn of whether their low-income housing financing is approved within the extended period.
- c. Prior to the expiration of any incentive 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 incentive reservation expiration date.

No incentive reservation extensions may be granted beyond this one-time, six-month extension. However, eligible applicants may re-apply for BUILD incentives after the expiration of incentive reservations.

Construction Reservation Extensions

- a. At least 30 days prior to the incentive reservation 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 12 months and setting forward the basis for the request to the BUILD Program email inbox at BUILD@energy.ca.gov.
- b. At a minimum, the letter shall contain:
 - i. 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, and
 - ii. 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.
- c. 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 Energy Commission.

2. Commission Extension of a Construction Reservation

The Energy Commission, 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. Staff will forward the request to the Executive Office for date stamping.
- b. The request shall include the following information:
 - 1.) The name and address of the applicant.
 - 2.) The project name and BUILD project reservation number.
 - 3.) 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.
 - 4.) An explanation of why there is good cause to grant the extension, including:
 - i. The circumstances 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, and
 - ii. Whether these circumstances were beyond the applicant's control.
 - 5.) An explanation of any other good cause that exists for granting the request for an extension of time.
 - 6.) Documentation, if available, to support the information provided in items (a) through (e).
- c. The Energy Commission may grant an extension of time upon a showing of good cause, based on the documented factors submitted along with the applicant's request.
 - i. 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.
 - ii. Poor planning, carelessness, or negligence of the applicant or the applicant's agents, or ignorance of the applicable BUILD Guidelines requirements or deadlines, does not constitute good cause for an extension.
- d. The extension of time granted by the Energy Commission 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 status and must be submitted before or within the 36-month time period (or the 12-month staff extension period).

Under no circumstances will more than one Energy Commission 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 Executive Director for reconsideration if a BUILD incentive reservation application was denied, or the reservation amount was reduced or cancelled, or if a request for a staff extension of an incentive 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 inbox at BUILD@energy.ca.gov within 30 days of the date of the notice of the reservation denial, cancellation, reduction, or revocation.

The petition shall:

- Specify the basis for the petition.
- State why the petitioner believes the denial, cancellation, reduction, 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 Energy Commission 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 Energy Commission 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 Energy Commission Chair and processed as an appeal from a request for investigation following the Energy Commission'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 Energy Commission Chair shall issue a written order sustaining the Executive Director or the designee's denial, modifying it, overturning it, or referring the matter to an Energy Commission committee or the full Energy 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.

Q. Participation in CPUC's evaluation, measurement, and verification process

The data and information provided as outlined in these guidelines will inform the CPUC's Evaluation, Measurement and Verification (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 may request additional information to further inform the CPUC's EM&V pilot program evaluation.

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 D. 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

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

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

Glossary

Key Words and Terms

Word/Term	Definition
AEA	Association for Energy Affordability
AHSC	Affordable Housing and Sustainable Communities
ANSI	American National Standards Institute
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.
ASHP	Air-source split central heat pump
AWHI	Advanced Water Heating Initiative
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."
CalHFA	California Housing Financing Agency
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
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
CARB	California Air Resources Board
CARE	California Alternative Rates for Energy
CBECC	California Building Energy Code Compliance (Freeware available on the CEC website)
CDLAC	California Debt Limit Allocation Committee

CEC	State Energy Resources Conservation and Development Commission, commonly called the California Energy Commission, the Energy Commission, or the CEC
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 inspected by inspection personnel. This certificate can be obtained through the local building authority. The requirement for a Certificate of Occupancy varies among municipalities.
Certified Energy Analysts (CEAs)	Certified Energy Analysts (CEAs) are individuals who have demonstrated their mastery of the Residential and/or Nonresidential California Energy Standards by completing a comprehensive certification examination administered by California Association of Building Energy Consultants (CABEC).
Residential Certificates of Compliance (CFR1s)	CF1R documents demonstrate the project design and equipment are compliant with the Energy Code at time of permit application.
Residential Certificates of Installation (CFR2s)	CF2R documents demonstrate installations are compliant with the Energy Code at the time of construction.
Residential Certificates of Verification (CFR3s)	CF3R documents demonstrate field verification and/or diagnostic testing is compliant with the Energy Code at the time of construction
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).
COP	Coefficient of Performance
CPUC	California Public Utilities Commission
CSLB	Contractor State Licensing Board
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) is currently available on the California Office of Environmental Health Hazard Assessment website²³ and in the process of being updated by California EPA with a December 2021 targeted completion date.²⁴

DACAG	Disadvantaged Communities Advisory Group
DIR/DOSH	Department of Industrial Relations Division of Occupational Safety and Health
DWHR	Drain water heat recovery
EER	Energy Efficiency Ratio
EM&V	Evaluation Measurement and Verification efforts
EV	Electric vehicle
FY	Fiscal Year
GHG	Any gas that absorbs infrared radiation in the atmosphere. Common examples of greenhouse gases include water vapor, carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), halogenated fluorocarbons (HCFCs), ozone (O ₃), perfluorinated carbons (PFCs), and hydrofluorocarbons (HFCs). The programs methodology of evaluating GHG is in Appendix D
GWP	Global Warming Potential
HCD	California Department of Housing and Community Development
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)

²³ See SB 535 Disadvantaged Communities, <https://oehha.ca.gov/calenviroscreen/sb535>

²⁴ See PRELIMINARY DESIGNATION OF DISADVANTAGED COMMUNITIES PURSUANT TO SENATE BILL 535, https://calepa.ca.gov/wp-content/uploads/sites/6/2021/10/2021_CalEPA_Prelim_DAC_1018_English_a.pdf (preliminary designation notice); CalEPA Proposed SB 535 Disadvantaged Communities: October 2021, <https://oehha.maps.arcgis.com/apps/insant/minimalist/index.html?appid=b2a617f0e8984f3b96d8156bf968a36d¢er=-118.7324,36.6988&level=7> (map of proposed updates to disadvantaged communities)

HPWH	Heat pump water heaters use electricity to move heat from one place to another instead of generating heat directly. ²⁵
HUD	U.S. Department of Housing and Urban Development
HVAC	Heating, Ventilation, and Air Conditioning
IEPR	Integrated Energy Policy Report
Investor-Owned Utility (IOU)	As used in this document, investor-owned utilities refers to Pacific Gas and Electric Company (PG&E), Southern California Edison, and San Diego Gas and 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
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 (MTCO _{2e})	A unit of measurement for the amount of GHG emission produced by an activity.
Natural Gas	A hydrocarbon gas found in the earth composed of methane, ethane, butane, propane, and other gases.
NEEA	Northwest Energy Efficiency Alliance
NEEP	Northeast Energy Efficiency Partnership
NRCC	Nonresidential Certificate of Compliance
NRTL	Nationally Recognized Testing Laboratory
PTAC	Packaged terminal air conditioner
PTHP	Packaged terminal heat pump
PERF	Certificate of performance
Premise ID	Uniquely identifies a premise. A premise is a contiguous geographic area used by a utility to track billing and usage. It

²⁵ See the Department of Energy HPWH webpage for more information, <https://www.energy.gov/energysaver/heat-pump-water-heaters>

contains service points and meters, and should have an address assigned to it.

Publicly Owned Utility (POU)	A local publicly owned electric utility as defined by Public Utilities Code section 224.3.
Project	Pursuant to the BUILD Guidelines a “project” refers to new, all electric, low-income, single, or multi-family residential housing unit(s) located within an eligible natural gas utility service area. Only “eligible buildings,” as defined in Chapter 2 above, 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
PUC	Public Utilities Code
PV	Photovoltaic
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
TCAC	California Tax Credit Allocation Committee
TECH	Technology and Equipment for Clean Heating Initiative
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 or not

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 about 0.90, and gas instantaneous units approximately 0.80–0.94. It replaced the “energy factor” metric previously used for residential water heaters.
VCHP	Variable Capacity Heat Pump
Virtual Net Energy Metering (VNEM)	A program that allows multi-tenant building owners to install a solar system to cover the electricity load of both common and tenant areas connected at the same service delivery point.
VRF	Variable refrigerant flow

APPENDIX A:

Payment Process

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

Award & Incentive Type	Incentive Reservation Approval	Construction Reservation Approval	Building Foundation Poured	Project Completion
New Adopter Design Award	100% \$25,000			
Base GHG Incentive		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				100% Project Specific
Modeled Resident Utility Costs / Increment PV				100% Project Specific
Kicker Incentives				100% Project Specific

A. Payment Claims

No applicant may submit more than four payment claims specific to any individual 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. With each assignment the applicant must file a new appropriate payee data record (STD-204)

C. New Adopter Design Award of \$25,000

Applicants must apply for this award concurrent with their incentive reservation and is subject to the approval of the incentive reservation. The payment claim package consists of:

- Payment claim form.
- Attestation the applicant qualifies as a new adopter, 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.
- Attestation that the project is a multifamily residential building of at least 10 units.
- Attestation that the award will reimburse direct costs and paid invoices for architectural, engineering, energy consultation design services for the eligible project.
- Copy of paid invoices of third-party architectural, engineering, or energy consultation design services for the eligible project.

D. Base GHG Incentive Payments

The BUILD incentive is comprised of four different components or types: 1) base GHG incentive, 2) building efficiency incentive, 3) modeled resident utility costs/incremental PV, and 4) kicker incentives (See 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 build 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, along the following schedule.

To be eligible for progress payments, the applicant must attest at the time of a progress payment is 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 it has not yet communicated to the CEC's BUILD Program staff.
- The applicant still fully intends and has the ability to perform 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 Incentive Reservation
 - Up to 25% 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 (photograph) has been constructed.
 - Up to 50% 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 the project completion 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, whatever is less.

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.

This 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).
- Recorded Regulatory Agreement/Deed Restriction; Resale restriction or equity sharing agreement²⁶.

26 California Public Utilities Code Section 921(d)

- Energy Efficiency Verifications (CF-2R, CF-3R).

Detailed information on each of the required forms and documentation is 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 can be demonstrated with paid invoices, purchase or installation contract, or other appropriate documentation.

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

- 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 project's electric utility for any installed solar energy system installed 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 a payment claim and dispersal of funding for any part of 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. 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 inspected by inspection personnel.

5. Recorded Regulatory Agreement & 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 only eligible for consideration 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 that has 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 § 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 the 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 (CF-2R, CF-3R)

Applicants must identify a HERS Rater for the energy efficiency measures 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. 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) 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 be good communication among the applicant, builder, solar installer, and HERS Rater to coordinate Title 24 or BUILD energy efficiency requirement verification.

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 Energy Commission, 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.

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 section.

If, during the CEC staff review, a complete and timely submitted payment claim package is found to contain minor errors, discrepancies, or omissions, the CEC staff will request clarification from the applicant. The applicant will be responsible for obtaining all information requested by CEC staff from the contractors, equipment seller, installer or electric utility provider 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 Energy Commission 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 program, and should indicate this at the time of the construction reservation.

APPENDIX B: Required and Eligible Technologies

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 for contractors certified to do the work.

All appliances and equipment must be installed per manufacturer’s instructions and applicable code requirements. Included in this chapter is the equipment lists required by the CEC for each technology type under the BUILD Program.

B. Base GHG Incentives

1. The BUILD Calculator Pathway

At application reservation, an applicant can use the BUILD calculator to estimate incentive amounts. 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, Table B.2 for low rise multifamily, or Table B.3 for mid/high rise multifamily:

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 ¹	HSPF ≥ 8.2
	Variable Capacity Heat Pump ³	See footnote ³
Water Heating	Unitary Heat Pump Water Heater	NEEA Tier 3
	Drain Water Heat Recovery (DWHR) (for 2 stories and above)	Unequal to shower, 43% CSA Rated Efficiency

Source: California Energy Commission

Table B.2: Technologies for BUILD Base Incentives — Low-Rise Multifamily Residential

Energy End Use	Core Technologies	Minimum Requirements
Space Conditioning	Air-source split central heat pump ¹	HSPF ≥ 8.2
	Packaged Terminal Heat Pump ²	COP ≥ 3.0
	Variable Capacity Heat Pump ³	See footnote ³
Water Heating	Unitary Heat Pump Water Heater	NEEA Tier 3
	Central On-site Heat Pump Water Heater	UEF ≥ 3.75
	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](#).

Table B.3: Technologies for BUILD Base Incentives — Mid and High-Rise Multifamily Residential

Energy End Use	Core Technologies	Minimum Requirements
Space Conditioning	Air-source split central heat pump ¹	HSPF ≥ 8.2
	Variable Refrigerant Flow (VRF) ²	HSPF ≥ 7.7, COP ≥ 3.3
	Variable Capacity Heat Pump ³	HSPF ≥ 7.7, COP ≥ 3.3
Water Heating	Unitary Heat Pump Water Heater	NEEA Tier 3
	Central On-site Heat Pump Water Heater	UEF ≥ 3.75 CEC Certified ⁴ and available in the CEC approved compliance software
	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 variable-refrigerant-flow systems shall have ANSI/AHRI Standard 1230 rating at 47°F dry-bulb.
3. Qualifying variable-capacity heat pumps shall have ANSI/AHRI Standard 1230 rating at 47°F dry-bulb.
4. Qualifying central heat pump water heater shall be certified and on the CEC's [certification list](#).

2. Custom Energy Model Pathway.

An applicant can also an energy model for any equipment and features available within the software and is not limited to Table 5.1 – Table 5.3, such as high-performance building envelope features, or other types of ventilation, space heating and water heating systems.

C. Kicker Incentives

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

Table B.4: Eligible Technologies for BUILD Kicker Incentives

Eligible Technologies	Minimum Requirement
Grid Flexibility	For smart thermostats, ENERGY STAR®-certified Smart Thermostats For HPWHs, must comply with 2019 Title 24 Part 6 Joint Appendix 13 CTA-2045-compliant
Refrigerant	Lower-GWP refrigerants (GWP< 750) Low GWP (GWP<150)
Cooktop	Induction, permanent fixture
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	Listed on the CALeVIP Eligible Equipment List (or future CEC equivalent list) and/or ENERGY STAR-certified
Smart Electric Vehicle Supply Equipment	<ul style="list-style-type: none"> • If installing three or fewer EVSE, each EVSE must be capable of delivering electricity to a plug-in electric vehicle at a minimum current of 40 amperes at 208/240 volts • If installing more than three EVSE, all EVSE must be controlled by an Automatic Load Management System (ALMS) that meets the minimum requirements defined in Health & Safety Code Sections 18930.5 and 18941.10 • Additionally, all EVSE must meet the following requirements for incentive funding: <ul style="list-style-type: none"> ○ ENERGY STAR-certified ○ Approved by a NRTL program for EVSE testing and certification

	<ul style="list-style-type: none"> ○ Be capable of managing charging based on electricity rates, greenhouse gas signals, and/or other dynamic grid signals. ○ Support Open Charge Point Protocol or OpenADR ○ Support ISO 15118 communication with the plug-in electric vehicle
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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, 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 a 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.²⁷

E. Eligible Equipment Lists

As administrator of the BUILD Program, the CEC aims to develop proposed 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,

²⁷ [CEC’s 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>

and installation of high-quality, energy-efficient products. Table A.1 provides the eligible equipment list sources for each technology type.

Table B.5: Eligible Equipment Lists

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

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.

The CEC’s online Modernized Appliance Efficiency Database System (MAEDbS) may also be relied on.

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 northwest utilities and energy efficiency organizations working to cost-effectively deliver energy efficiency 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 Specification²⁸ 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 Specification²⁹ 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 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 list³⁰ must submit an assessment that

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

29 [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>

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

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. CEC is setting design criteria, performance specifications, and installation guidelines for heat pump water heaters with larger capacity.

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.

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 List³¹ 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 ENERGY STAR specification³² 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.

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

32 [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>

- 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.
- 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 Lists³³ 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)*.³⁴

For energy storage systems, the safety certification must be from a NRTL and performance characteristics are provided from manufacturers. The Energy Storage

³³ [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.

³⁴ [Guidelines for California's Solar Electric Incentive Programs \(Senate Bill 1\), Seventh Edition](https://efiling.energy.ca.gov/GetDocument.aspx?tn=226057&DocumentContentId=56796), https://efiling.energy.ca.gov/GetDocument.aspx?tn=226057&DocumentContentId=56796

System List reflects equipment certified to UL 9540, advanced inverter functions, and the approval status of the equipment for JA 12 requirements.

APPENDIX C:

Modeled Resident Utility Costs Method

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 a 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.³⁵

This section describes the method CEC staff have 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. 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 methodology 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 bill savings for low-income building occupants and owners. CEC staff designed this methodology 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 to demonstrate the modeled resident utility costs, CEC staff developed a BUILD Calculator to assist builders and developers in the incentive reservation application process (Step 1). Flexibility is also given to 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, buildings types, and utility rates. CEC staff developed an automated process to

³⁵ "Occupant" utility costs are referred to interchangeably in this document as "resident" costs to distinguish them from utility costs typically paid by non-resident building owners or management companies.

simplify repeated analyses for future updates to the method, such as utility rate updates.

B. Building Energy Modeling

CBECC 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 default TOU rates where applicable. It is likely BUILD projects will need a PV system to either meet the Energy Code or BUILD minimum requirements. Under NEM 2.0³⁶, TOU rates are mandatory for residential PV customers in IOU service territories. Moreover, IOUs are transitioning to default TOU rates for most customers.
- 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. Additionally, in the instances where 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.

³⁶ [Net Energy Metering](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)

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 2019.³⁷ 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 directly benefit tenants, increase energy efficiency measures, or both to overcome the current difference between electricity rates and gas rates in year one 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 Energy Code prescriptive standards as specified by the 2019 Residential and Nonresidential ACM Reference Manuals. 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 California Alternative Rates for Energy (CARE) rates (or an equivalent low-income rate), and default TOU or tiered rates. The CARE³⁸ 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 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.

³⁷ [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>)

³⁸ [California Alternative Rates for Energy \(CARE\)](#), <https://www.cpuc.ca.gov/lowincomerates/>

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 rates used to calculate modeled resident utility costs. Staff expects that the Load Management Standards proceeding³⁹ will include a requirement for utilities to report their hourly rates to a rate repository maintained by CEC. As these updated rates become available, 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

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

Source: California Energy Commission

39 The Load Management Standards Proceeding includes a requirement for utilities to report their hourly rates to a rate repository maintained by CEC. When these rates are available, CEC staff may use these rates in any updates to the BUILD modeled resident utility costs method. For more, see the [2020 Load Management Rulemaking page](https://www.energy.ca.gov/proceedings/energy-commission-proceedings/2020-load-management-rulemaking), <https://www.energy.ca.gov/proceedings/energy-commission-proceedings/2020-load-management-rulemaking>

Table C.2: Electric Rates

Electric Utility	2020 Rates*
Pacific Gas and Electric	Electric Schedule E-TOU-C (4-9 PM)
Southern California Edison	Schedule TOU-D (4-9PM)
San Diego Gas & Electric	Schedule TOU-DR1 (4-9 PM)
Los Angeles Department of Water and Power	Schedule R-1B (TOU) or Rate R-1A** (tiered)
Sacramento Municipal Utility District	Time-of-Day (5-8 PM)
Liberty Utilities	Schedule No. TOU D-1
Imperial Irrigation District	Schedule D (tiered)
All other electric utilities	Default TOU rate, or tiered rate if not available. 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.

Source: California Energy Commission

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

** For LADWP, only tiered rates are available for low income.

3. Minimum Bill Charges

Most utilities have minimum bill charges. These charges are applied if the customer's energy usage charges are less than the minimum bill. In mixed fuel homes the delivery charge applies to both the gas and electric bill, and in all-electric homes only the delivery charges specific to electricity apply. These charges have been accounted for in the methodology 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 by the hourly utility rate from utilities. This accounts for peak hours in TOU rates and any excess PV generation. The bill is summed monthly and includes delivery charges and any PV bill credits. Lastly, all the hourly utility costs are summed to determine an annual total.

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. During certain times of day throughout the year, there may be excess PV generation compared to the estimated building electricity load.

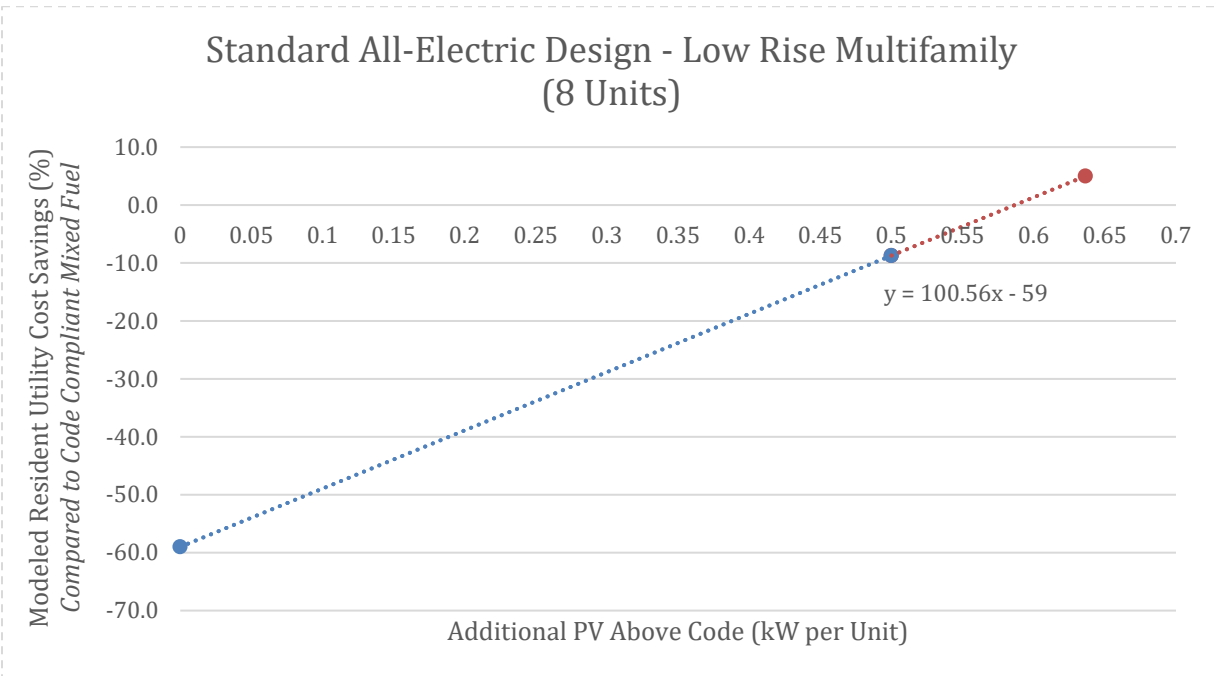
This energy is exported to the grid. Exported energy is handled according to the utilities' net energy metering (NEM) compensation rules. NEM policies allow solar PV customers to be compensated for the electricity generated that is exported to the grid. Credits are accrued for each kilowatt-hour (kWh) generated and is then used to offset energy purchased from the grid. A small component of the energy rate includes non-bypassable charges (NBCs) that cannot be offset by solar credits. In hours where generation is less than consumption, the net energy is charged the full energy rate. Therefore, generation is fully credited and equal to the energy rate. However, in hours where generation is more than consumption, leading to exports to the grid, the generation is compensated at the energy rate minus the NBCs. NBCs are tracked separately from usage charges to not be offset by PV credits. NBCs can include fees for public purpose programs, nuclear decommissioning, Department of Water Resources bond charge, and competition transition charge.³⁹ In cases for POUs, the excess generation was handled according to their NEM compensation rules. Low-income discounts are applied where applicable. In cases when NEM agreements allow, a net surplus compensation rate is applied if the NEM customer's PV system produces excess energy over their entire annual billing period.

F. BUILD Calculator Pathway

Chapter 4 and Appendix D describes how applicants can elect to use the BUILD Calculator for the reservation application process to calculate the amount of increased efficiency and energy savings are needed for projects to be eligible for incentives. 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 can be 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.3 for an all-electric design in Climate Zone 12 (PG&E territory) with increasing additional PV to achieve resident utility cost savings.

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.

G. 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 Methodology

A. Base incentive

The base incentive is calculated from the building's avoided GHG emissions. 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 is calculated by approved compliance software and can be found on the CF1R-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% to 10%. Example, if the compliance margin is 4.4%, the building would be eligible for \$440 per bedroom. If the compliance margin is 10% 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% modeled resident utility cost savings in comparison to a mixed-fuel building. For projects where the modeled resident utility cost savings is less than 5%, some developers will choose to add PV to the building design, which lowers the amount of electricity purchased from the utility provider, until 5% 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 currently required by the Energy Code, such as multi-family buildings 4-stories and higher, BUILD will incent the entire amount of the required PV. This is calculated by multiplying the amount of PV by \$3.00 per Watt dc. The BUILD program will only incent the cost of installing the additional PV required to meet the modeled resident utility costs; it will not incent 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 after proof of purchase for the equipment is provided.

E. BUILD Calculator

The BUILD Calculator is an estimating tool that can be used to make an incentive reservation if the applicant does not have an energy model to use for the Custom Energy Model Pathway. 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 of 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% 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

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's results, and includes:

- Number of low emission buildings 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 evaluator for TECH and BUILD. The CEC's BUILD Program Guidelines are intended to 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.