

COMMUNITY DEVELOPMENT AGENCY
PLANNING DIVISION

February 13, 2018

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Marin County Board of Supervisors
3501 Civic Center Drive
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SUBJECT: First reading of proposed updated Green Building Ordinance amending Marin County Code Title 19 (Building Code).

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Dear Supervisors,

RECOMMENDATION: Initiate an amendment to the Building Code updating the County's green building requirements by taking the following actions:

1. Read proposed Ordinance by title only.
2. Schedule a merit hearing for February 27, 2018.

SUMMARY: The County has been requiring residential projects to comply with green building and increased energy efficiency requirements since 2002. In 2010, the Board approved an overhaul of the Green Building Ordinance to expand the requirements for residential new construction, additions, and renovations, and to include commercial and multifamily projects. Best practices and available technologies have evolved since 2010 and this update incorporates new policies that will make new buildings in Marin more energy efficient, comfortable, and affordable to operate.

The proposed ordinance addresses four key areas:

- **Sustainability:** The County has had a reach code in place since 2002, meaning that new buildings, additions, and many remodels require energy efficiency and green building measures that exceed state requirements. Energy efficiency includes insulation, windows, lighting, and other energy saving measures to reduce the overall demand for electricity and/or natural gas in a building. Green building focuses on using environmentally-preferable materials, water use and waste reduction, indoor environmental quality, and project location and design. The proposed updates improve upon existing reach codes by adding options for solar-powered and all-electric buildings, expanding choices available to applicants. Residential standards for new construction have also been modified to require large new homes (greater than 4,000 square feet) to create as much electricity as they use annually by generating power on site, or comply with a comparable alternative. These code amendments keep the County one of the most advanced green building communities in the state.
- **Flexibility:** Multiple options for compliance are provided in the proposed standards. This is meant to give applicants the freedom to choose a compliance path that is best for their project, while simultaneously reducing staff time spent on issuing exemptions, as would be the case with a

prescriptive requirement (such as mandatory solar installation).

- **Clarity:** The existing Green Building Requirements Fact Sheet is five pages long, and while it includes the green building standards for every construction type, it could benefit from greater clarity around the process of satisfying the County’s green building requirements. The revised Green Building Guide will be only two pages, and is broken out into the following six versions:
 - Single- and Two-Family Residential – New Construction
 - Single- and Two-Family Residential – Alterations and Additions
 - Multifamily Residential – New Construction
 - Multifamily Residential – Alterations and Additions
 - Nonresidential – New Construction
 - Nonresidential – Alterations and Additions

Outlining the new requirements in a simpler format tailored to the specific project type will allow planning and building staff to provide more efficient guidance to applicants. The revised introduction will provide step-by-step guidance for applicants navigating the green building process. A checklist on the second page will allow applicants to identify their approach to compliance early in the planning process to ensure code compliance and maximize cost-effectiveness. The revised fact sheet will use clear, concise language to allow applicants to focus on meeting the requirements, rather than struggling to understand them.

- **Consistency:** The proposed ordinance has been developed with the goal of being adopted by multiple jurisdictions within the county. Staff met with the Marin Builders Association, and gathered feedback from individual builders and green raters to better understand existing constraints and desired changes. Countywide code consistency is a frequent request of the building community, who may struggle to comply with standards that change from city to city. County staff began meeting with city and town Planning Directors and Building Officials in 2016 to solicit feedback on desired components of an upgraded Green Building Ordinance that could be adopted by multiple jurisdictions. State and regional funding for the project allows County staff to support other cities in adopting these codes.

Primary changes of the proposed ordinance include:

- **Energy efficiency measures separated from green building measures.** Green building standards currently require submittal of a Green Point Rated (residential) or Leadership in Energy and Environmental Design (commercial) checklist demonstrating that the project has achieved the number of points required of their project. Categories in the checklists range from community measures, such as street-facing porches and proximity to a transit stop, to building performance and renewable energy measures, such as high efficiency windows or on-site solar. By measuring compliance with only a total number of points, the County’s current code allows applicants to under-achieve on measures in one category (such as energy efficiency) but make up the points in other areas. While the County wants to encourage broader green building measures, the reduction of energy use in new buildings is a key part of making homes more comfortable, cost effective, and less carbon

intensive. To address this ambiguity, the updated green building ordinance sets separate requirements for green building and energy efficiency, rather than bundling them as is done now. This clarifies the requirements for reducing energy use in new buildings.

- **Emphasis on performance vs prescriptive measures.** Stakeholders within local jurisdictions and the building community emphasized the need for flexibility in green building requirements. Mandatory solar ordinances have grown in popularity across California jurisdictions in recent years. This is often referred to as a prescriptive requirement, because it outlines a specific measure the applicant would need to complete. The proposed code amendments were developed with all of Marin County in mind, and many of our local geographies, such as shady valleys or large Redwood groves, are unsuitable for onsite solar. To increase applicability of the ordinance for multiple jurisdictions and geographies, these standards include performance energy efficiency standards, which allow applicants to meet more stringent requirements in the most efficient way for their property. While applicants can still get credit for installing solar, other pathways are available for those that can't or don't want to produce energy on site. This should reduce or eliminate the time needed for the applicant and local building officials to determine an appropriate alternative.
- **All electric building option for new construction.** Marin County's electricity generation are increasingly from renewable sources such as solar and wind power, and 100% renewable power is available for purchase from both MCE and PG&E. 100% renewable electricity does not have associated greenhouse gas emissions, which means that reducing the County's emissions from building energy use requires a focus on natural gas. Because there is not currently a commercially available renewable alternative to natural gas, attention has increasingly turned to reducing the need for natural gas in the first place.

The California Energy Commission develops software with each update of the State's building codes (Title 24) to measure compliance with statewide energy efficiency standards. Currently, this software "weights" energy sources (such as electricity and natural gas) differently, and consequently makes it difficult to comply with the state energy code when constructing an all-electric building where natural gas is available. The County is active in efforts to address these statewide barriers to all-electric buildings in future code cycles, in hopes that future software cycles will no longer favor natural gas. Recognizing the existing regulatory challenges to constructing all-electric buildings under the current energy code, and the importance of reducing emissions from natural gas use in the built environment, the County has included energy efficiency compliance options that allow applicants to meet (rather than exceed) state energy efficiency standards if the project is all electric.

- **Streamlined project tiers.** The existing Green Building Standards include five project size tiers identified by both square footage and project valuation. The inclusion of project valuation has led to different green building requirements for projects of essentially the same scope, as each project can have widely varying valuations depending on materials selected. Additionally, the granularity of the size tiers did not necessarily result in additional energy

savings or green building measures but added complexity to the application process. To resolve these issues, the proposed code is simplified to include a maximum of two tiers in each building sector.

- **Additional energy efficiency requirements for homes over 4,000 square feet.** While the number of size-based tiers has been reduced in the updated ordinance to streamline the process, a new threshold has been introduced to preserve the intentions of the County’s original 2002 Single Family Dwelling Energy Efficiency Ordinance, which required increasingly stringent energy efficiency for larger homes. This requires that new homes greater than 4,000 square feet offset their annual electricity use through efficiency measures and onsite renewables, consistent with the County’s policies of additional standards for homes greater than a certain size.
- **Energy efficiency requirements only apply to new construction.** To require more stringent energy efficiency standards than the state code, the County must demonstrate to the California Energy Commission that the additional requirements are cost effective, meaning they will pay for themselves over the life of the project. To date, cost effectiveness studies have only been completed for new construction projects, meaning the energy efficiency requirements in the proposed code amendments apply only to new buildings. Pursuant to the County’s existing Development Code, “removal or substantial modification of more than 75 percent of the linear sum of a building’s exterior walls for each story shall be considered demolition of the building.” Any existing building that is demolished to this level will be required to comply with the green building standards outlined in this chapter for new construction.
- **Electric Vehicle Charging Infrastructure.** Under the revised code, all new homes would be required to add additional capacity to the service panel to allow for at home Level 2 EV charging (240 volt). This reduces barriers to EV purchasing by allowing charging at home without having to undergo a service panel upgrade after the House is built. This is also required for remodels where the service panel is being expanded. For multifamily and commercial projects, when a new parking lot is added or an existing lot is modified, 10% of the new parking spaces need to have everything but the charger installed (EV Ready), and an additional 10% of the spaces will have conduit laid in anticipation of later EV installation (EV capable). In Marin County, which has one of the highest EV purchase rates of any California County, it will be vitally important to build out the local infrastructure to support greater EV adoption.

The California Public Resource Code states that a local jurisdiction may adopt more restrictive energy standards when they are cost-effective and approved by the California Energy Commission (CEC). The proposed Ordinance’s energy efficiency requirements have all been determined to be cost effective via third party analysis for projects in our climate zones. In other words, the additional cost of the proposed energy efficiency requirements will pay for themselves over the life of the project from reduced energy usage at the site.

This initiative will further the County’s sustainability and green building goals included in the Countywide Plan and supports the County’s efforts to reduce greenhouse gas emissions from the built environment as outlined in the Climate Action Plan 2015.

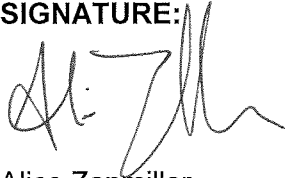
FISCAL/STAFFING IMPACT: This action does not impact the General Fund.

REVIEWED BY:

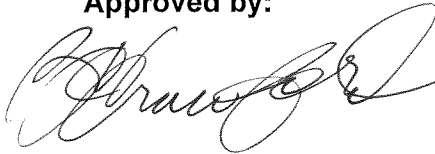
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SIGNATURE:

Approved by:



Alice Zanmiller
Planner



Brian C. Crawford
Director



William Kelley
Deputy Director

Attachments:

1. Ordinance Adopting Amendments to Marin County Code Title 19 (Building Code)
2. Proposed Text Amendments with Track Changes
3. Marin County Green Building Requirement Checklists
4. Energy Cost-Effectiveness Studies
5. Communications