



# CITY COUNCIL AGENDA STATEMENT



March 3, 2020

File ID: 20-0038

## TITLE

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 (FIRST READING)

## RECOMMENDED ACTION

Council place the ordinance on first reading.

## SUMMARY

In September 2017, the City Council adopted the 2017 Climate Action Plan (CAP) to help address the local threat of climate change by reducing greenhouse gas (GHG) emissions and lowering Chula Vista's vulnerability to expected climate change impacts. The 2017 CAP called for promoting energy efficiency upgrades. The proposed increased energy efficiency standards for some pre-2006 residential properties undergoing additions or remodels is intended to support that effort. Based on the attached cost effectiveness studies created by the California Public Utilities Commission (CPUC) and Investor Owned Utilities, City staff has determined that the proposed requirements are cost effective and are anticipated to lower utility bills for applicable Chula Vista residents. In addition, the proposed requirements will exceed existing Title 24 energy requirements. In ten years, it is estimated that these requirements could save approximately 641 metric tons CO<sub>2</sub>e emissions and \$559,000 in utility costs per year, by 2040, those figures rise to 1,340 metric tons and \$1.1 million in bill savings annually.

## ENVIRONMENTAL REVIEW

The Director of Development Services has reviewed the proposed Project for compliance with the California Environmental Quality Act (CEQA) and has determined that the Project qualifies for a Class 8 Categorical Exemption pursuant to Section 15308 (Actions by Regulatory Agencies for Protection of the Environment) of the state CEQA Guidelines. The proposal seeks to help address the local threat of climate change by reducing greenhouse gas (GHG) emissions and lowering vulnerability to anticipated climate change impacts. Thus, no further environmental review is necessary. In addition, notwithstanding the foregoing, the Director of Development Services has also determined that the Project qualifies for an Exemption pursuant to Section 15061(b)(3) of the California Environmental Quality Act State Guidelines.

## BOARD/COMMISSION/COMMITTEE RECOMMENDATION

The Sustainability Commission (SSC) on September 9th, 2019 unanimously supported the proposed requirements.

The Board of Appeals and Advisors on February 10<sup>th</sup>, 2020 recommended that City Council adopt the ordinance.

**DISCUSSION**

The 2017 Climate Action Plan (CAP) and related implementation actions were established through an extensive outreach effort to Chula Vista residents and communities. The Climate Change Working Group (CCWG) was chaired by Sustainability Commission members and consisted of 13 other members representing various community sectors. The CCWG held a total of 11 meetings, including 10 publically-noticed meetings and one public forum to solicit input and engage the public on the development of the greenhouse gas reduction strategies through a consensus-building process. In November 2014, City Council adopted the 12 GHG reduction strategies that the CCWG presented, which included requiring energy savings retrofits in existing buildings.

These CCWG recommendations were subsequently incorporated into the CAP adopted by the City Council in September 2017. Working with community stakeholders and consultants, city staff have created the Home Energy Sustainability Ordinance. This proposed ordinance builds off previous energy efficiency efforts the City Council has approved such as the Commercial Outdoor LED Ordinance, “reach codes” that required new homes be built above Title 24 code requirements and PACE financing to allow residents to finance energy saving projects. The City of Carlsbad has also adopted a similar ordinance called the Residential Energy Conservation Ordinance which went into effect in 2019. After Council approval the California Energy Commission (CEC) must confirm that the proposed ordinance meets certain requirements including that the City has made a cost effectiveness finding. There are two common measures of cost effectiveness, simple payback and benefit-to-cost ratio. Simple payback divides the up-front installation cost by the expected utility bill savings each year. The result is a simple measure of the number of years it takes to “pay back” the initial investment. The lower the number, the quicker a measure pays back and the more cost effective it is. Benefit- to - cost ratio divides the lifecycle benefits over the one-time costs. Lifecycle benefits are calculated over 30 years and discounted at 3%. Benefit-to-cost ratios above 1.0 are considered cost effective and the higher the ratio, the better. In addition, every three years as updated state building codes are adopted, the City will need to seek new approval from the CEC by affirming via letter that the cost-effectiveness of these requirements is unaffected by the new standards.

Table 1 Timeline

Task / Milestone	Date
Present to City Council (first reading)	3/3/20
City Council (second reading)	3/10/20
Submit California Energy Commission (CEC) Application	3/4/20
Receive CEC Response (expected)	4/8/20

File with California Building Standards Commission (expected)	4/9/20
Effective Date (30 days following CEC approval)	5/8/20

Proposed Home Energy Sustainability Ordinance

The proposed Home Energy Sustainability Ordinance requires that homes built before 2006 make some energy efficiency upgrades, see Table 2, when they are also making an addition or remodel of their home. Based on the age of the home and the Climate Zone where the home is located, different energy efficiency upgrades are required. The reason for the different requirements is because typically older or more inland homes consume more energy and have more opportunities to save energy. These requirements are based on the Statewide Cost Effectiveness Study, attached with a Chula Vista Summary. All of the proposed requirements were found to be cost-effective in the energy simulations performed by these studies. Over the first 10 years staff estimate that residents will spend \$4.9 million on the required energy upgrades. Depending on the condition of the home, the homes location and the measures installed the energy savings are expected to equal the implementation costs within 7.9 to 10.7 years. Based on forecasted projects, staff estimate the average home will save more than \$170 in utility costs per year and take 8.3 years to equal the implementation costs. For more an overview of the cost-effectiveness of proposed requirements see the attached “Summary Cost-Effectiveness Results”.

The climate zones are created by the California Energy Commission to guide building requirements and align with zip codes. Within the City of Chula Vista, the following zip code 91914 lies within climate zone 10 and the rest of the city is located in climate zone 7. Once adopted, this proposed ordinance is expected to impact 3,872 units which will reduce approximately 3,218 metric ton (MT) of carbon emissions and save an estimated \$2.9 million over the first 10 years. The savings will help the City meet the energy and carbon reduction goals included in Objective 3.3 of the 2017 Climate Action Plan.

Table 2 Required Energy Efficiency Upgrades

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
1978-2005	Water Heating Package; LED Lighting; <u>1978-1991 Condos only:</u> Duct Sealing also required	

Table three below includes more information about each of the energy efficiency measures listed above.

Table 3 Required Measures Installation Details

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. Homes with one or more vented combustion appliances must have a Building Performance Institute (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	<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 Fixtures</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.

Staff anticipate that some homeowners and contractors may find other ways to reach the same energy reduction levels in their projects. The ordinance accommodates this option, providing a “performance path” that would allow owners to concurrently complete an alternative set of energy measures that performs equal to or better than the applicable prescribed measures.

## Exemptions

These proposed energy efficiency requirements are an effort to bring existing buildings closer to the energy efficiency of current energy code for new homes. The required updates are cost effective energy efficiency measures that have been adopted by other cities and have been widely available for years. Staff assumes that some residents may have already voluntarily adopted them. The following exemptions are designed for homes that have already undertaken voluntary energy updates.

- Homes where similar measures have already been completed
- Homes that have achieved a Department of Energy (DOE) Home Energy Score (HES) of at least 8 out of 10
- Homes with on-site photovoltaics in place offsetting at least 95% of the annual electricity and gas-equivalent usage

Additionally, a property would be exempt for the reasons stated below:

- Project Value Cutoff - If the cost of completing energy efficiency measures required 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%.
- Technically/Financial infeasibility – If the prescribed measures would be technically infeasible or not be cost-effective due to unique characteristics of home or other special circumstances.
- Home Owners Association (HOA) Restrictions - A measure is beyond the authority of the homeowner due to HOA covenant
- Exempt Project Types - An Addition or Remodel consists solely of medically necessary improvements, or principally of, solar PV, solar water heating, electrical upgrades for PV or electric vehicle (EV) charging, or energy storage.

## Required Next Steps

In order for the City to adopt and enforce increased building energy standards, the City must submit an application to the California Energy Commission (CEC) and obtain approval before the increased standards can take effect. The application submittal must include:

- 1) The proposed standards as adopted by Council,
- 2) The City's determination that the proposed standards will save energy and are cost-effective, and
- 3) A study with supporting analysis for the City's energy savings and cost effectiveness findings,

The proposed ordinance includes the necessary energy savings and cost effectiveness findings. By reviewing the attached cost effectiveness study and adopting this proposed ordinance, Council will be making the cost effectiveness and energy savings determinations mentioned above. After City Council votes on the proposed ordinance after the first reading, staff will submit the application to the CEC for their review and approval, a process that can take up to three months. After CEC approval, staff will file the ordinance with the California

Building Standards Commission and the ordinance will go into effect 30 days after the CEC approval. After City Council Approval, staff will begin preparing for the ordinance to take effect by working with various internal departments and stakeholders to educate impacted parties about the requirements and how they can be met.

### **DECISION-MAKER CONFLICT**

Staff has reviewed the decision contemplated by this action and has determined that it is not site-specific and consequently, the real property holdings of the City Council members do not create a disqualifying real property-related financial conflict of interest under the Political Reform Act (Cal. Gov't Code § 87100, et seq.).

Staff is not independently aware and has not been informed by any City Council member, of any other fact that may constitute a basis for a decision-maker conflict of interest in this matter.

### **CURRENT-YEAR FISCAL IMPACT**

No current year fiscal impact. The building permit review and inspection time associated with implementing this ordinance will be funded through building permit fees; outreach and education time will be supported through existing Economic Development Department funds.

### **ONGOING FISCAL IMPACT**

No ongoing fiscal impact. The building permit review and inspection time associated with implementing this ordinance will be funded through building permit fees.

### **ATTACHMENTS**

1. Existing Home Energy Sustainability Ordinance Summary
2. Existing Home Energy Sustainability Ordinance Overview
3. Summary Cost-Effectiveness Results
4. Existing Building Efficiency Upgrade Cost-Effectiveness Study

*Staff Contact: Cory Downs*