

Memorandum

To: ROBERT OGLESBY
Executive Director

Date: July 7, 2011

Telephone: (916) 654-5013

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

Subject: **POSSIBLE APPROVAL OF THE CITY OF SAN MATEO'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 10, 2011, the City Council of the City of San Mateo submitted an application for approval for their local energy standards (Ordinance No. 2010-16) which will meet or exceed the *2008 Building Energy Efficiency Standards (Title 24, Part 6 of the California Building Standards)*.

The ordinance requires enforcement of the energy efficiency provisions of the *California Green Building Standards Code (Title 24, Part 11)* for newly constructed low-rise (defined as up to three stories) residential buildings and for newly constructed nonresidential buildings. Those provisions that are optional under Part 11 are made mandatory by this Ordinance, resulting in a 15% energy savings compared to Title 24, Part 6. The ordinance also requires conformance to a Mandatory Green Building Program "Compliance Matrix" adopted by City Council resolution, which calls for specific obligations for newly constructed buildings and additions and alterations to

existing buildings based on the GreenPoint Rated¹ (GPR) rating system developed by Build It Green and the Leadership in Energy and Environmental Design² (LEED) rating system developed by the U.S. Green Building Council.

Newly constructed single-family and duplex residential buildings and alterations that represent a substantial removal of existing single-family and duplex residential buildings (defined as removal of 50 percent or more of the linear feet of the existing exterior walls or 50 percent or more of the square footage of the roof) must comply with both of the following:

1. Exceed the energy efficiency requirements of Title 24, Part 6 by 15 percent or more, and
2. Achieve 75 points under GPR as verified by a GreenPoint Rater. The addition of these GPR points may or may not require energy efficiency significantly beyond 15% greater than Title 24, Part 6.

Additions and alterations to existing single-family and duplex residential buildings valued at \$100,000 or more must comply with one of the following, as verified by a GreenPoint Rater:

1. Achieve 25 points from the GPR for Existing Homes under the Elemental Approach, or
2. Achieve 50 points from the GPR for Existing Homes under the Whole House Approach³.

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 multi-family residential buildings must comply with both of the following:

1. Exceed the energy efficiency requirements of Title 24, Part 6 by 15 percent or more (applies to low-rise buildings only).
2. Achieve 75 points under GPR, as verified by a GreenPoint Rater. The addition of these GPR points may or may not require energy efficiency significantly beyond 15% greater than Title 24, Part 6.

1 **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.

2 **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.

3 **"Elements"** and **"Whole House"** have 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. While these point requirements may result in lower energy consumption than permitted by Title 24, Part 6, that is not a requirement under GPR for Existing Homes.

Newly constructed nonresidential buildings, which are 10,000 square feet or larger and tenant improvements on nonresidential buildings other than retail, which are 10,000 square feet or larger, must comply with both of the following:

1. Exceed the energy efficiency requirements of Title 24, Part 6 by 15 percent or more, and
2. Be LEED Silver compliant, as verified by a LEED Accredited Professional (LEED-AP). The requirement to be LEED Silver may or may not require additional energy efficiency.

Newly constructed nonresidential buildings, greater than 1,000 square feet and smaller than 10,000 square feet must comply with both of the following:

1. Exceed the energy efficiency requirements of Title 24, Part 6 by 15 percent or more.
2. Be LEED compliant, as verified by a LEED-AP. The requirement to be LEED Certified may or may not require additional energy efficiency.

The City of San Mateo has made a written commitment to enforce compliance with their locally adopted energy standards and Title 24, Part 6. 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 detailed 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 San Mateo is to be commended for seeking to achieve the energy savings that result from their local energy ordinance.

The City of San Mateo 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 San Mateo 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 San Mateo'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 City of San Mateo Ordinance No. 2010-16

1. General Requirements of all Buildings

- a. All newly constructed residential and nonresidential buildings must comply with all requirements of Title 24, Part 6⁴.
- b. All newly constructed residential and nonresidential buildings must comply with all requirements of Title 24, Part 11⁵.
- c. All newly constructed residential and nonresidential buildings must comply with the energy efficiency specifications of Title 24, Part 11, Tier 1⁶ Appendix A4 and Appendix A5 to achieve 15 percent energy savings compared to Title 24, Part 6.

2. Requirements for Residential Buildings

- a. Newly constructed single-family and duplex residential buildings and alterations that represent a substantial removal of existing single-family and duplex residential buildings (defined as removal of 50 percent or more of the linear feet of the existing exterior walls or 50 percent or more of the square footage of the roof) must comply with both of the following:
 - i. Exceed the energy efficiency requirements of Title 24, Part 6 by 15 percent or more, and
 - ii. Achieve 75 points GPR⁷, as verified by a GreenPoint Rater. The addition of these GPR points may or may not require energy efficiency significantly beyond 15% greater than Title 24, Part 6.
- b. Additions and alterations to existing single-family and duplex residential buildings valued at \$100,000 or more must comply with one of the following, as verified by a GreenPoint Rater:
 - i. Achieve 25 points from the GPR for Existing Homes under the Elemental Approach, or
 - ii. Achieve 50 points from the GPR for Existing Homes under the Whole House Approach⁸.

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.

⁴ **Title 24, Part 6:** Refers to the 2008 Building Energy Efficiency Standards (Title 24, Part 6) of the California Code of Regulations.

⁵ **Title 24, Part 11:** Refers to the 2010 Green Building Standards (Title 24, Part 11) of the California Building Code.

⁶ **Tier 1:** Refers to the voluntary requirements of the Tier 1 portion of the 2010 California Green Building Standards Title 24, Part 11 Appendix A4 and Appendix A5.

⁷ **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.

⁸ **"Elements"** and **"Whole House"** have 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. While these point requirements may result in lower energy consumption than permitted by Title 24, Part 6, that is not a requirement under GPR for Existing Homes.

- c. Newly constructed multi-family residential buildings must comply with both of the following:
 - i. Exceed the energy efficiency requirements of Title 24, Part 6 by 15 percent or more (applies to low-rise buildings only).
 - ii. Achieve 75 points GPR, as verified by a GreenPoint Rater. The addition of these GPR points may or may not require energy efficiency significantly beyond 15% greater than Title 24, Part 6.

3. Requirements for Nonresidential Buildings

- a. Newly constructed nonresidential buildings, which are 10,000 square feet or larger and tenant improvements on nonresidential buildings other than retail, which are 10,000 square feet or larger, must comply with both of the following:
 - i. Exceed the energy efficiency requirements of Title 24, Part 6 by 15 percent or more, and
 - ii. Become LEED⁹ Silver compliant, as verified by a LEED Accredited Professional (LEED-AP).

The requirement to be LEED Silver may or may not require additional energy efficiency.

- b. Newly constructed nonresidential buildings, greater than 1,000 square feet and smaller than 10,000 square feet must comply with both of the following:
 - i. Exceed the energy efficiency requirements of Title 24, Part 6 by 15 percent or more.
 - ii. Become LEED compliant, as verified by a LEED-AP.

The requirement to be LEED Certified may or may not require additional energy efficiency.

4. Other Requirements

- a. The City of San Mateo has made a written commitment to enforce compliance with their locally adopted energy standard and Title 24, Part 6.

⁹ **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.