

# City of Chula Vista Draft Policy Summary Existing Home Energy Sustainability Ordinance (EHESO) version 4.1

## Policy Overview

- Require installation of a minimum number of energy upgrade options chosen from a list of qualifying measures for homes built before 2006 (including condos and townhouses) when they perform additions and remodels
- Minimum number depends on the building type, age of home and climate zone
- Upgrades will apply to the part of the home not already required to comply with current building code as a result of the addition or remodel
- As an alternative to the minimum number requirement, allow homes to install any custom set of upgrades, as long as they achieve equivalent energy performance
- Exempt homes that are already highly efficient
- Exempt homes that are predominately powered by solar
- Exempt low-income applicants
- Exempt ADUs or JADUs
- If implemented as recommended, estimated to affect 3,872 units and reduce GHG emissions by 3,218 metric tons over the first 10 years

## Proposed Requirements

1. **APPLICABILITY:** Applies to 1-4 unit residential buildings and individually owned townhome and condominium units built before 2006 when an Addition or Remodel is performed.

2. **DEFINITIONS**

*Addition:* As defined in Energy Code<sup>1</sup>.

*Condo:* An individually owned residential unit within a building containing five or more dwelling units.

*Home:* A residential building containing between one and four dwelling units.

*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.

3. **OPTION 1: PRESCRIPTIVE PATH**

Owners of covered residential buildings must complete the specified minimum number of measures shown below according to building type, construction year and climate zone.

Year Built	Building Type	Climate Zone 7	Climate Zone 10
Pre-1978	Homes and Condos	Choose 3 Measures	Choose 4 Measures
1978-1991	Condos	Choose 3 Measures	
	Homes	Choose 2 Measures	
1992-2005	Homes and Condos	Choose 2 Measures	

3.1. These prescriptive requirements shall apply to the entire unit or units within the scope of the triggering permit, not just the additional or altered portion. Where these requirements conflict with other energy code requirements, the stricter requirement shall prevail.

3.2. For Additions and Remodels involving roof replacement, recovering or recoating (>50% or >2,000sf), or new roof sections, on a steep sloped roof the Cool Roof measure applies for:

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<sup>1</sup> Any change to a building that increases conditioned floor area and conditioned volume. See also “newly conditioned space.” Addition is also any change that increases the floor area and volume of an unconditioned building of an occupancy group or type regulated by Title 24 Part 6. Addition is also any change that increases the illuminated area of an outdoor lighting application regulated by Title 24 Part 6.

- a. Homes built before 1978 in climate zone 7, or pre-2006 in climate zone 10
- b. Condos built before 1992 in climate zone 7, or pre-2006 in climate zone 10

3.3. Owners shall choose and install at least the minimum number of measures from among the Measure Option List below:

Measure Name	Description
R-38 Attic Insulation	Add attic insulation in buildings with vented attic spaces to meet R-38.
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.
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 the 2016 Title 24 Section 150.2(b)1E. Homes with one or more vented combustion appliances are <b>STRONGLY RECOMMENDED</b> to have a BPI Combustion Appliance Safety Inspection performed after duct sealing.
LED Lighting	Replace low performing screw-based lighting with high performing lighting per the requirements of Title 24 Section 150.0(k)1.A,D,G,H and I.
Water Heating Package	<u>Water Heater Blanket</u> : 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. <u>Hot Water Pipe Insulation</u> : Insulate all accessible hot water pipes with R-3 pipe insulation. <u>Low Flow Fittings</u> : 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.
Windows	Replace existing single pane windows with a dual pane product, which has a U-factor equal to 0.32 or lower and a Solar Heat Gain Coefficient (SHGC) equal to 0.25 or lower. This measure was only evaluated for the pre-1978 vintage, which is assumed to have single-pane, metal-frame windows.
Water Heater Replacement	<u>High Efficiency Heat Pump Water Heater</u> : Replace natural gas storage water heater, or, tankless water heater having an Energy Factor of .81 or less, with Heat Pump Water Heater with Uniform Energy Factor (UEF) of at least 3.1 (Northwest Energy Efficiency Alliance Tier 3).  -or-  <u>High Efficiency Tankless Water Heater</u> : Replace natural gas storage water heater, or, tankless water heater having a Energy Factor of .81 or less, with tankless water heater with a minimum Energy Factor of 0.96.

Air Conditioner Replacement	<p><u>High Efficiency Air Conditioner:</u> Replace an existing air conditioner having a SEER rating of 13 or less with an air conditioner of at least 18 SEER.</p> <p>-or-</p> <p><u>High Efficiency Heat Pump:</u> Replace an existing air conditioner having a SEER rating of 13 or less with a Heat Pump of at least 18 SEER.</p>
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4. **OPTION 2: PERFORMANCE PATH:** Owners may concurrently complete an alternative set of energy measures that performs equal to or better than the assumed prescriptive measures shown below for their building type, construction year and climate zone.

Year Built	Building Type	Climate Zone 7	Climate Zone 10
Before 1978	Homes and Condos	Duct Sealing	Duct Sealing; R38 Attic;
1978-1991	Condos	Duct Sealing	
	Homes	N/A	
1992-2005	Homes and Condos	N/A	

4.1. Applicants may demonstrate this by submitting one compliance report, as already required, with the proposed performance measures, and a second compliance report modeling the existing home + alteration with the assumed prescriptive measures above. The Total Energy Use for the first compliance report must be equal or less than that of the second compliance report.

4.2. The LED Lighting and Water Heating Package requirements are mandatory and cannot be substituted for performance measures.

5. **EXEMPTIONS:** Owners are exempt from this ordinance, in part or in whole, subject to the requirements below.

5.1. Project Value Cutoff. If the cost of completing energy efficiency measures required under the prescriptive path exceeds 20% of the overall project cost absent those measures, permit applicants can propose a more limited set from among the required measures which does not exceed 20%.

5.2. Permits for work principally composed of one of the following are excluded from this requirement: solar PV, solar water heating, electrical upgrades for PV or EV charging, energy storage, EV charging

5.3. Homes where similar measures have already been completed.

5.4. Prescribed measures would be technically infeasible or not be cost-effective due to unique characteristics of home or other special circumstances.

- a. Evidence to show lack of cost effectiveness: letter from energy professional explaining calculation
- b. Evidence to show technical infeasibility: letter from 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

- 5.5. Home achieves a Home Energy Score (HES) of at least 8 out of 10
- 5.6. Home has on-site photovoltaics (PV) in place offsetting at least 95% of the annual electricity and gas-equivalent usage (simplified evidence options to be included in implementation guidelines)
- 5.7. A measure is beyond the authority of the homeowner due to HOA covenant
- 5.8. An Addition or Remodel consists solely of medically necessary improvements
- 5.9. Applicant qualifies for a recognized low-income assistance program.

6. IMPLEMENTATION AUTHORITY

- 6.1. The City Manager may adopt rules and regulations for the implementation.
- 6.2. 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. Streamlining of compliance