

Memorandum

To: ROBERT OGLESBY
Executive Director

Date: July 7, 2011

Telephone: (916) 654-5013

From: **California Energy Commission** - Panama Bartholomy, Deputy Director
1516 Ninth Street
Sacramento CA 95814-5512
Efficiency and Renewable Energy Division

Subject: **POSSIBLE APPROVAL OF THE CITY OF BELMONT'S LOCALLY ADOPTED BUILDING ENERGY STANDARDS TO REQUIRE GREATER ENERGY EFFICIENCY THAN THE 2008 BUILDING ENERGY EFFICIENCY STANDARDS**

Summary of Item

The California Public Resources Code establishes a process that allows cities or counties to adopt and enforce locally adopted energy standards that are more stringent than the statewide standards. This process, described in Section 25402.1(h)(2) and the *2008 Building Energy Efficiency Standards*, Title 24, Part 1, Section 10-106 (Standards), allow cities or counties to adopt new versions of the Standards before their statewide effective date (early adoption), require additional energy efficiency measures, or set more stringent energy budgets. The governing body of the city or county is required to make a determination that the standards are cost effective and adopt the findings at a public meeting. The city or county is required to file this determination of cost effectiveness with the California Energy Commission. The Energy Commission must find that the standards will require the diminution of energy consumption levels permitted by the current Standards. The proposed local ordinance cannot be enforced until it is approved by the Energy Commission.

On February 8, 2011, the City Council of the City of Belmont submitted an application for approval for their local energy standard (Ordinance amending Chapter 7 of the Belmont Municipal Code) which will meet or exceed the *2008 Building Energy Efficiency Standards (Title 24, Part 6) of the California Building Standards*.

Additions and alterations to existing residential buildings adding less than 400 square feet and with a construction value less than or equal to \$50,000 are required to choose one building practice from the GreenPoint Rated (GPR) rating system for Existing Homes developed by Build It Green. Additions and alterations to existing residential buildings less than 400 square feet and with a construction value greater than \$50,000 and less than \$100,000 must choose three GPR building practices. The building practices may be energy efficiency measures or other green building measures. If the chosen building practices are energy efficiency measures, they may

or may not result in lower energy consumption when compared to Title 24, Part 6 requirements. For alterations Title 24, Part 6 requires altered components of the building to meet specific requirements; some of the BIG building practices required by the Belmont Ordinance do not meet these requirements, some exceed them. For additions, Title 24, Part 6 requires the addition to meet many requirements similar to those for a newly constructed building (an addition larger than 1,000 square feet must meet the same requirements as a newly constructed building). The building practices required by the Belmont ordinance will not exceed the requirements of Title 24, Part 6.

Additions and alterations to existing residential buildings less than 400 square feet and with a construction value of \$100,000 or more must achieve either 25 points under the Elements option of GPR for Existing Homes or 50 points under the Whole House option. "Elements" and "Whole House" have slightly different energy efficiency requirements under the GPR for Existing Homes rating system. To achieve 25 points under the Elements requirements, 8 points must be energy related. To achieve 50 points under Whole House requirements, 20 points must be energy related. Additions to existing residential buildings 400 square feet or more must achieve 70 points under the Whole House options of GPR for Existing Homes. To achieve 70 points under the Whole House option, 20 points must be energy related. While point requirements may result in measures that save energy, those measures may be less efficient than the measures that are necessary to comply with Title 24, Part 6 or may be the same measures necessary to comply. The extent to which this ordinance for alterations and additions lowers energy consumption compared to Title 24, Part 6 is indeterminable.

Newly constructed residential buildings 400 square feet or more must achieve 70 points under GPR New Homes. GPR New Homes has a mandatory requirement that residential buildings must have at least 15 percent energy savings compared to Title 24, Part 6.

The ordinance does not require the third-party verification necessary for projects to be certified by GreenPoint Rated.

Newly constructed nonresidential buildings 10,000 square feet or greater and additions and alterations (tenant improvements) to existing nonresidential buildings 10,000 square feet or greater are required to achieve Leadership in Energy and Environmental Design (LEED) Silver Certification under the LEED rating system developed by the U.S. Green Building Council. The LEED rating system does not require nonresidential buildings to save energy with respect to Title 24, Part 6. Title 24, Part 6 requires nonresidential additions to meet the same requirements as newly constructed buildings. LEED Silver may result in additions saving more energy than Title 24, Part 6 but that is indeterminable for the ordinance as a whole. Title 24, Part 6 requires alterations to nonresidential buildings to meet specific requirements for the altered components; lighting alterations that result in the replacement of more than 50% of the lighting system must meet the lighting requirements for a newly constructed building. Requiring LEED Silver for alterations impacting larger than

10,000 square feet may result in saving more energy than Title 24, Part 6 but by an indeterminable amount.

The ordinance does not require the third-party verification necessary for projects to be certified by LEED.

Energy Commission staff has found that the application meets all requirements under Public Resources Code Section 25402.1(h)(2) and Section 10-106 of Title 24, Part 1 and recommends it for approval.

A summary of the proposed local energy standards is provided in Attachment A. The complete application including the full proposed ordinance and cost effectiveness analysis will be made available on the Energy Commission web site upon Energy Commission approval of the proposed ordinance.

Project Manager

Joseph M. Loyer, High Performance Buildings and Standards Development Office.

Summary of Staff Position

Energy Commission staff has found that the application meets all requirements under Public Resources Code Section 25402.1(h)(2) and Section 10-106 of Title 24, Part 1. Energy Commission staff believes that the City of Belmont is to be commended for seeking to achieve the energy savings that result from their local energy ordinance.

The City of Belmont has been informed that the approved ordinance will be enforceable while the *2008 Building Energy Efficiency Standards (Title 24, Part 6 of the California Building Code)* is enforced and upon implementation of new adopted State Standards, the City of Belmont will be required to resubmit an application for local energy standards under Public Resources Code Section 25402.1(h)(2) and Section 10-106 of Title 24, Part 1.

Oral Presentation Outline

Energy Commission staff will provide a brief summary and be available to answer questions if any arise.

Business Meeting Participants

Joseph M. Loyer, High Performance Buildings and Standards Development Office.

Commission Action Requested

Approval of the City of Belmont's locally adopted energy standards that result in more stringent energy requirements than the *2008 Building Energy Efficiency Standards*.

Panama Bartholomy, Deputy Director
Efficiency and Renewable Energy Division

Summary of the City of Belmont Ordinance amending Chapter 7 of the Belmont Municipal Code

1. General Requirements of all Buildings

- a. All covered projects are required to comply with Title 24, Part 6¹.

2. Requirements for Residential Buildings

- a. Newly Constructed.
 - i. Achieve 70 points under GPR² New Homes. This will achieve 15% energy savings compared to Title 24, Part 6.
- b. Additions and Alterations to Existing Buildings
 - i. Adding less than 400 Square feet.
 1. Construction value less than or equal to \$50,000.
 - a. Choose 1 building practice from the GPR for Existing Homes. This is unlikely to exceed Title 24, Part 6.
 2. Construction value greater than \$50,000 and less than \$100,000.
 - a. Choose 3 building practices from the GPR for Existing Homes. This is unlikely to exceed Title 24, Part 6.
 3. Construction value of \$100,000 or more, choose one of the following:
 - a. 25 points under the Elements option of GPR for Existing Homes, or
 - b. 50 points under Whole House option of GPR for Existing Homes. Achieving these point levels may or may not result in more energy efficiency than Title 24, Part 6. Energy savings compared to Title 24, Part 6 is indeterminable.
 - ii. Adding 400 Square feet or more.
 1. 70 points under the Whole House options of GPR for Existing Homes. Achieving these point levels may or may not result in more energy efficiency than Title 24, Part 6. Energy savings compared to Title 24, Part 6 is indeterminable.

3. Requirements for Nonresidential Buildings

- a. Newly constructed nonresidential buildings 10,000 square feet or greater and additions and alterations to existing nonresidential buildings 10,000 square feet or greater.
 - i. LEED³ Silver Certification
Achieving Silver Certification for these additions and alterations to existing nonresidential buildings may result in saving energy compared to Title 24, Part 6. The amount of energy savings is indeterminable.

4. Other

- a. The City of Belmont has made a written commitment to enforce compliance with both their Local Energy Standard and Title 24, Part 6.

¹ **Title 24, Part 6:** Refers to the 2008 Building Energy Efficiency Standards (Title 24, Part 6) of the California Building Code.

² **GPR:** GreenPoint Rated is a rating system developed by Build It Green for residential buildings only. Certification under GPR requires that the applicant meet specific green building points, including a minimum requirement for achieving 15 percent energy reduction compared to Title 24, Part 6 and use a certified GreenPoint Rater and provide documentation from the GreenPoint Rater that was submitted to and approved by Building It Green.

³ **LEED:** Leadership in Energy and Environmental Design is a rating system developed by the U.S. Green Building Council for residential and nonresidential buildings. Certification under LEED requires that the applicant meet specific green building points, including points for energy and use a LEED Accredited Professional (LEED-AP) and provide documentation from the LEED-AP be submitted to and approved by USGBC