

ORDINANCE NO. 3492

**ORDINANCE OF THE MARIN COUNTY BOARD OF SUPERVISORS
AMENDING SECTION 19.04.100 ADOPTING ENERGY EFFICIENCY STANDARDS FOR
SINGLE FAMILY DWELLINGS**

THE BOARD OF SUPERVISORS OF THE COUNTY OF MARIN DOES HEREBY ORDAIN
AS FOLLOWS:

SECTION I. Background and Purpose.

In October 2002 the Marin County Board of Supervisors amended the County Building Code to establish local energy efficiency requirements for single family dwellings 3,500 square feet and larger (Ordinance 3356; Code Section 19.04.100). In November 2007 the Marin County Board of Supervisors adopted the Marin Countywide Plan which established goals, policies and programs for reducing greenhouse gas emissions in Marin County including increased energy efficiency requirements for single family dwellings. The residential building sector accounts for 24% of Marin's total greenhouse gas emissions, 49% of Marin's electricity use, and 71% of Marin's natural gas use.

All single family dwellings must meet or exceed the energy requirements contained in the 2005 California Building Energy Efficiency Standards including California Code of Regulations, Title 24, Parts 1 and 6 (the "Current Standards"). This ordinance requires the application of the Current Standards, including but not limited to the definitions, procedures, forms, manuals and alternative calculation methods ("ACM's") associated with the Current Standards.

The purpose of this ordinance is to set minimum energy efficiency standards for single family dwellings in Marin County that exceed the State's Current Standards in order to help meet the energy efficiency and greenhouse gas emissions reduction goals of the County. This ordinance requires all new single family dwellings, additions and substantial remodels resulting in a conditioned floor area of 1,500 square feet or greater, unless exempt under specific provisions of this ordinance, to exceed the Current Standards by 15% or greater. Applicable residential projects less than 4,500 square feet are required to verify a minimum 15% greater energy efficiency while applicable residential projects 4,500 square feet or greater are required to verify an increasing degree of energy efficiency greater than 15%, as specified in this ordinance, in order to achieve energy efficiency performance comparable to that of a smaller residential project. Single family dwellings less than 1,500 square feet have relatively small energy and other resource requirements and, thus, are not subject to the requirements of this ordinance. Additionally, residential second units up to 750 square feet and affordable housing dwellings approved by the Director are exempted from the requirements of this ordinance.

SECTION II. Energy Efficiency Standards For Single Family Dwellings.

Section 19.04.100 of the Marin County Code is hereby amended to read as follows:

19.04.100 Energy Efficiency Standards for Single Family Dwellings.

A. Definitions

For the purposes of this section, the following definitions shall apply:

Current Standards. The 2005 California Building Energy Efficiency Standards including California Code of Regulations, Title 24, Parts 1 and 6.

Solar Photovoltaic Energy System. A photovoltaic solar collector or other photovoltaic solar energy device that has a primary purpose of providing for the collection and distribution of solar energy for the generation of alternating current rated peak electricity. The installation of any solar photovoltaic energy system must meet all installation criteria of the current edition of the California Electrical Code and the California Energy Commission *Guidebook Eligibility Criteria and Conditions for Incentives for Solar Energy Systems Senate Bill 1*.

Photovoltaic (PV) Credit. A TDV Energy credit that may be used to achieve compliance with the requirements of this section. This credit is available if the solar photovoltaic energy system is capable of generating electricity from sunlight, supplying the electricity directly to the building, and the system is connected, through a reversible meter, to the utility grid. The methodology used to calculate the energy equivalent to the photovoltaic credit shall be the CECPV Calculator, using the most recent version prior to the permit application date, which may be found at the following web site:

http://www.gosolarcalifornia.ca.gov/nshpcalculator/download_calculator.html

Alternative Proposed Design Credit. An energy credit for alternative energy system designs that may be used to achieve compliance with the requirements of this section subject to approval by the Chief Building Official and the Director of the Marin County Community Development Agency. Alternative energy system designs may include, but are not limited to, any renewable energy system which is not a solar photovoltaic system and any energy-efficiency measures not included in the Title 24 performance analysis which significantly exceed current building practice or applicable minimum state or federal efficiency standards. The permit applicant must submit calculations to document, explain and justify the amount of the credit claimed.

B. Covered Projects.

The provisions of this section shall apply to the following types of building projects for which a building permit is applied for and accepted as complete by the Building and Safety Division after the effective date of this section:

1. New single family dwellings resulting in a total dwelling size of 1,500 square feet or greater of total conditioned floor area.
2. Additions to single family dwellings resulting in a total dwelling size of 1,500 square feet or greater of total conditioned floor area and where Title 24 energy performance documentation is submitted which uses the Existing + Addition or Existing + Addition + Alteration calculation method.

3. Substantial remodels, as defined in this code, to single family dwellings resulting in a total dwelling size of 1,500 square feet or greater of total conditioned floor area and where Title 24 energy performance documentation is submitted which uses the Existing + Alteration or Existing + Addition + Alteration calculation method. (For the purposes of this section, the terms "remodel" and "alteration" are synonymous.)

C. Exemptions.

The following types of building projects shall be exempt from this section:

1. Residential second units of 750 square feet or less.
2. Affordable housing dwellings approved by the Agency Director.

D. Compliance.

A building permit subject to the provisions of this section will not be issued by the Building and Safety Division unless the energy compliance documentation submitted with the permit application meets the requirements of this section. A certificate of occupancy will not be granted until a Certificate of Field Verification and Diagnostic Testing (CF-4R) for the permitted project is submitted to the Building and Safety Division when applicable. A certificate of occupancy will not be granted unless the work authorized under a permit has been constructed in accordance with the approved plans, conditions of approvals and requirements of this section.

E. General Requirements.

1. All single family dwellings subject to the provisions of this section shall exceed the Current Standards using the performance approach by the percentage (%) indicated in the Compliance Table corresponding to the dwelling's resultant total conditioned floor area and applicable Climate Zone.

Compliance Table		
Dwelling Size ¹ (Total Conditioned Floor Area)	Buildings in Climate Zone 2 Must Exceed the Current Standards by:	Buildings in Climate Zone 3 Must Exceed the Current Standards by:
1,500 - 4,499 SF	15.0%	15.0%
4,500 – 5,499 SF	17.5%	15.0%
5,500 – 6,499 SF	30.0%	27.0%
6,500 – 7,499 SF	37.0%	33.5%
7,500 – 8,499 SF	43.0%	39.5%
8,500 – 9,499 SF	47.5%	44.0%
9,500 – 10,499 SF	51.5%	48.0%
10,500 – 11,499 SF	55.0%	51.5%
11,500+ SF	57.5%	54.0%

Note 1: All additions and/or substantial remodels in dwellings with a total conditioned floor area of 1,500 square feet or greater, and where compliance with the Title 24 Standards uses the Existing + Addition + Alteration performance method, shall meet the requirements of the Compliance Table.

2. New single family dwellings subject to the provisions of this section shall meet both of the following:
 - a. Exceeding the Current Standards, as specified in the Compliance Table, using the performance compliance approach; and,
 - b. Meeting all other provisions applicable to low-rise residential buildings contained in the Current Standards.
3. Additions and/or alterations to single family dwellings subject to the provisions of this section shall meet one of the following requirements:
 - a. The addition and /or alteration shall comply with subsection E.2.; or,
 - b. The energy efficiency of the existing building shall be improved so that the existing building plus the addition and/or alteration meet the requirements listed in the Compliance Table.
4. A building project may use the Photovoltaic Credit and/or the Alternative Proposed Design Credit to meet the requirements of subsection E.1. if the proposed building exceeds the Current Standards using the performance compliance approach by at least 15.0%.
5. In addition to the standard Title 24 report and when a permit applicant is applying for Photovoltaic Credit or an Alternative Proposed Design Credit, a special compliance and calculation form, which shall be available at the Community Development Agency, documenting compliance with the provisions of this section shall be submitted with the building permit application and included on all plan sets with the CF-1R.
6. HERS field verification and diagnostic testing. All buildings, additions, and remodels subject to the provisions of this section shall be field verified, by a certified HERS rater when required by the Current Standards. Verification shall be in accordance with protocols established in the Residential Field Verification and Diagnostic Testing Regulations Manual. A CF-4R, when required by the Current Standards, shall be submitted to the Building and Safety Division to demonstrate compliance prior to issuance of a certificate of occupancy.

F. Modifications.

Whenever there are practical difficulties involved with carrying out the literal provisions of this Section; the Building Official, in consultation with the Community Development Agency Director, shall be authorized to grant modifications for individual cases, upon application by the owner or owner's representative, provided that the Building Official determine the requested modification is in compliance with the intent and purpose of this section.

SECTION III. Findings Pursuant to Public Resources Code section 25402.2 and Health and Safety Code sections 17958.5, 17958.7 and 18941.5.

To the extent the requirements of this ordinance are deemed to constitute changes or modifications to the requirements of the California Building Standards Code and the other regulations adopted pursuant to Health and Safety Code section 17922, this Board of Supervisors expressly finds that the provisions of this ordinance are reasonably necessary because of local climatic, geological, or topographical conditions as follows:

Marin County has two Title 24 climate zones and 24 microclimates. During periods when arctic masses dominate the weather, nighttime lows drop into the high twenties with daytime highs in the thirties. In climate zone three (Coastal and certain bay areas), fog is a consistent weather pattern that creates a demand for heating even during summer months. In addition, climatic conditions in Kentfield (Climate Zone 2) result in 2774 "heating degree days."

The Average Maximum temperature is over 80°F for the months of June, July, August and September, and during the summer it is not uncommon for temperatures to reach 100°F in some parts of Marin. Climatic conditions in Kentfield (Climate Zone 2) result in 441 "cooling degree days".

The average house size in Marin is getting larger and using more energy. During the 1970s most home construction was approximately 1,500-2,500 square feet. In the years 1998 through 2001 average house size construction continued to rise to approximately 3,000 - 4,000 square feet. These large houses are using more energy and resources.

Due to local climatic conditions and increasing house size, total residential energy consumption increased from 619 million kWh to 734 million kWh from 1995 to 2000. This 18.5% increase in energy use raises the per capita contribution of costly uncertain energy supplies, pollution, and global warming. Due to local climatic conditions, it is reasonably necessary to enhance the State of California energy code requirements for homes 1,500 square feet or greater.

SECTION IV. Efforts to Enhance Local Compliance.

Given that the purpose of this ordinance is to adopt stricter local energy efficiency standards for the construction of residential buildings within Marin County, the Board of Supervisors recognizes that the adoption of new standards without additional education and training for County staff responsible for enforcement of the standards can diminish compliance and potentially undermine the efficacy of this ordinance. Therefore, in order to ensure greater compliance and enforcement of the applicable energy efficiency standards, to better equip building department staff, and to provide a greater resource to the County's building community, the County will seek out additional education and training opportunities for building department staff in the areas of energy standards, building energy technology and energy code implementation.

SECTION V. Severability.

If any section, subsection, subdivision, paragraph, sentence, clause or phrase of this ordinance, or any part thereof is for any reason held to be unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this ordinance or any part thereof. The County Board of Supervisors hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase of this ordinance irrespective of the fact that one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional or invalid or effective.

SECTION VI. Effective Date.

This ordinance shall be and is hereby declared to be in full force and effect as of thirty (30) days from and after the date of its passage, or on the date this ordinance is approved by the California Energy Commission, whichever is later. This ordinance shall be published once before the expiration of fifteen (15) days after its passage, with the names of the supervisors voting for and against the same in the *Marin Independent Journal*, a newspaper of general circulation published in the County of Marin.

PASSED AND ADOPTED at a regular meeting of the Board of Supervisors of the County of Marin held on this 3rd day of June, 2008 by the following vote:

AYES: SUPERVISORS Steve Kinsey, Harold C. Brown, Jr., Judy Arnold,
Susan L. Adams, Charles McGlashan

NOES: NONE

ABSENT: NONE



PRESIDENT, BOARD OF SUPERVISORS

ATTEST:



CLERK