



CITY OF SANTA BARBARA

ORDINANCE COMMITTEE AGENDA REPORT

AGENDA DATE: December 7, 2010
TO: Ordinance Committee
FROM: Building & Safety Division, Community Development Department
SUBJECT: Reach Code - Energy Efficiency Standards

RECOMMENDATION:

That the Ordinance Committee review and recommend for approval to the City Council an Ordinance establishing local energy efficiency standards for new construction and most additions.

DISCUSSION:

On September 28, 2010, City Council received a presentation from the Southern California Edison Company regarding a South Coast Energy Reach Code proposal. The Energy Reach Code proposal would require new buildings and most additions to be 10 to 15 percent more energy efficient than the current 2008 California Energy Code.

After receiving this presentation, City Council voted to direct staff to conduct public outreach and prepare ordinance amendments for a South Coast Energy Reach Code for consideration by the City's Ordinance Committee. This was submitted to the Committee on November 16, 2010.

At the November 16th Ordinance Committee presentation we heard from several stakeholders who had not attended previous public meetings. They expressed specific concerns about the proposal. Staff held a meeting with them on November 23rd and addressed their concerns by making changes to and clarifying some of the language and intent of the proposal.

The new Energy Efficiency Standards Ordinance (Energy Ordinance), which is based on what will be the current 2010 California Energy Code, deletes the previously adopted Architecture 2030 Energy Efficiency Standards Ordinances, based on the now outdated 2005 California Energy Code, found in Chapter 22.82 of the City's Municipal Code.

This Draft Energy Ordinance has been placed on the City's Webpage for public viewing and comment and was sent to a representative of the "Illuminating Engineering Society" for placement on their website and dissemination to their members. The draft ordinance has also been included in a Land Development Team public bulletin, and it has been sent to the Santa Barbara Contractors Association, Santa Barbara Chapter of the

American Institute of Architects, and the Community Environmental Council's email notification list.

As stated in our previous report, this proposed Energy Ordinance is supported by our local American Institute of Architects, the Santa Barbara Contractors Association, the Community Environmental Council and many others.

If the Ordinance Committee recommends this Energy Efficiency Standards Ordinance for City Council approval and Council subsequently approves it for introduction, an Energy Cost-Effectiveness Study for Climate Zone 6 that has been prepared and funded by the Southern California Edison Company will be forwarded to the California Energy Commission for review and approval. Once the Energy Cost-Effectiveness Study is approved by the California Energy Commission the Energy Ordinance and the Energy Cost-Effectiveness Study would be brought back to City Council for adoption.

Depending on the length of time taken to review and approve this Energy Efficiency Standards Ordinance by the California Energy Commission, it is anticipated that the new Ordinance would become effective in late February/March of 2011.

SUSTAINABILITY IMPACT:

Adoption of this Ordinance would lead to more stringent energy requirements for new construction and most additions than the 2008 Building Energy Efficiency Standards approved by the California Energy Commission. More energy efficient buildings will result in a reduction in the use of natural gas and electricity associated with those building occupancies and may contribute to the reduction of greenhouse gas emissions from that construction.

ENVIRONMENTAL REVIEW

Staff has determined that the proposed Ordinance is categorically exempt from the California Environmental Quality Act (CEQA) review since it preserves and enhances the environment by setting forth minimum energy efficiency standards. In accordance with CEQA Guidelines Section 15308, actions authorized by State or local ordinance to assure the maintenance, restoration, enhancement, or protection of the environment are exempt from CEQA.

ATTACHMENT: Draft Energy Efficiency Standards Ordinance

PREPARED BY: George A. Estrella, Chief Building Official

SUBMITTED BY: Paul Casey, Assistant City Administrator

APPROVED BY: City Administrator's Office

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CITY OF SANTA BARBARA REPEALING CHAPTER 22.82 OF THE SANTA BARBARA MUNICIPAL CODE AND ADOPTING A NEW CHAPTER 22.82 ESTABLISHING LOCAL “ENERGY EFFICIENCY STANDARDS” FOR CERTAIN BUILDINGS AND IMPROVEMENTS COVERED BY THE 2008 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS.

The City Council of the City of Santa Barbara does ordain as follows:

SECTION 1. Findings.

1. The modifications to the 2008 California Building Energy Efficiency Standards required by this ordinance are reasonably necessary due to local climatic conditions. Despite moderate summer ambient temperatures in the local area, the City of Santa Barbara is served by an energy system that may experience power outages or power reductions (i.e., “brown-outs”) during peak demand periods. Reduction of total and peak energy use as a result of incremental energy conservation measures required by this ordinance will have local and regional benefits in the cost-effective reduction of energy costs for the building owner, additional available system energy capacity, and a reduction in greenhouse gas emissions.

2. The proposed ordinance preserves and enhances the environment; in that it would set forth increased minimum energy efficiency standards within the City of Santa Barbara for buildings and improvements covered by the ordinance. In accordance with CEQA Section 15061(b)(3), “[C]EQA applies only to projects, which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.” Staff has determined that the proposed ordinance is exempt from CEQA review.

3. In order to maintain and advance the energy efficiency standards, it is in the best interest of the City to revisit this ordinance prior to expiration, ensuring that local energy standards meet the goals of reducing energy consumption, thereby saving on energy bills and decreasing greenhouse gas emissions.

4. The City has reviewed a study of the cost-effectiveness of the energy efficiency measures contained in this ordinance for the Climate Zones within the City’s jurisdiction. This study has concluded that the energy efficiency measures contained in this ordinance are cost-effective. The City Council hereby adopts the conclusions of this study and authorizes its inclusion in an application for consideration by the California Energy Commission in compliance with Public Resources Code 25402.1(h)(2).

SECTION 2. Chapter 22.82 of the Santa Barbara Municipal Code, titled “Energy Efficiency Standards” is amended to read as follows:

22.82.010 Purpose.

This Chapter (“Energy Efficiency Standards”) sets forth increased minimum energy efficiency standards within the City of Santa Barbara for all new construction of any size, additions to existing buildings or structures over a certain size threshold, and the installation of new circulation pumps for swimming pools, spas and water features. This Chapter is intended to supplement the 2008 California Building Energy Efficiency Standards, as specified in California Code of Regulations, Title 24, Parts 1 and 6 (Standards). Compliance with the 2008 California Building Energy Efficiency Standards is required even if the increased minimum energy efficiency standards specified in this Chapter do not apply.

22.82.020 Definitions.

For purposes of this Chapter 22.82, words or phrases used in this Chapter that are specifically defined in Parts 1, 2, 2.5, or 6 of Title 24 of the California Code of Regulations shall have the same meaning as given in the Code of Regulations. In addition, the following words and phrases shall have the meanings indicated, unless context or usage clearly requires a different meaning:

A. **2008 BUILDING ENERGY EFFICIENCY STANDARDS.** The standards and regulations adopted by the California Energy Commission contained in Parts 1 and 6 of Title 24 of the California Code of Regulations as such standards and regulations may be amended from time to time.

B. **EXISTING + ADDITION + ALTERATION.** An approach to modeling the TDV (time dependent valuation) energy use of an addition including the existing building and alterations as specified in the Residential Compliance Manual and Nonresidential Compliance Manual.

C. **NONRESIDENTIAL COMPLIANCE MANUAL.** The manual developed by the California Energy Commission, under Section 25402.1(e) of the Public Resources Code, to aid designers, builders, and contractors in meeting the requirements of the state’s 2008 Building Energy Efficiency Standards for nonresidential, high-rise residential, and hotel/motel buildings.

D. **RESIDENTIAL COMPLIANCE MANUAL.** The manual developed by the California Energy Commission, under Section 25402.1(e) of the Public Resources Code, to aid designers, builders, and contractors in meeting the requirements of the state’s 2008 Building Energy Efficiency Standards for low-rise residential buildings.

E. **SWIMMING POOL.** Any structure intended for swimming and able to contain water over 18 inches deep.

F. **TIME DEPENDENT VALUATION ENERGY or (“TDV ENERGY”)**. The time varying energy caused to be used by the building or addition to provide space conditioning and water heating and, for specified buildings, lighting. TDV energy accounts for the energy used at the building site and consumed in producing and in delivering energy to a site, including, but not limited to, power generation, transmission and distribution losses. TDV Energy is expressed in terms of thousands of British thermal units per square foot per year (kBtu/sq.ft.-yr).

G. **WATER FEATURE**. Any structure intended to contain water over 18 inches deep. Examples of water features include, but are not limited to, ponds and fountains.

22.82.030 Applicability.

A. The provisions of this Chapter apply to any of the following buildings or improvements for which a building permit is required by this Code:

1. All new conditioned buildings or structures of any size,
2. Any addition to an existing low-rise residential building or structure where the addition is greater than 500 square feet of conditioned floor area,
3. Any addition to an existing nonresidential, high-rise residential or hotel/motel building or structure where the addition is greater than 500 square feet of conditioned floor area,
4. All new-circulation pumps for swimming pools, spas, and water features.

B. Exception. Nonresidential remodels or alterations that involve neither the HVAC system nor the building envelope components (exterior walls, roofs, floors, windows, skylights, etc.) shall be exempt from the requirements of this Chapter, regardless of the square footage of the remodel or alteration.

C. Subject to the limitations specified in this Section 22.82.030, the coverage of this Chapter shall be determined in accordance with the scope and application section of either the 2008 Residential Compliance Manual or 2008 Nonresidential Compliance Manual, as appropriate for the proposed occupancy.

22.82.040 Compliance.

A building permit subject to the requirements of this Chapter will not be issued by the Building Official unless the energy compliance documentation and plans submitted with the permit application comply with the requirements of this Chapter. A final inspection for a building permit subject to the requirements of this Chapter will not be approved unless the work authorized by the building permit has been constructed in accordance with the approved plans, conditions of approvals, and requirements of this Chapter.

22.82.050 Mandatory Energy Efficiency Requirements.

In addition to meeting all minimum requirements of the 2008 Building Energy Efficiency Standards, all applications for building permits that include buildings or improvements covered by this Chapter, shall include the following mandatory energy efficiency measures as may be applicable to the proposed building or improvement:

A. **RESIDENTIAL BUILDINGS.** Unless preempted by the National Appliance Energy Conservation Act (NAECA), any appliance to be installed in a residential building shall be Energy Star rated, if the appliance installed is of a type that has been Energy Star rated.

B. **SWIMMING POOL AND SPA PUMPS.** Any circulation pump to be installed for any swimming pool, spa, or water feature shall incorporate the following energy conservation features: all circulating pump motors and filtration pump motors with a nominal rating of 0.75 horsepower or greater (except pump motors only serving spa jets) shall be two-speed or variable speed motors. The installation of all two-speed and variable speed motors shall include the installation of a controller which shall be time-based and shall be programmed to alternate the speed of the motor between low and high to make effective use of the energy savings potential of the unit's multi-speed capability.

22.82.060 General Compliance Requirements.

In addition to any applicable mandatory requirements specified in Section 22.82.050 and the minimum requirements of the 2008 Building Energy Efficiency Standards, the following general compliance requirements shall apply to permit applications subject to this Chapter:

A. **LOW-RISE RESIDENTIAL BUILDINGS.** Applications for building permits that involve new low-rise residential buildings or additions to existing low-rise residential buildings where the additions are greater than 500 square feet of conditioned floor area:

1. **New Low-Rise Residential Buildings.** When an application for a building permit involves a new low-rise residential building, the performance approach specified in Section 151 of the 2008 Building Energy Efficiency Standards must be used to demonstrate that the TDV Energy of the proposed building is at least 15.0% less than the TDV Energy of the standard building.

2. **Additions to Low-Rise Residential Buildings.** When an application for a building permit involves an addition of more than 500 square feet of conditioned floor area to an existing low-rise residential building, compliance may be met by either of the following methods:

a. Using the performance approach specified in Section 151 of the 2008 Building Energy Efficiency Standards to demonstrate that the TDV Energy of the proposed addition is at least 15.0% less than the TDV Energy of the standard design; or,

b. Using the "Existing +Addition +Alteration" calculation methodology to demonstrate that the TDV Energy of the proposed building is at least 15.0% less than the TDV Energy of the standard design, as calculated in accordance with the performance approach specified in Section 151 of the 2008 Building Energy Efficiency Standards. In modeling buildings under the

Existing +Addition +Alteration method, domestic hot water energy use must be included in the calculation model unless the application does not involve a change to the building's existing water heater(s).

B. HIGH-RISE RESIDENTIAL BUILDINGS & HOTEL/MOTELS. Applications for building permits that involve new high-rise residential buildings, new hotel/motels, or additions to these occupancies, where the additions are greater than 500 square feet of conditioned floor area, shall demonstrate compliance with the general compliance requirements as follows:

1. **New High-Rise Residential Buildings and Hotel/Motels.** When an application for a building permit involves a new high-rise residential building or new hotel/motel, the applicant shall use the Performance Approach to model the building using a state-approved energy compliance software program and demonstrate that the TDV Energy of the proposed building is at least 10.0% less than the TDV Energy of the standard building. In calculating the %-better-than-Title-24 in High-rise Residential or hotel/motel projects, the TDV energy of the Process, Receptacle energy use components, and also Lighting energy use in the residential spaces, is omitted in both the proposed and standard designs.

2. **Additions to High-Rise Residential Buildings and Hotel/Motels.** When an application for a building permit involves an addition of more than 500 square feet of conditioned floor area to an existing high-rise residential building or an existing hotel/motel occupancy, this general compliance requirement may be met by either of the following methods:

a. Using the "Addition Alone" performance method, calculated in the manner specified in Section 22.82.060.B.1 above, to demonstrate that the TDV Energy sum of the energy components for the proposed addition is at least 10.0% less than the TDV Energy sum of the same energy components of the standard addition; or,

b. Using the "Existing +Addition +Alteration" performance method, calculated in the manner specified in Section 22.82.060.B.1 above, to demonstrate that the TDV Energy for the sum of the energy components for the proposed building is at least 10.0% less than the TDV Energy for the sum of the same energy components of the standard design.

C. NONRESIDENTIAL OCCUPANCIES. Applications for building permits that involve new nonresidential occupancies or additions to existing nonresidential occupancies, where the additions are greater than 500 square feet of conditioned floor area, shall demonstrate compliance with the general compliance requirements as follows:

1. **New Nonresidential Buildings.** When a project involves a new nonresidential building, compliance may be demonstrated by using either the prescriptive approach or the performance approach as specified below:

a. **Prescriptive Approach.** Subject to the exceptions listed below and the provisions of the 2008 Building Energy Efficiency Standards, the prescriptive approach requires compliance with the prescriptive envelope requirement and/or the prescriptive indoor lighting requirement, depending upon the work proposed in the permit application, as specified below:

(1) **Prescriptive Envelopment Requirement.** The Overall Envelope TDV Energy Approach in Section 143(b) of the 2008 Building Energy Efficiency

Standards shall be used to demonstrate that the Overall TDV energy of the proposed building is at least 10.0% less than the Overall TDV energy of the standard building; and/or,

(2) **Prescriptive Indoor Lighting Requirement.** The “Prescriptive Requirements for Indoor Lighting” contained in Section 146 of the 2008 Building Energy Efficiency Standards that apply to conditioned spaces shall be used to demonstrate that the Adjusted Actual (Installed) Watts are at least 10.0% less than the Total Allowed Watts.

(i) **Exception:** When using the Tailored Method to determine compliance with the Prescriptive Requirements for Indoor Lighting, display and decorative lighting watts may be omitted from the above calculation.

b. **Performance Approach.** The applicant shall model the building using a state-approved energy compliance software program and demonstrate that the TDV Energy of the proposed building is at least 10.0% less than the TDV Energy of the standard building. In calculating the %-better-than-Title-24, the TDV energy of the Process and Receptacle energy use components is omitted in both the proposed and standard designs.

2. **Additions to Existing Nonresidential Buildings.** When an application for a building permit involves an addition of more than 500 square feet of conditioned floor area to an existing nonresidential building, the general compliance requirement may be met by either of the following methods:

a. Using the “Addition Alone” performance method, calculated in the manner specified in Section 22.82.060.C.1.b above, to demonstrate that the TDV Energy sum of the energy components for the proposed addition is at least 10.0% less than the TDV Energy sum of the same energy components of the standard addition; or,

b. Using the “Existing +Addition +Alteration” performance method, calculated in the manner specified in Section 22.82.060.C.1.b above, to demonstrate that the TDV Energy of the sum of the energy components for the proposed building is at least 10.0% less than the TDV Energy of the sum of the same energy components of the standard design.

D. **DOCUMENTATION.** In order to demonstrate compliance with the requirements of this Section, a permit applicant may be required to submit supplementary forms and documentation in addition to the building drawings, specifications, and standard Title 24 report forms, as deemed appropriate by the Building Official.

22.82. 070 Expiration.

This Chapter 22.82 shall expire upon the expiration date of the state’s 2008 Building Energy Efficiency Standards.