

ORDINANCE NO. 2565

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF DAVIS AMENDING SECTION 8.01.092 OF THE DAVIS MUNICIPAL CODE TO ADOPT NEW ENERGY EFFICIENCY STANDARDS FOR NEW SINGLE FAMILY AND LOW-RISE MULTIFAMILY DWELLINGS

WHEREAS, in 2017 the City of Davis adopted energy efficiency standards for new single-family and low-rise multifamily buildings under the Green Building Code, requiring such buildings to comply with the Tier 2 requirements for energy efficiency and install PV systems to offset total household energy use; and

WHEREAS, the 2019 California Building Standards Code, Title 24, California Code of Regulations, has been released by the State and will go into effect January 1, 2020, including the California Energy Code (Part 6 of Title 24); and

WHEREAS, Sections 17958.5, 17958.7, and 18941.5 of the California Health and Safety Code provide that the City may make changes or modifications to the standards contained in the California Building Standards Code based upon express findings that such changes or modifications are reasonably necessary because of local climatic, geological, or topographical conditions; and

WHEREAS, amendments to the City's energy efficiency standards for new single-family and low-rise multifamily dwellings are necessary in order to continue promoting increased energy efficiency and the use of renewable energy resources, and in light of the standards in the 2019 California Energy Code; and

WHEREAS, the City has completed an analysis and determined that the amendments to the energy efficiency standards contained herein would be cost effective.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF DAVIS DOES HEREBY ORDAIN AS FOLLOWS:

SECTION I. Section 8.01.092 of the Davis Municipal Code is hereby amended to read in full as follows:

“8.01.092 Energy efficiency “Reach Code”.

In addition to all requirements of the California Energy Code applicable to new single-family dwellings and new low-rise multifamily dwellings, mixed-fuel dwellings shall comply with the following. A “mixed-fuel dwelling” is a dwelling that uses natural gas or propane as fuel for space heating, water heating (including pools and spas), cooking appliances, or clothes drying appliances or is plumbed for such equipment.

- (a) New single-family dwellings. New mixed-fuel, single-family dwellings shall be required to meet a Total Energy Design Rating (EDR) margin of 9.5 as defined by the

2019 California Energy Code. In addition, the electrical system design shall provide capacity for a future retrofit to facilitate the installation of all electric appliances. This includes capacity and space at the electrical service panel, pre-wiring and installed circuit breakers for the following appliances:

- 1) heat-pump water heater;
- 2) induction stove top and oven;
- 3) electric clothes dryer; and
- 4) heat-pump for code-required comfort heating.

(b) New low-rise multifamily dwellings. New mixed-fuel, low-rise multifamily dwellings shall be required to meet a Total Energy Design Rating (EDR) margin of 10 as defined by the 2019 California Energy Code. In addition, the electrical system design shall provide capacity for a future retrofit to facilitate the installation of all electric appliances. This includes capacity and space at the electrical service panel, pre-wiring and installed circuit breakers for the following appliances:

- 1) heat-pump water heater (if applicable);
- 2) induction stove top and oven;
- 3) electric clothes dryer (if applicable); and
- 4) heat-pump for code-required comfort heating.”

SECTION 2. Express Findings.

As required by Health and Safety Code sections 17958.7, 18941.5 and 18942, the City Council of the City of Davis hereby expressly finds that the above amendment to the California Building Standards Code is necessary for the protection of the public health, safety and welfare, due to the local climatic, geological or topographical conditions.

The amendment is justified by all of the following conditions:

Express Finding #1: Climatic

The effects of climate change are increasingly self-evident, and costly. Hurricanes wildfires and other natural disasters take many lives and cost billions of dollars. Across the globe, higher temperatures are contributing to record heat waves and droughts, rising sea levels, more intense storms, wildfires, and floods. Climate change is the fundamental design problem of our time. The burning of fossil fuels used in the generation of electric power and heating of buildings is a significant contributor to greenhouse gas (GHG) emissions and consequently climate change.

In Davis, climate can have a significant effect on fire behavior and other major emergency events because it cannot be controlled. The drying out of wildland fuels in the summer months allows for easy ignition. The combustible weeds on vacant urban lots coupled with windy conditions are a recipe for disaster. The Sacramento region has extreme variations in weather patterns. Summers are arid and warm, while winters are cool to freezing but without snowfall. Fall and spring can bring any combination of weather pattern together. The doubling of average rainfall called an “El Nino” event has occurred from time to time, and causes the grass to mature and grow in excess of six feet high before it dries out. Ten square feet of this type of wildland fuel is

equivalent to the explosive force of one gallon of gasoline. Average yearly rainfall for the City is approximately 17.87 inches. This rainfall normally occurs from October to April. Low-level fog (tulle-fog) is present throughout the winter months, which brings visibility to almost zero feet. The fog delays emergency responders. The fog can also cause freezing and slick roadways. During the summer months there is generally no measurable precipitation. Temperatures for this dry period range from 70 to 112 degrees F and are frequently accompanied by light to gusty Delta winds. The relative humidity during the summer months range from 2 to 30 mm HG, which is classified as arid. Extreme heat days are increasing significantly, especially in the Central Valley. Hotter temperatures lead to more smog, which can damage lungs, increase childhood asthma, and cause respiratory/heart disease and death. Certain segments of the population are at greater risk, including the elderly, infants, persons with chronic heart or lung disease, people who can't afford air conditioning, and those who work outdoors. The failure to address and significantly reduce GHG emissions will exacerbate the aforementioned conditions.

Express Finding #2: Geological

The City of Davis is subject to ground tremors from seismic events, as the City is located in Seismic Design Category D, which relates to a high risk of earthquakes. The elimination of natural gas appliances in new dwellings would reduce the hazards associated with gas leaks during seismic events. Large portions of the City of Davis have very poor soil conditions. The soil is often expansive in nature and very acidic which leads to pre-mature deterioration of plumbing piping installed in the ground. Although non-metallic gas pipe is not susceptible to deterioration, there are many homes built with metallic gas pipe infrastructure.

Express Finding #3: Topographical

The City of Davis is located in the center of the Sacramento Valley, which has among the worst air quality in the nation according to the U.S. Environmental Protection Agency. Much of this air quality problem is created by the surrounding hills trapping pollutants locally. In particular, inversion events, where cold air is trapped below warmer air during the winter months, are a unique aspect of the local topography, and cause worse ambient air quality. In turn, these events cause residents to spend more time indoors to avoid the pollution and colder temperatures. During the winter, homes with appliances that are powered by fossil fuel combustion, a by-product of which is carbon monoxide, are more polluted than homes served solely by electricity. Thus, minimizing the combustion of fossil fuels and the associated pollution that is trapped by inversion events is necessary to protect public health, safety, and welfare due to local topographic conditions.

In regard to emergency response in fire events, the City's topography includes open space, drainage canals, freeways and railroad tracks. Traffic has to be channeled around several of these topographical features and limitations, which creates traffic congestion and delays in emergency response. These features are located between the Fire Stations located within the City of Davis. Heavy traffic congestion on the City streets already acts as a barrier to timely response for fire and emergency vehicles. In the event of an accident or other emergency at one of the key points of intersection between a road and freeway, sections of the City could be isolated or response times could be sufficiently slowed so as to increase the risk of injury or

damage. Mixed-fuel homes exacerbate the risk of fire events due to natural gas leaks and by contributing to climate change.

SECTION 3. In accordance with CEQA Guidelines Section 15308, adoption of this Ordinance is categorically exempt from CEQA, because it imposes stricter energy efficiency requirements and is a regulatory action authorized by state law and intended to protect the environment.

SECTION 4. If any section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council hereby declares that it should have adopted the ordinance and each section, subsection, sentence, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses or phrases be declared invalid or unconstitutional.

SECTION 5. The City Clerk is hereby directed to file a copy of this ordinance with the California Building Standards Commission of the State of California.

SECTION 6. This ordinance shall take effect and be in full force upon approval by the California Energy Commission.

SECTION 7. The City Clerk shall certify to the adoption of this ordinance and shall cause a summary thereof to be published at least five (5) days prior to the meeting at which the proposed ordinance is to be adopted and shall post a certified copy of the proposed ordinance, and within fifteen (15) days of its adoption, shall cause a summary of it to be published, including the vote for and against the same, and shall post a certified copy of the adopted ordinance, in accordance with California Government Code Section 36933.

INTRODUCED on the 24th day of September, 2019, and PASSED AND ADOPTED by the City Council of the City of Davis on this 8th day of October, 2019, by the following vote:

AYES: Arnold, Carson, Frerichs, Partida, Lee

NOES: None

Brett Lee
Mayor

ATTEST:

Zoe S. Mirabile, CMC
City Clerk