



# MARIN COUNTY COMMUNITY DEVELOPMENT AGENCY

BRIAN C. CRAWFORD, DIRECTOR

February 9, 2010

Marin County Board of Supervisors  
3501 Civic Center Drive  
San Rafael, CA 94903

**SUBJECT:** Hearing and vote on proposed Green Building Ordinance amending Marin County Code Title 19 (Building Code).

Dear Board Members:

**RECOMMENDATION:** Approve the Ordinance amending Marin County Code Title 19 updating the County's Green Building requirements by taking the following actions:

1. Conduct merit hearing
2. Vote to approve Ordinance

**SUMMARY:** On June 2, 2009, the Community Development Agency (CDA) provided the Board of Supervisors with a status report on a proposal to update the County's green building requirements as called for by the Countywide Plan. Since then, CDA has worked with the Marin Green Building, Energy Retrofit and Solar Transformation (BERST) collaborative on a model green building ordinance in an attempt to standardize green building regulations among the cities, towns, and County of Marin. A technical advisory committee composed of approximately 50 experts in the fields of construction, architecture, energy consultation, building performance, building inspection, planning, and real estate met 11 times to develop and recommend model regulations to a Task Force comprised of elected or appointed representatives from each Marin jurisdiction. The Task Force endorsed the proposed green building regulations at a meeting held on November 19, 2009.

The proposed green building regulations address new construction, additions, and renovations for residential, commercial, and municipal projects. The proposed ordinance revisions would further the County's sustainability goals and policies by increasing green building through the planning and building permit review process. The primary changes of the updated ordinance include:

- **New single family and two-family structures** would require a GreenPoint rating, using the Build it Green (BIG) New Home Green Building Guidelines. The number of required points would increase from 75 for a home up to 2,500 square feet and up to 150 points for a new home of 7,000 square feet. In addition, modifications to the existing Single Family Dwelling Energy Efficiency Ordinance would adjust Title 24 standards to be consistent with the 2008 California Building Energy Efficiency Standards and would require that homes over 7,000 square feet achieve zero net energy use. New homes would also be required to be pre-plumbed and pre-wired to accommodate future installation of photovoltaic panels and solar hot water.

- **New multi-family projects** would require a GreenPoint rating, using the BIG Multi-family Green Building Guidelines. The minimum points required would increase based on average unit size to encourage smaller, more efficient units, starting at 60 points for units less than 1,000 square feet and up to 75 points for larger units. New multi-family projects would also be required to be pre-plumbed and pre-wired to accommodate the future installation of photovoltaic panels and solar hot water.
- **Remodeling and additions to residential structures** would involve compliance with requirements based on the valuation of the project. Projects would be treated as follows:
  - Building permits for construction of less than \$50,000 in project valuation would be subject to minor requirements beyond the state building code, based on the type of work. Remodeling which opens walls would be required to insulate exposed hot water pipes, and reroofing projects that remove the roof sheathing would be required to install a radiant barrier (a thin metal material which inhibits heat transfer by radiation). Both upgrades involve minimal additional cost but have significant energy savings benefits.
  - Remodeling valued from \$50,000 - \$100,000 would have to submit a completed GreenPoint Rated Existing Homes checklist, with no minimum points required. The purpose of completing the checklist is only to help educate property owners with the intent of incentivizing them to voluntarily modify plans. In addition, the property owner would be required to have a home performance energy audit using either the Home Energy Rating System II (HERSII) protocols from the California Energy Commission when these become available in 2010, or those from the Building Performance Institute.
  - Remodels between \$100,000 - \$300,000 would be required to achieve between 25 and 35 points on the BIG GreenPoint Rated Existing Homes Elements checklist, which was devised for partial remodeling projects. The Existing Homes checklist requires an up-front home performance audit to establish an energy baseline upon which the remodeling must improve building energy performance.
  - Remodels over \$300,000 would have to achieve at least 50 points on the GreenPoint Rated Existing Homes Whole House checklist, which is intended for larger remodels, and which may require modifications beyond the area of remodeling including energy, indoor air quality, and water conservation prerequisites that apply to the existing building. The project will also be required to demonstrate at least a 20% improvement in energy efficiency from the home energy audit.
- **Remodeling of multi-family projects** is not addressed since Build It Green is currently developing a rating system for multi-family renovations.
- **New commercial buildings or additions** would use the United States Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) New Construction or Core & Shell Guidelines, and requirements would vary based on project size.
  - Projects between 2,000 and 5,000 square feet would be required to submit a completed LEED checklist, with no minimum points required. However, applicants would have to meet eight LEED prerequisites ranging from measures dealing with indoor air quality to water efficiency.
  - Projects between 5,000 and 50,000 square feet would have to achieve a LEED Silver rating level. To improve energy efficiency, buildings above 5,000 square feet would have to be 15% below Title 24 requirements.
  - Projects over 50,000 square feet would have to achieve a LEED Gold rating level.

- All new commercial buildings and major remodels are also required to be pre-plumbed and pre-wired for future PV and solar hot water.
- **Tenant improvement and minor alteration projects for commercial buildings** are even more difficult to regulate than residential remodeling due to the great variation in the vintage, construction type and condition of existing commercial buildings. The LEED Commercial Interiors or Operations & Maintenance checklists would be utilized, with the following requirements based on project size:
  - Projects less than \$500,000 in valuation, only require voluntary compliance with two prerequisites and one credit of the Commercial Interiors checklist. For multi-tenant buildings, the prerequisite and credit affecting the Heating, Ventilating, and Air Conditioning (HVAC) system would only be applicable if over half of the building is being modified, since it would not be reasonable for a single tenant improvement to trigger the replacement of the HVAC unit for the entire building.
  - Projects between \$500,000 and \$5 million in valuation, would be required to comply with two prerequisites and one credit of the Commercial Interiors checklist.
  - Projects over \$5 million in valuation would be required to achieve a LEED Silver rating.

Verification of compliance with green building requirements for new single-family and multi-family dwellings will be completed by a third-party GreenPoint Rater which costs an estimated \$1,500-\$2,500. This includes technical assistance throughout the design and construction of the project and final verification. In addition, there is a \$450 Build It Green certification fee. Requirements for residential remodeling projects \$50,000-\$100,000 in valuation will be verified by CDA staff and will not be required to obtain a GreenPoint Rater or GreenPoint Rating Certification. Larger remodeling projects would be verified in plan check and through field inspection by a GreenPoint Rater, either in-house or through a third party, without the requirement for project certification by Build It Green. A home performance audit would be required for all remodeling projects over \$50,000 in valuation using the HERSII protocols from the California Energy Commission when these become available for use in 2010 or those from the Building Performance Institute (BPI). These audits are estimated to cost between \$500 and \$700. All fees are expected to decrease due to increased volume and green job training efforts to increase the number of auditors.

The building certification process under the LEED rating system by the USGBC has been notoriously slow and costly. For this reason, the USGBC has delegated this function to the Green Building Certification Institute (GBCI) which has regional offices. Due to the increased cost and complexity of LEED certification it is recommended that green building requirements in new non-residential buildings be verified by a LEED Accredited Professional (AP). Since LEED APs are not required to have field inspection experience, it is further recommended that LEED APs verifying compliance with the ordinance requirements also have an additional green building certification which tests for field expertise, such as GreenPoint Rated or the Building Performance Institute. The cost of the LEED AP depends on the project scope but they can be the project architect.

For large new commercial buildings more than 50,000 square feet it is recommended that full LEED building certification be required. Certification costs are based on the square footage of the project and are approximately \$0.045/sf for combined design and construction review. A hardship or infeasibility exemption for both residential and commercial projects has been included in the proposed Ordinance. An exception for historic structures from green building

requirements that would impair the structure's historic integrity has also been included. Exemptions are also included for seismic upgrades, installation of renewable energy systems, flood or earthquake repair and required disabled access improvements.

As required by State Law, an analysis was performed to determine the cost effectiveness of the increased energy efficiency requirements. The analysis is included in an application to the California Energy Commission (CEC) that will be submitted on February 9, 2010. The proposed Ordinance will take effect 60 days after the date of adoption and after approval by the CEC. The CEC is scheduled to hear the proposed ordinance in early April 2010, and the proposed ordinance will take effect after it has been approved by the CEC.

This initiative is included in CDA's approved performance plan and is supported by the Marin Countywide Plan, which calls for the adoption of additional green building standards and established goals, policies, and programs for reducing greenhouse gas emissions in Marin County.

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

Reviewed By:	<input type="checkbox"/> Auditor-Controller	<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

Respectfully Submitted,

Omar Peña  
Assistant Planner

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Agency Director

Attachments:

1. Final Ordinance Adopting Amendments to Marin County Code Title 19 (Building Code)
2. Marin County Green Building Requirements