

## DOCKETED

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**CITY OF SAN MATEO  
ORDINANCE NO. 2016-5**

**AMENDING TITLE 23 BUILDING AND CONSTRUCTION OF THE SAN MATEO  
MUNICIPAL CODE TO ADOPT THE CALIFORNIA ENERGY CODE, 2016 EDITION AS A  
NEW CHAPTER 23.24 AND TO ADOPT LOCAL AMENDMENTS TO THE ENERGY CODE  
AND RELATED FINDINGS**

WHEREAS, the California Energy Code, 2016 Edition, Title 24, Part 6 of the California Code of Regulations has been released by the State and needs to be adopted by local jurisdictions; and

WHEREAS, the City's Climate Action Plan recommended that the City review local amendments to the Energy Code to promote increased energy efficiency and the use of renewable energy sources; and

WHEREAS, the City has completed an analysis and has determined that the requirements of the local amendments to the Energy Code would provide a positive cost benefit to new construction within the City of San Mateo.

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF SAN MATEO DOES  
ORDAIN AS FOLLOWS:

**Section 1.** Chapter 23.24, Energy Code, is hereby incorporated to adopt California Energy Code, 2016 Edition with Local Amendments to read:

**Chapter 23.24 – Energy Code**

Sections:

23.24.010	Adoption
23.24.020	Local Amendment for Cool Roofs
23.24.030	Local Amendment for Mandatory Solar Installations
23.24.040	Infeasibility Exemption

**Section 23.24.010 ADOPTION.**

(a) The Building Energy Efficiency Standards for Residential and Non-residential Buildings, 2016 Edition, Title 24, Part 6 of the California Code of Regulations, as adopted and amended by the State of California, hereinafter called "Energy Code," are adopted as the rules, regulations and standards within this City as to all matters therein except as hereinafter modified or amended;

(b) One copy of the Energy Code shall at all times be kept on file in the office of the City Clerk.

**Section 23.24.020 LOCAL AMENDMENT FOR COOL ROOFS**

Section 110.8(i)1, Mandatory Requirements for Insulation, Roofing Products and Radiant Barriers is amended as follows:

1. The requirements of Section 110.8(i)1 supersede the thermal emittance and aged solar reflectance requirements of Sections 140.1, 140.2, 140.3(a)1, 141.0(b)2B, 150.1(c)11, 150.2(b)1H or 150.2(b). A roofing product's thermal emittance and an aged solar reflectance shall be certified and labeled according to the requirements of Section 10-113, and meet the following requirements:

- i. Non- Residential Buildings:

- a. Low-sloped roofs shall have:

1. A minimum aged solar reflectance of 0.70 and a minimum thermal emittance of 0.85; or
2. A minimum Solar Reflectance Index (SRI) of 85.

**Exception 1:** Roof constructions that have thermal mass with a weight of at least 25 lb/ft<sup>2</sup> over the roof membrane are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.

**Exception 2:** An aged solar reflectance less than 0.70 is allowed provided the maximum roof/ceiling U-Factor in Table 140.3-B is not exceeded.

- ii. High-rise residential buildings and hotels and motels:

- a. Low-sloped roofs shall have:

1. A minimum aged solar reflectance of 0.70 and a minimum thermal emittance of 0.85; or
2. A minimum Solar Reflectance Index (SRI) of 85.

**Exception 1:** Roof constructions that have thermal mass with a weight of at least 25 lb/ft<sup>2</sup> over the roof membrane are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.

**Exception 2:** Roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels is exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.

- iii. Low-rise residential buildings with low-sloped roofs shall have a minimum aged solar reflectance of 0.70 and a minimum thermal emittance of 0.85 or a minimum SRI of 85.

**Exception 1:** Roof constructions that have thermal mass over the roof membrane with a weight of at least 25 lb/ft<sup>2</sup> are exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.

**Exception 2:** Roof area covered by building integrated photovoltaic panels and building integrated solar thermal panels is exempt from the minimum requirements for solar reflectance and thermal emittance or SRI.

## **Section 23.24.030 LOCAL AMENDMENT FOR MANDATORY SOLAR INSTALLATIONS**

Subchapter 2 – All Occupancies – Mandatory Requirements for the Manufacture, Construction and Installation of Systems, Equipment, and Building Components is amended to include:

- A. Solar photovoltaic systems shall be installed on both non-residential and residential building types as follows:
1. Non- Residential Buildings:
    - a. New non-residential buildings with less than 10,000 square feet of gross floor area shall provide a minimum of a 3 kilowatt photovoltaic system.
    - b. New non-residential buildings greater than or equal to 10,000 square feet of gross floor area shall provide a minimum of a 5 kilowatt photovoltaic system.
  2. Residential Buildings:
    - a. New single-family buildings, including townhomes and duplexes, shall provide a minimum of a 1 kilowatt photovoltaic system.
    - b. New multi-family buildings containing between 3 and 16 units shall provide a minimum of a 2 kilowatt photovoltaic system.
    - c. New multi-family buildings containing 17 or more units shall provide a minimum of a 3 kilowatt photovoltaic system.

**Exception to Section A:** As an alternative to a solar photovoltaic system, all of the building types listed above may provide a solar hot water system (solar thermal) with a minimum collector area of 40 square feet.

## **Section 23.24.040 INFEASIBILITY EXEMPTION**

- A. Exemption. If an applicant for a Covered Project believes that circumstances exist that make it infeasible to meet the requirements of this Chapter, the applicant may request an exemption as set forth in Section 23.06.015 of the Municipal Code. In applying for the exemption, the burden is on the Applicant to show infeasibility.

**Section 2.** The Council adopts the findings for the local amendments to the California energy Code, 2016 Edition, attached hereto as Exhibit A and incorporated herein by reference.

**Section 3.** If any section, subsection, clause or phrase of this Ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portion or sections of the Ordinance. The 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 held invalid.

**Section 4.** The Council finds that this project is exempt from the provisions of the California Environmental Quality Act (“CEQA”), pursuant to Section 15601 of the CEQA Guidelines, because it

## Exhibit A

### FINDINGS FOR LOCAL AMENDMENTS TO CALIFORNIA ENERGY CODE, 2016 EDITION

Section 17958 of the California Health and Safety Code provides that the City may make changes to the provisions in the uniform codes that are published in the California Building Standards Code. Sections 17958.5 and 17958.7 of the Health and Safety Code require that for each proposed local change to those provisions in the uniform codes and published in the California Building Standards Code which regulate buildings used for human habitation, the City Council must make findings supporting its determination that each such local change is reasonably necessary because of local climatic, geological, or topographical conditions.

Local building regulations having the effect of amending the uniform codes, which were adopted by the City prior to November 23, 1970, were unaffected by the regulations of Sections 17958, 17958.5 and 17958.7 of the Health and Safety Code. Therefore, amendments to the uniform codes which were adopted by the City Council prior to November 23, 1970, and have been carried through from year to year without significant change, need no required findings. Also, amendments to provisions not regulating buildings used for human habitation, including amendments made only for administrative consistency, do not require findings.

<b>Code: California Energy Code</b>					
Section(s)	Title	Add	Deleted	Amended	Justification (See below for keys)
Subchapter 2, Section 110.8(i)1	Mandatory Requirements for Insulation, Roofing Products, and Radiant Barriers – Roofing Products Solar Reflectance and thermal Emittance	✓		✓	A, B
Subchapter 2, Section 110	Mandatory Requirements for the Manufacture, Construction and Installation of Systems, Equipment, and Building Components	✓			A

## Key to Justification for Amendments to Title 24 of the California Code of Regulations

- A. This amendment is justified on the basis of a local climatic condition. Failure to address and significantly reduce greenhouse gas (GHG) emissions could result in rises in sea level, including in San Francisco Bay, that could put at risk City homes and businesses, public facilities, and Highway 101 (Bayshore Freeway), particularly the mapped Flood Hazard areas of the City. Energy efficiency and the use of renewable energy sources are key components in reducing GHG emissions, and construction of more energy efficient buildings with dedicated renewable energy installations can help the City of San Mateo reduce its share of the GHG emissions that contribute to climate change. The burning of fossil fuels used in the generation of electric power and heating of buildings contributes to climate change, which could result in rises in sea level, including in San Francisco Bay, that could put at risk City homes and businesses, public facilities, and Highway 101. Due to decrease in annual rain fall, the City experiences the effect of drought and water saving more than some other communities in California. Cool roofs reduce the urban heat island effect, and may significantly reduce local San Mateo temperatures if cool roofs are installed on a significant number of properties.
- B. 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 Chapter 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.

can be seen with certainty that there is no possibility that the amendments herein adopted will have a significant effect on the environment.

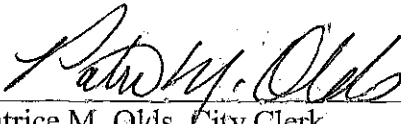
**Section 5.** This ordinance shall be effective on the commencement of the thirty-first day after the date of its adoption or upon the effective date of the California Energy Code, 2016 Edition, whichever comes latter.


**Section 6.** This Ordinance was introduced on May 16, 2016 and adopted on June 6, 2016 and shall be effective thirty days after its date of adoption.

The foregoing ordinance was adopted by the City Council of the City of San Mateo, State of California by the following vote:

AYES: Council Members Goethals, Lim, Bonilla, Freschet and Papan  
NOES: None  
ABSENT: None

ATTEST:

  
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Patrice M. Olds, City Clerk

  
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Joe Goethals, Mayor