

Ordinance: Existing Home Energy Sustainability Ordinance v1.9.3

Policy Overview

- Require homes built before 2006 that are performing additions or remodels to also perform specific energy upgrades
- Prescribed upgrade measures depend on home age and climate zone
- Prescribed upgrades will apply to the remainder of the home not otherwise required to comply with current building code as a result of the addition or remodel
- Allow homes to install a custom set of upgrades, instead of the required upgrades, as long as they meet or exceed the energy performance of the required upgrades
- Avoid dis-incentivizing solar installation or other energy efficiency measures
- Avoid inordinate financial burden
- Avoid impeding ADUs or JADUs in any way
- Avoid disruption to permit process
- Estimated to affect 3,872 units and reduce GHG emissions by 3,142 metric tons over the first 10 years

ORDINANCE NO. _____

ORDINANCE OF THE CITY OF CHULA VISTA AMENDING CHAPTER 15.26 OF THE CHULA VISTA MUNICIPAL CODE TO ESTABLISH MANDATORY ENERGY UPGRADE REQUIREMENTS FOR ADDITIONS AND REMODELS TO SINGLE FAMILY HOMES

WHEREAS, through its 2017 Climate Action Plan, the City committed to reducing greenhouse gas emissions to below six metric tons CO₂e per capita by 2030 and two metric tons CO₂e per capita by 2050; and

WHEREAS, as presented in a citywide 2014 greenhouse gas inventory, Chula Vista's greenhouse gas emissions decreased since 2005 but are still 10% above the City's 2020 emission goal; and

WHEREAS, as a result, the City Council directed staff to convene a Climate Change Working Group (CCWG) to develop recommendations to reduce the community's greenhouse gas emissions; and

WHEREAS, the CCWG recommended twelve climate protection measures, including requiring energy-savings retrofits in existing buildings at a specific point in time, which were included in the 2017 Climate Action Plan; and

WHEREAS, on September 26, 2017, City Council adopted the 2017 Climate Action Plan and directed staff to implement the measures based on funding levels; and

WHEREAS, as a component of the 2017 Climate Action Plan, staff proposed developing a residential and commercial energy conservation ordinance for City Council consideration;

WHEREAS, staff is presenting to Council an ordinance amending Chapter 15.26 of the Municipal Code and adding Section 15.26.040 requiring single family homes built before 2006 that are undergoing additions to also install certain energy saving measures; and

WHEREAS, pursuant to the California Administrative Code, Title 24, Part I, Section 10-106, Locally Adopted Energy Standards, and the CEC's submittal and approval process, the City finds that the requirements below will save energy and are cost-effective within the City of Chula Vista; and

WHEREAS, Pursuant to Sections 17958 and 18941 of the Health and Safety Code, before making any modifications to the California Building Standards Code, the City must make an express finding that such modifications are reasonably necessary because of local climatic, geological or topographical conditions. Modifications to the California Building Standards and Building Energy Efficiency Standards, as detailed in this Ordinance, are reasonably necessary due to local climatic conditions. As a result of high summer ambient temperatures and periods of heat waves, average load demand and peak load demand of energy used in Chula Vista is an important factor concerning public

safety and adverse economic impacts of power outages or power reductions. Reduction of total and peak energy use, as a result of incremental energy conservation measures required by this Ordinance, will have local and regional benefits in the cost-effective reduction of energy costs for the building owner, additional available system energy capacity, and a reduction in greenhouse gas emissions.

WHEREAS, the City affirms that the requirements below will require buildings to be designed to consume no more energy than permitted by California Energy Code; and

WHEREAS, this Ordinance is intended to preserve and enhance the environment of the City of Chula Vista and is not subject to the California Environmental Quality Act pursuant to Section 15061(b)(3) of the CEQA Guidelines, because there is no possibility that the ordinance may have a significant negative impact on the environment. The proposed ordinance is exempt from the requirements of CEQA pursuant to Section 15308 of the CEQA Guidelines, which exempts actions taken by regulatory agencies for the enhancement and protection of the environment.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Chula Vista hereby adopts this ordinance and directs staff to prepare and present for City Council consideration proposed local amendments to future versions of California Energy Code requiring increased local energy efficiency standards and the necessary future cost-effectiveness studies, consistent with this resolution.

NOW THEREFORE the City Council of the City of Chula Vista does ordain as follows:

Section I.

Chapter 15.26 of the Chula Vista Municipal Code is hereby amended by addition of the section 15.26.040 as follows:

15.26.040 Mandatory Energy Efficiency Requirements for Additions to Single Family Homes

A. *Purpose and Intent.* It is the purpose and intent of this section to require installation of specific energy efficiency measures in less energy-efficient homes, when such homes undertake additions or remodels, in order to reduce GHG emissions resulting from energy consumption.

B. *Applicability.* This section applies to dwelling units constructed before 2006, that are undergoing a permitted Addition or Remodel, either in Low-Rise Residential Buildings (as defined in Title 24 Part 6 Section 100.1) with 1-4 dwelling units, or that are individually owned residential condominiums and townhouses. EXCEPTION: This section shall not be triggered by creation of a new ADU or JADU alone. This section does apply to Additions or Remodels of existing ADUs and JADUs.

C. Definitions. For purposes of this section, the following terms shall have the following meanings:

“Addition” See definition in Title 24 Part 6 Section 100.1(b).

“Compliance Report” A Certificate of Compliance generated by approved Energy Code compliance software, including CBECC-Res and EnergyPro.

“Remodel” Means any of the following:

1. Any change or rearrangement, other than a repair, of the structural elements of an existing building including foundations, footing, sub-floors, lintels, beams, columns, girders, slabs, roof trusses, staircases, load bearing walls, door frames, window frames, or any other part of the building that resists force or moment.
2. Change or rearrangement of the plan configuration of walls and full-height partitions of an existing building.

“Steep Slope” A roof slope greater than two units vertical in 12 units horizontal (17-percent slope).

“Total Energy Use” The energy consumption estimated by approved Energy Code compliance software, including CBECC-Res and EnergyPro, in terms of kTDV per square foot per year (kTDV/sf²-yr).

D. Requirements. The following requirements shall apply to the entire dwelling unit, not just the additional or altered portion. Where these requirements conflict with other energy code requirements, the stricter requirement shall prevail. Homes shall comply with either the Prescriptive Approach or the Performance Approach.

(1) Prescriptive Approach

- a. The upgrade measures shown below in Table 15.26.040(D)(1)(a1) must be completed in accordance with the home's construction date and climate zone.

Table 15.26.040(D)(1)(a1): Existing Home Addition Prescriptive Energy Upgrade Measures

Year Built	Climate Zone 7	Climate Zone 10
Before 1978	Water Heating Package; LED Lighting; R38 Attic Insulation; Duct Sealing	Water Heating Package; LED Lighting; Duct Sealing; R38 Attic; Air Sealing
1978-2005	Water Heating Package; LED Lighting	

EXCEPTION: Individually owned residential units within buildings containing five or more units must complete the upgrade measures shown below in Table 15.26.040(D)(1)(a2) in accordance with the home's construction date and climate zone.

Table 15.26.040(D)(1)(a2): Existing Condo Prescriptive Energy Upgrade Measures

Year Built	Climate Zone 7	Climate Zone 10
Pre-1978	Water Heating Package; LED Lighting; R38 Attic Insulation; Duct Sealing	Water Heating Package; LED Lighting; Duct Sealing; R38 Attic; Air Sealing
1978-1991	Water Heating Package; LED Lighting; Duct Sealing	
1992-2005	Water Heating Package; LED Lighting;	

- a. Additions or Remodels involving steep sloped roof replacement, recovering, or recoating of either more than 50% or more than 2,000 square feet of roof area, or new steep sloped roof sections of any size, are also required to meet the Cool Roof requirements in Table 15.26.040(D)(1)(b) for the roofing material added to:
 - i. 1-4 unit residential buildings constructed pre-1978 in climate zone 7 or pre-2006 in climate zone 10.
 - ii. Individually owned units in 5+ unit buildings constructed pre-1992 in climate zone 7 or pre-2006 in climate zone 10.
- b. Required measures in Tables 15.26.040(D)(1)(a) and (2) shall be completed in accordance with the following specifications. Materials must meet the parameters included below in Table 15.26.040(D)(1)(b) as a minimum. More energy efficient materials may be substituted.

Table 15.26.040(D)(1)(b): Prescriptive Energy Upgrade Measure Specifications

Package	Specification
R-38 Attic Insulation	Add attic insulation in buildings with vented attic spaces to meet R-38 per requirements of section 150.1(c)1Aii or iii.

Air Sealing	Apply air sealing practices throughout all accessible areas of the building. All joints, penetrations and other openings in the building envelope that are potential sources of air leakage shall be caulked, gasketed, weather stripped, or otherwise sealed to limit infiltration and exfiltration. Buildings constructed before 1992 should be sealed to 7 Air Changes per Hour (ACH), and buildings constructed from 1992-2005 should be sealed to 5 ACH, at 50 Pascals pressure difference. Homes with one or more vented combustion appliances must have a BPI Combustion Appliance Safety Inspection performed after air sealing.
Cool Roof	For steep slope roofs, install a roofing product rated by the Cool Roof Rating Council (CRRC) with an aged solar reflectance of 0.25 or higher and thermal emittance of 0.75 or higher.
Duct Sealing	Air seal all ductwork to meet the requirements of Section 150.2(b)1E as if the heating system were being replaced.
LED Lighting	Replace screw-in halogen, incandescent or CFL light bulbs with LED light bulbs in accordance with the requirements of Section 150.0(k)1.A,D,G,H and I.
Water Heating Package	<p>1. Water Heater Blanket: Add R-6 insulation to the exterior of existing residential tank storage water heaters manufactured before April 2015. Requirement is waived for water heaters with internal tank insulation of at least R-16.</p> <p>2. Hot Water Pipe Insulation - Insulate all accessible hot water pipes with R-3 pipe insulation per requirements of section 150.0(j)2.A..</p> <p>3. Low Flow Fittings - Upgrade sink and shower fittings to meet current CALGreen requirements, which require maximum flow rates of 1.8 gallons per minute (gpm) for showerheads and kitchen faucets, and 1.2 gpm for bathroom faucets per requirements of section CALGreen Section 4.303.</p>

- c. Project Value Cutoff. If the cost of completing the energy efficiency measures required under this section are projected to exceed 20% of the projected cost of the Addition or Remodel absent those measures, permit applicants can propose a more limited set from among the required measures which does not exceed 20%. The limited set must include as many of the required measures as possible without exceeding the 20% cutoff.

(2) Performance Approach

- a. Complete any set of energy efficiency measures concurrent with Addition or Remodel that are projected to result in equivalent or lower energy usage than the applicable prescriptive measures required in section 15.26.040(D)(1).

- b. Shall be demonstrated by the following method.
 - i. Install the LED Lighting and Water Heater Blanket measures as specified in Table 15.26.040(D)(1)(b).
 - ii. Submit two compliance reports. One compliance report shall be generated from a model of the proposed energy performance measures, and, the existing home plus the proposed addition(s) and any other alterations. A second compliance report shall be generated by modeling the existing home with the prescriptive measures that would otherwise be required by section 15.26.040(D)(1), not including the LED Lighting and Water Heater Blanket, and including proposed addition(s) and any other alterations. The Total Energy Use for the first compliance report must be equal or less than that of the second compliance report.

E. *Exemptions.* The requirements of Sections 15.26.040(A), (B), (C) and (D) are waived, in part or in whole, if any of the following conditions are met.

- (1) *Measure Already Completed.* Substantially similar measures to those required by Table 15.26.040(D)(1)(a) and meeting the specifications of Table 15.26.040(D)(1)(b) are already in place.
- (2) *Technical Infeasibility.* Prescribed measure would be technically infeasible or not be cost-effective due to unique characteristics of home or other special circumstances.
 - a. Evidence requirement to show lack of cost effectiveness: Letter from certified energy professional attesting to the lack of cost effectiveness with explanation of methodology and calculation.
 - b. Evidence to show technical infeasibility: Letter from licensed building professional documenting infeasibility for one of the following reasons: inaccessibility, violation of other codes, low likelihood of success, measure would affect proper functioning of other building elements, result in safety risks, cause harm to building occupants.
- (3) *High Performing Home.* Home has earned a Home Energy Score of 8 or above within the previous 3 years.
- (4) *Fully Solar Powered.* Home is powered by a solar PV system offsetting at least 95% of the annual electricity demand and gas-equivalent energy consumption.

- (5) *Exempt Additions.* Additions where work is principally composed of one of the following: Solar PV, Solar water heating, EV charging, electrical upgrades for solar PV or EV charging, energy storage.
- (6) *Homeowner's Association.* A measure is beyond the authority of the homeowner due to Homeowner's Association (HOA) covenant.
- (7) *Medical Necessity.* An Addition or Remodel consists solely of medically necessary improvements.

F. Implementation Authority.

- (1) The City Manager may adopt rules and regulations for the implementation of this section.
- (2) The City Manager may modify or suspend the requirements of this section after submitting a written justification to the Sustainability Commission for one or more of the following reasons:
 - a. Technological infeasibility.
 - b. Economic infeasibility.
 - c. Legal infeasibility.
 - d. Streamlined compliance

Section II. Severability

If any portion of this Ordinance, or its application to any person or circumstance, is for any reason held to be invalid, unenforceable or unconstitutional by a court of competent jurisdiction, that portion shall be deemed severable, and such invalidity, unenforceability or unconstitutionality shall not affect the validity or enforceability of the remaining portions of the Ordinance, or its application to any other person or circumstance. The City Council of the City of Chula Vista hereby declares that it would have adopted each section, sentence, clause or phrase of this Ordinance, irrespective of the fact that any one or more other sections, sentences, clauses or phrases of the Ordinance be declared invalid, unenforceable or unconstitutional.

Section III. Construction

The City Council of the City of Chula Vista intends this Ordinance to supplement, not to duplicate or contradict, applicable state and federal law and this Ordinance shall be construed in light of that intent.

Section IV. Effective Date

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This ordinance shall take effect on the 30th day following approval by the California Energy Commission and not before June 1, 2020.

Section V. Publication

The City Clerk shall certify to the passage and adoption of this Ordinance and shall cause the same to be published or posted according to law.

Presented by

Approved as to form by

Eric Crockett

Director of Economic Development

Glen R. Googins

City Attorney