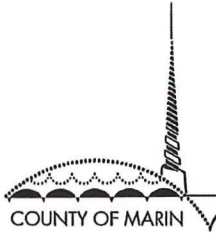


<b>DOCKETED</b>	
<b>Docket Number:</b>	22-BSTD-07
<b>Project Title:</b>	Local Ordinance Applications Exceeding the 2022 Energy Code
<b>TN #:</b>	248488-2
<b>Document Title:</b>	Marin County - 2022 Staff Report
<b>Description:</b>	Plain text of the Marin County 2022 staff report
<b>Filer:</b>	Danuta Drozdowicz
<b>Organization:</b>	California Energy Commission
<b>Submitter Role:</b>	Commission Staff
<b>Submission Date:</b>	1/20/2023 8:12:21 PM
<b>Docketed Date:</b>	1/23/2023



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November 15, 2022

Honorable Board of Supervisors  
Marin County Civic Center  
San Rafael, CA 94903



**SUBJECT:** Proposed Ordinance to amend Chapter 19.04 Subchapter 2 - Green Building Requirements and Chapter 19.07 - Carbon Concrete Requirements of Title 19 of Marin County Code, including local amendments to the 2022 California Green Building Standards Code.

Dear Supervisors:

**RECOMMENDATION:** Consider amending the Building Code updating the County’s green building and low carbon concrete requirements by taking the following actions:

1. Conduct public hearing
2. Consider adopting proposed ordinance with an effective date of January 1, 2023

**BACKGROUND:** On October 18, 2022, your Board conducted a first reading of the attached ordinance and scheduled a public hearing for November 15, 2022.

The County has required construction in the unincorporated area to comply with a range of green building and energy efficiency requirements since 2002. In October 2019, your Board adopted an updated Green Building Ordinance (Ord. No. 3712) that recognized the greenhouse gas (GHG) emission disparities between buildings fueled by electricity and buildings fueled by natural gas. This was a result of the availability of renewable and GHG-free electricity serving the County, and the high emissions associated with natural gas extraction, distribution, and combustion. The 2019 Green Building Ordinance supported local GHG reduction goals by encouraging all-electric buildings and requiring additional energy efficiency for new construction buildings that use natural gas. The goal of the ordinance was to act as an on-ramp for more all-electric construction and to increase contractors’ familiarity with all-electric technologies.

Title 24 of the California Code of Regulations contains the California Building Standards Code (also referred to herein as “Building Code”), which governs the design and construction of buildings, associated facilities, and equipment in the state. California updates these requirements every three years with the next iteration, the 2022 Building Code cycle, going into effect on January 1,

2023. This ordinance proposes to continue the County's progress towards electrification by adopting local amendments to the Building Code that shift from the current local amendments that incentivize electrification to requiring that all new construction be all-electric. This ordinance also includes stronger energy efficiency requirements for additions, alterations, and remodels and will assist the County in achieving its GHG reduction, energy savings, and environmental protection goals.

State law authorizes local agencies to enact local amendments to the State Building Code that go beyond state standards if reasonably necessary because of local climatic, geological, or topographical conditions (Health and Safety Code sections 18941.5 and 17958.7). As of August 2022, 60 California jurisdictions (including the cities of Fairfax, San Anselmo, Petaluma, Contra Costa County, Santa Clara County, Oakland, San Jose, and San Francisco) have adopted ordinances enacting local amendments to the State Building Code by requiring all-electric buildings for new construction.

**PROPOSED ORDINANCE:** The proposed ordinance includes five notable changes related to the County's current green building and low carbon concrete requirements:

1. **All new construction projects will be required to be all-electric (residential, multifamily, and commercial).** (Section 19.04.125 and Section 19.04.140, Standards of Compliance) This change would replace the "electric-preferred" pathway requirement currently in effect for new construction and anticipates market and policy trends across the State while continuing progress towards decarbonizing the built environment. For comparison, minimum standards under the State's 2022 Building Code, require all new residential projects to include either electric space heating or electric water heating. While this is a strong step towards electrification, it misses the opportunity for projects in Marin to fully benefit from the construction savings now that can come from eliminating the need to plumb and meter for new gas infrastructure, or the possible removal of existing infrastructure in the near future.
2. **Existing single family residences undergoing additions or alterations, will be required to implement additional energy efficiency and electrification measures beyond the State code.** (Section 19.04.130 and Section 19.04.140, Standards of Compliance) Additional energy savings are achieved through a performance compliance pathway recently developed by the State. The Flexible Compliance path is a points-based system allowing homeowners and contractors to select from a comprehensive menu of energy efficiency and electrification measures that are appropriate for the scope of their

project. This requirement applies to single family additions and alterations affecting 750 or more square feet, lowering the threshold level from the 1,200 square feet specified in the 2019 Green Building Code, a level that would effectively exempt Accessory Dwelling Units (ADUs) or Junior Accessory Dwelling Units (JADUs) which are typically smaller than 1,200 square feet. This ordinance lowers that threshold but includes specific language exempting ADUs and JADUs created as part of an addition or alteration.

The additional energy efficiency standards proposed for the single-family additions and alterations have been demonstrated to be cost-effective in modeling studies completed by the Statewide Reach Codes Program (Attachment 3).

3. **Requirement that all covered projects meet CALGreen Tier 1 standards.** This ordinance requires all projects including new construction and additions and alterations meet CALGreen Tier 1 standards except for electric vehicle (EV) charging infrastructure for certain building types as detailed in item 4 below.
4. **Requirements for electric vehicle (EV) infrastructure that exceed CALGreen standards.** The proposed ordinance requires that single and two-family residential and nonresidential new construction meet CALGreen Tier 1 standards. Only State minimum standards will be required for nonresidential grocery, retail or warehouses planning for off-street medium-heavy duty vehicles.

For multifamily residential new construction, EV standards will go above and beyond State standards by requiring the ability for 100% of units with parking spaces to have charging capabilities. Of the total parking spaces, 15% will be required to have Level 2 charging stations (i.e., network charging stations that plug into a car) and 85% will require low-power level 2 EV Ready receptacles (i.e., 240-volt outlet that a car's charging cable can plug into).

For additions and alterations, EV standards for single-family projects meet CALGreen Tier 1 standards. State minimum and CALGreen Tiered standards exists for multifamily residential and nonresidential projects being remodeled. However, the State standards miss the opportunity to maximize this moment when parking lot surfaces and/or service panels are upgraded. By requiring the installation of EV infrastructure at time of parking lot upgrades, developers can fully benefit from construction savings and install valuable amenities for their occupants. In response, additions and alterations for multifamily

residential and all nonresidential projects in the county will go above and beyond State standards while improving upon previously adopted standards by requiring the following:

- (i) If the service panel is modified: add designated electrical capacity so that 20% of onsite parking spaces can be Level 2 EV Ready.
- (ii) If the parking lot surface is modified (paving material and curbing removed):
  - Add conduit (aka raceway) to a minimum of 50% of exposed parking spaces, OR
  - Add conduit to a minimum of 20% of exposed parking spaces and install at minimum 5% EVCS to parking spaces requiring any combination of Level 2 and Direct Current Fast Charging, except at least one Level 2 charger shall be provided.

5. **Marin's 2019 low carbon concrete (LCC) building code will be augmented and compliance forms updated.** The cement industry has improved its technology and will soon distribute Portland Lime Cement, a binding material that is estimated to reduce GHG emissions 10% compared to the industry standard, Portland Cement (ASTM C150). Chapter 19.07 of Marin County Code will be amended to allow Portland Lime Cement as a standard as per ASTM C595.

**COMMUNITY ENGAGEMENT:** From September 2021 to September 2022, the Sustainability Team implemented a comprehensive community engagement strategy. The team engaged and garnered feedback from City, Town, and County staff; community-based organizations including environmental, affordable housing, senior/aging-in-place, and equity priority advocates; building community including developers, architects, realtors, contractors and Marin Builders Association; utilities including MCE and PG&E; and Town and City commission, subcommittee, and City Council members.

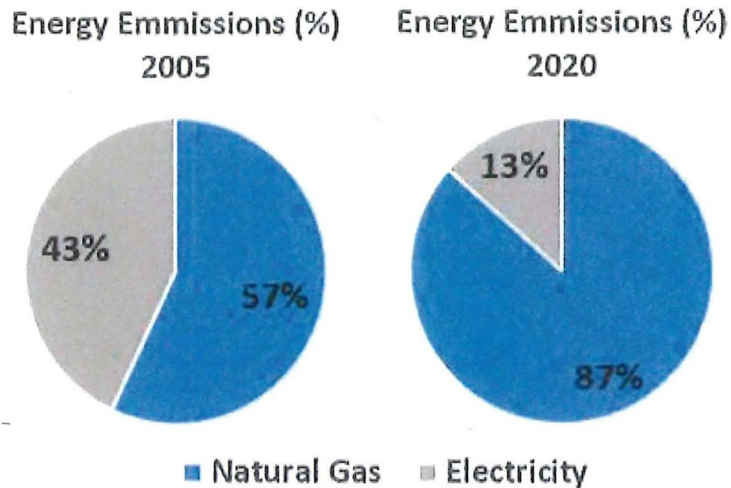
The year was highlighted by formal engagements with key stakeholders including (i) five monthly technical working meetings consisting of City and Town building officials and planners, (ii) one public community workshop, and (iii) three focus group workshops with the wide swath of community members mentioned above.

These engagements culminated in a model reach code recommendation that nearly mirrors the building code herein. The model served as a prototype in which other City and Town policy makers can use to adopt similar codes; whole or in-part. The model was also reflected back to the community. Comments on the model were publicly solicited through all outreach channels

(e.g., partner organization listservs, presentations, newsletters, and social media). Feedback was collected via an online survey as summarized in Attachment 4.

**CLIMATE IMPACT:** The proposed standards support the County’s climate and sustainability goals by recognizing the greenhouse gas (GHG) emission disparities between buildings fueled by electricity and buildings fueled by natural gas. This is a result of renewable and GHG-free electricity serving the County, and the high emissions associated with natural gas extraction, distribution, and combustion. GHG emissions from electricity use in buildings are already on the decline, thanks to the State’s renewable portfolio standard, local solar installations, and energy efficiency efforts. However, as we have cleaned the electric grid, the share of emissions in the built environment has shifted significantly to natural gas (Figure 1). Recent studies show that natural gas not only leads to more emissions from its burning in the household, but can also leak directly from stoves, pipes, and fittings. Electrifying our buildings can result in reduced GHG emissions and much improved indoor air quality.

**Figure 1. 2005 Versus 2020 Marin Countywide Building Emissions by Source**



**EQUITY IMPACT:** While dramatically reducing GHG emissions is imperative, implementation of emissions reduction measures must also ensure that no communities are unfairly impacted nor are left behind in accessing benefits. Through the development process, the County met with multi-family developers, contractors, and community-based organizations representing seniors, affordable housing advocates, and equity/frontline communities. The proposed ordinance seeks to balance our ambitious climate, housing, and equity priority obligations.

To encourage and facilitate the creation of new housing units within existing homes, the proposed ordinance for additions and alterations exempts attached ADUs and JADUs from additional energy measures so long as they are creating new units of housing for independent living. However, staff will continue to identify opportunities for these projects to voluntarily adopt these measures because the improvements will benefit occupants. Additionally, to minimize the impact of the proposed renovation ordinance on lower-income residents, the ordinance also includes an exemption for residents that qualify for either the California Alternative Rates for Energy (CARE) or Family Electric Rate Assistance (FERA) programs. Still, Electrify Marin program materials will be provided to educate individuals on the benefits and resources available for voluntary compliance.

To bring the benefits of zero-emission transportation to all Marin County residents, access to EV charging infrastructure in multi-family properties and in the community at large is needed. The proposed ordinance expands the requirements for EV readiness in commercial and multi-family properties beyond state minimum standards. It requires new construction projects to meet CALGreen Tier 1 standards and renovation projects, that involve parking lots, to include EV capable infrastructure. This will result in greater opportunities for EV charging stations needed in these spaces while balancing the potential development costs to affordable housing units and increased rents on market rate properties.

**IMPLEMENTATION AND NEXT STEPS:** The proposed policies seek to achieve progress towards Countywide Plan and Climate Action Plan goals while also recognizing the importance of developing policies that are clear, consistent, and achievable. The proposed ordinance sets a progressive standard for new and renovated buildings. It is simultaneously paired with ongoing work by the Sustainability Team to promote and provide financial incentives to property owners for energy efficiency and electrification renovations, such as through the Bay Area Regional Energy Network's Single-Family and Multi-Family programs and Electrify Marin. Together with the green building ordinance, these programs provide opportunities for all buildings to reduce their carbon footprint, save money, and support a healthier built environment across Marin County.

In addition to these voluntary incentive programs, staff will continue to coordinate with Marin's cities and towns on developing programs and policies that address greenhouse gas emissions from our built environment including the development of a comprehensive implementation plan for electrifying all residential, commercial, and public buildings countywide.

To strive for consistency countywide, Sustainability Team staff has been and will continue to work with cities and towns to support their adoption of similar green building ordinances. The Team is currently working on providing appropriate collateral, including implementation guidelines and CALGreen checklists (see example in Attachment 2), to streamline implementation and

over-the-counter interactions between applicants and City, Town, and County staff. Collateral will be ready for use by January 1, 2023.

Lastly, during engagement with building and planning officials, one of the major challenges identified was having the staff capacity and knowledge to enforce. Tools may be developed to support city/town staff after adoption such as a closed peer resource channel (e.g., MS Teams, Slack, etc.) for Marin building officials, inspectors, and planners to interpret codes, ask each other for rapid insight to solve those challenging questions, document those questions, and help each other as they pertain to enforcing these unique codes. Additional tools will be considered and developed in partnership with City and Town staff.

The proposed Ordinance amends Chapter 19.04 Subchapter 2 (Green Building Requirements) and Chapter 19.07 (Carbon Concrete Requirements) of the Marin County Code Title 19 Building Code and sets the effective date as January 1, 2023, provided that the additional energy efficiency requirements of the Ordinance cannot be enforced by the County until it has further been approved by the California Energy Commission and California Building Standards Commission.

**FISCAL IMPACT:** This action does not impact the General Fund.

**REVIEWED BY:**

<input checked="" type="checkbox"/> County Administrator	<input type="checkbox"/> N/A
<input type="checkbox"/> Department of Finance	<input checked="" type="checkbox"/> N/A
<input checked="" type="checkbox"/> County Counsel	<input type="checkbox"/> N/A
<input type="checkbox"/> Human Resources	<input checked="" type="checkbox"/> N/A

**SIGNATURE:**



Brian Reyes  
Planner



William Kelley  
Deputy Director

**Attachments**

1. Ordinance Adopting Amendments to Marin County Code Title 19 (Building Code)
2. Example Marin County Green Building Requirement Checklists
3. Energy Cost-Effectiveness Studies
4. Summary of Survey Feedback on Model Reach Code
5. Public Comment