

**ORDINANCE NO. 1507**

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF ARCATA  
AMENDING THE ARCATA MUNICIPAL CODE TO ADOPT  
THE RESIDENTIAL REACH CODE AS AMENDMENTS TO  
THE 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE**

**WHEREAS**, the 2016 California Building Standards code, Title 24 of the California Code of Regulations, is maintained and updated every three years by two state agencies, the California Energy Commission (CEC) and the Building Standards Commission (BSC), has been effective throughout California since January 1, 2017;

**WHEREAS**, Part 11 of Title 24, called the California Green Building Standards Code or CALGreen Code, establishes energy efficiency standards for all new buildings constructed in California;

**WHEREAS**, in addition to enforcing the Title 24 standards, local jurisdictions have the authority to adopt local ordinances that exceed the minimum standards defined by Title 24 when deemed reasonably necessary because of local conditions caused by climate, geology or topography;

**WHEREAS**, the City Council makes the following findings of existing local climatic, geological or topographical conditions which support the adoption of more stringent standards than those found in the 2016 California Green Building Standards Code:

- 1) The City of Arcata Sea-Level Rise Risk Assessment (April 2018) identifies the threat of sea-level rise to Arcata as one of the most evident and problematic consequences of global climate change, with recent estimates of land subsidence indicating that Humboldt Bay has the highest local sea-level rise rate in California, approximately two to three times higher than the long-term global rate.
- 2) The City of Arcata Sea-Level Rise Risk Assessment further identifies continued emissions of greenhouse gases (carbon dioxide, methane, and nitrous oxide) as causing changes in all components of the global climate system, affecting temperature and precipitation patterns, ocean temperatures and chemistry, ocean-climate variability, and sea-level rise, such that limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.
- 3) The California Department of Water Resources, California Climate and Science for Water Resources Management 2015 Report predicts GHG induced higher intensity storms in the future, which may lead to increased wildfire activity caused by increased vegetative load.
- 4) The City of Arcata's topography includes forested hillsides with narrow and winding access, which makes timely response by fire suppression vehicles difficult.

- 5) Energy efficiency is a key component in reducing GHG emissions. The City of Arcata's local Greenhouse Gas Reduction Plan seeks implementation of extra measures to achieve GHG reductions, including the "Develop[ment of] land use regulations and building codes designed to encourage energy efficiency." Areas in which policy can promote energy efficiency in commercial or residential buildings include heating systems, lighting, insulation, building materials, and landscaping, among others.
- 6) Failure to address and significantly reduce greenhouse gas emissions (GHG) could increase the rate of sea-level rise and severe storms in Arcata, which could put Arcata homes, businesses, public facilities, and roadways at risk.

**WHEREAS**, local agencies that adopt standards which exceed the minimum Building Energy Efficiency Standards must demonstrate that requirements of the proposed ordinance are cost effective and do not result in buildings consuming more energy than is permitted by Title 24;

**WHEREAS**, a "CALGreen Cost Effectiveness Study" dated November 16, 2016, and prepared for Pacific Gas and Electric Company, Codes and Standards Program, analyzed the feasibility and cost-effectiveness of requiring new low-rise single family and multifamily residential construction to exceed the 2016 Building Energy Efficiency Standards (a copy of the Study is on file with the Department of Environmental Services);

**WHEREAS**, said Cost Effectiveness Study evaluated three efficiency packages for 16 different climate zones and determined that the energy efficiency standards in this Ordinance will meet the Study's cost-effectiveness standards in Arcata; and

**WHEREAS**, Energy efficiency enhances the public health and welfare by promoting the environmental and economic health of the City through the design, construction, maintenance, operation and deconstruction of buildings and sites by incorporating green practices into all development. The provisions in this Ordinance are designed to achieve the following goals:

- a. Increase energy efficiency in buildings;
- b. Increase resource conservation;
- c. Provide durable buildings that are efficient and economical to own and operate;
- d. Promote the health and productivity of residents, workers, and visitors to the city;
- e. Recognize and conserve the energy embodied in existing buildings; and
- f. Reduce disturbance of natural ecosystems.

**WHEREAS**, the amendments contained herein will be enacted as amendments to the 2016 California Green Building Standards Code.

The City Council of the City of Arcata does ordain as follows:

Section 1: Title VIII (*Building Regulations*), Chapter 1 (*Building Codes*), Article 8 (*Part 11, California Green Building Standards Code*) of the Arcata Municipal Code is hereby replaced in its entirety with the following:

## **SEC. 8100. Adoption.**

The provisions of the California Green Building Standards Code, Title 24, Part 11, 2016 Edition, as published by the International Code Council with California amendments, and all other revisions, supplements and amendments heretofore and hereafter adopted by the International Code Council with California amendments are hereby adopted and the Code is adopted as a whole except as amended by this Article.

### **SEC. 8100.1 Definitions.**

*“Energy Budget”* is the maximum amount of Time Dependent Valuation (TDV) energy that a proposed building, or portion of a building, can be designed to consume, calculated with the approved procedures specified in Part 6 of Title 24 of the California Code of Regulations. The Energy Budget is calculated based upon the features in the Standard Design Building.

*“Low-Rise Residential Building”* is a building, other than a hotel/motel that is Occupancy Group:

R-2, multi-family, with three stories or less; or

R-3, single family; or

U-building, located on a residential site.

*“R-2 Residential Occupancies”* as defined in 2016 California Building Code, Title 24 Part 2, Volume 1, Section 310.4 Residential Group R-2.

*“R-3 Residential Occupancies”* as defined in 2016 California Building Code, Title 24 Part 2, Volume 1, Section 310.5 Residential Group R-3.

*“Single-Family Building”* is a single dwelling unit of occupancy group R-3, as defined in the CBC, which stands separate and unattached from other dwelling units but may have an attached garage.

*“Standard Design Building”* is a building that complies with the mandatory and prescriptive requirements in Title 24, Part 6 of the California Code of Regulations (California Energy Code) by using the building energy modeling rules described in the Alternative Calculation Method (ACM) Reference Manual.

### **SEC. 8100.2 Purpose and Intent.**

It is the purpose and intent of this section to provide standards for builders and developers of newly constructed low-rise residential buildings to design and construct the buildings to exceed minimum 2016 Title 24, Part 6 requirements to achieve energy savings, reduce greenhouse gas emissions and the environmental footprint of new developments.

### **SEC. 8100.3 Requirement.**

- A. Single Family Buildings. Newly constructed buildings of no more than two dwelling units in Arcata shall:
  - 1. Be designed and constructed to include the green building measures specified as mandatory under the California Green Building Standards Code (CALGreen); and
  - 2. Meet the efficiency requirements of Section [A4.203.1.2 Performance Standard] and shall have an Energy Budget that is no greater than 70% of the Energy Budget for the Standard Design using efficiency measures only or a combination of efficiency measures and the photovoltaic (PV) system compliance credit.
  
- B. Multi-Family Buildings. Newly constructed multi-family residential buildings of Occupancy Group R-2, in Arcata shall:
  - 1. Be designed and constructed to include the green building measures specified as mandatory under the California Green Building Standards Code (CALGreen); and
  - 2. Meet the efficiency requirements of Section [A4.203.1.2 Performance Standard] and shall have an Energy Budget that is no greater than 80% of the Energy Budget for the Standard Design using efficiency measures only or a combination of efficiency measures and the photovoltaic (PV) system compliance credit.
  
- C. PV Compliance Credit. The PV compliance credit is equivalent to 8.0% of the compliance margin for single family buildings, or 4.4% of the compliance margin for multi-family buildings. In order to secure the PV compliance credit the PV system must be sized in accordance with the 2016 Residential ACM Reference Manual. Maximum PV system size in all cases is limited to no more than providing 100% of annual onsite electrical usage for the building.

### **SEC. 8100.4 Exemptions.**

- A. The Building Official may exempt a covered building from the provisions of this Chapter if the Official determines there are sufficient practical challenges to make satisfaction of the requirements infeasible. The applicant is responsible for demonstrating requirement infeasibility when applying for an exemption.
  
- B. One exception to this ordinance is a lack of solar access for the building site. Properties that have limited solar access due to trees or other obstructions that will tend to make the PV system seriously underperform will not be held to the same standard. If solar access is reduced by 30% or more in terms of the total annual solar radiation available at the site compared to an unobstructed site, this is considered cause for an exception. In this case single family residential buildings are required to meet a 22% compliance margin using energy efficiency measures only (Energy Budget that is no greater than 78% Energy Budget for the Standard Design) and Multi-family residential buildings are required to

meet a 15% compliance margin using energy efficiency measures only (Energy Budget that is no greater than 85% Energy Budget for the Standard Design).

- C. The Building Official may exempt a covered building from the provisions of this Article if the Official determines the building has satisfied the purpose and intent of this provision through the use of alternate on-site renewable electricity systems, including wind turbines.

**SEC. 8101. Deposit of Copies.**

One copy of the California Green Building Standards Code, Title 24, Part 11, 2016 Edition, as amended herein, shall be filed for use and examination by the public in the office of the Building Official. The same or identical copy thereof shall at all times be kept on file for similar use.

**SEC. 8102. Violations.**

Violation of any provision of the California Green Building Standards Code, Title 24, Part 11, 2016 Edition, as amended herein, is declared to be an infraction punishable by all sanctions prescribed in Title I of the Arcata Municipal Code for violations of the Arcata Municipal Code.

Section 2: Severability. If any section, subsection, sentence, clause or phrase of this chapter is for any reason held to be invalid or unconstitutional, the decision shall not affect the validity of the remaining portions of the Chapter. The City Council hereby declares that it would have passed this Chapter, and each section, subsection, sentence, clause and phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid under law.

Section 3: This ordinance is exempt from CEQA under 15061 (b)(3) – These standards are more protective of the environment than the State Standards, and there are no reasonably foreseeable adverse impacts. Consequently, there is no possibility that the activity in question may have a significant effect on the environment. The ordinance is also exempt under Section 15308 – Actions by Regulatory Agencies for Protection of the Environment.

Section 4: This ordinance will take effect thirty (30) days after the date of its adoption.

**DATED:** September 19, 2018

**ATTEST:**

**APPROVED:**

/s/ Bridget Dory  
City Clerk, City of Arcata

/s/ Sofia Pereira  
Mayor, City of Arcata

**CLERK'S CERTIFICATE**

I hereby certify that the foregoing is a true and correct copy of Ordinance No. 1507, passed and adopted at a regular meeting of the City Council of the City of Arcata, Humboldt County, California on the 19th day of September, 2018, by the following vote:

AYES: **PEREIRA, WATSON, PITINO, WINKLER**

NOES: **NONE**

ABSENT: **ORNELAS**

ABSTENTIONS: **NONE**

/s/ Bridget Dory  
City Clerk, City of Arcata