CITY of ALBUQUERQUE
SEVENTEENTH COUNCIL

COUNCIL BILL NO. _____ ENACTMENT NO. _____

SPONSORED BY:

ORDINANCE

AMENDING SECTION 14-1-3(M) ROA 1994 TO ADOPT THE 2006 INTERNATIONAL ENERGY CONSERVATION CODE; CREATING THE ALBUQUERQUE HIGH PERFORMANCE BUILDING ORDINANCE ESTABLISHING CERTAIN ENVIRONMENTALLY SENSITIVE PRACTICES IN CONSTRUCTION; AMENDING SECTION 9-5-4-2 ROA 1994, THE "WOODBURNING ORDINANCE" TO DEFINE PRODUCTS THAT SHOULD NOT BE BURNED.

BE IT ORDAINED BY THE COUNCIL, THE GOVERNING BODY OF THE CITY OF ALBUQUERQUE:

Section 1. SHORT TITLE. Sections 1 through 5 of this ordinance may be cited as the "Albuquerque High Performance Buildings Ordinance".

Section 2. Council Findings.

The Council makes the following findings:

1.) The green building design and construction standards established in this Chapter are intended to reduce human exposure to noxious materials; conserve non-renewable energy and scarce materials; minimize the ecological impact of energy and materials used; use renewable energy and protect and restore local air, water, flora and fauna.

2.) These standards will help use energy, water and materials more efficiently, reduce greenhouse gas emissions and increase the economy of building operations.

3.) The requirements set out in this ordinance set standards that can be achieved with low effort and cost. These requirements establish the minimum standards that should be expected in any building.

Section 3. Section 14-1-3(M) ROA 1994 is amended as follows:

(M) [~~-The 2003 New Mexico Energy Conservation Code as adopted by the Construction Industries Division of the State of New Mexico with an effective date of July 1, 2004;-~~][+The City of Albuquerque hereby adopts the 2006 Edition of the International Energy Conservation Code. All references in the IECC to the International Building Code shall be deemed references to 14.7.2 NMAC, the 2003 New Mexico Commercial Building Code (NMCBC). All references to the International Residential Code shall be deemed references to 14.7.3 NMAC, the 2003 New Mexico Residential Building Code (NMRBC) All references to the International Plumbing Code shall be deemed references to 14.8.2 NMAC, the 2003 New Mexico Plumbing Code (NMPC). All references to the International Mechanical Code shall be deemed references to 14.9.2, the 2003 New Mexico Mechanical Code (NMMC). All references to the ICC or International Electrical Code shall be deemed references to 14.10.4 NMAC, the 2003 New Mexico Electrical Code (NMEC). All references to the International Fuel Gas Code are deemed references to the NMMC or the LP Gas Standards found at 19.15.40 NMAC, and NMSA 1978 70-5-1 et seq. +]

Section 4. A High Performance Building Ordinance is adopted as follows:

A. Applicability. The provisions of this ordinance shall apply to all new buildings, and existing buildings whose repair, alteration or rehabilitation costs exceed fifty percent of their replacement cost except for historic buildings registered with the State or National historic registries or designated Historic Landmarks in the City of Albuquerque. For purposes of this Section, the Planning Director shall determine the replacement cost of the building or structure and may use the most current building valuation table published by the International Conference of Building Officials. The Planning Director shall also determine the fair market value of any necessary repairs. Regardless of the costs of repairs, alteration, or rehabilitation, any replacement of specific items described herein shall comply with this Ordinance.

B. Priority Plan Check for LEED Certification.

(1) Buildings subject to the Applicability provisions of this ordinance that are registered with the United States Green Building Council for certification under the Leadership in Energy and Environmental Design Green Building Rating System (LEED), including LEED for Homes (LEED-H),

LEED for New Construction (LEED-NC), and LEED for Core and Shell (LEED-CS), shall receive priority plan check processing by all City departments.

(2) All applicants wishing to receive priority plan check processing pursuant to subsection (a) of this Section must submit their LEED project registration and checklist to the City indicating all of the credits they intend to pursue. Applicants must also clearly specify the materials, systems and strategies they will use to achieve the credits in the plans submitted to the City for plan check approval.

(3) Priority plan check shall consist of expedited prioritization of the submittal by City building code reviewers, moving to the top of any waiting list after any other previously submitted projects that are already in the active process of review.

C. Furnaces. All newly installed furnaces shall have a minimum Annual Fuel Utilization Efficiency of 90%.

D. Documentation of Heating and Cooling Equipment Sizing. Documentation verifying the methodology and accuracy of heating and cooling equipment sizing shall be submitted with final mechanical code compliance package. Documentation shall include the following information:

(1) Address of work

(2) Name of individual performing load calculations.

(3) Name and version of load calculation software.

(4) Design temperatures (outdoor and indoor) according to the Air Conditioning Contractors of America's (ACCA) Manual J, ACCA Manual N, American Society of Heating, Refrigeration and Air Conditioning Engineers, U.S. Department of Energy standards, or other methodology approved by the City of Albuquerque.

(5) Area of walls, windows, skylights and doors within +/- 10% of architectural plans or actual building.

(6) Orientation of windows and glass doors, infiltration rate, duct loads, internal gains, insulation values, and Solar Heat Gain Coefficient of windows and glass doors.

(7) Heating and cooling load calculations

(8) Duct sizing according to ACCA Manual D and equipment sizing according to Manual J.

E. Space Heating. In all residential buildings and mixed-use buildings with units in excess of 500 square feet, the primary source of space heating may not be electric resistance.

F. All evaporative coolers installed in newly constructed buildings, including homes, shall be equipped with thermostat controls.

G. Heating, Ventilating and Air Conditioning (HVAC). All HVAC Systems shall be constructed to ACCA Manual recommendations. All residential heating furnaces shall have minimum 90% efficiency. All residential cooling equipment systems shall have minimum 14 SEER, as rated by the Air-Conditioning and Refrigeration Institute (ARI), or be passive or evaporative coolers.

H. Building Leakage. Leakage of the building thermal envelope shall not exceed .35 Air Changes per Hour (ACH) as measured by the blower door test. The testing procedure shall be based on ASTM E779 or ANSI/ASHRAE 136. Testing shall be performed by a certified independent third-party technician approved by the building official. Documentation verifying thermal envelope air leakage equal to or less than .35 ACH shall include the following information:

(a) Address of residence

(b) Name and company of technician performing testing

(c) Date of final test

I. Duct System Leakage. Leakage of supply ducts and return plenum/ducts shall not exceed 6 cubic feet per minute per 100 square feet of floor space. Flexible duct shall be supported every eight feet on center maximum.

Exception: Existing construction with no modification of or addition to the existing ductwork.

J. Duct Insulation. Supply and return ducts shall be insulated to a minimum of R-8. Ducts in floor trusses shall be insulated to minimum of R-6. Exceptions: Ducts or portions thereof located within the building thermal

envelope; Supply and return ducts can be insulated to a minimum of R-6 if the efficiency of the cooling equipment is upgraded to SEER-14.

K. Building Insulation. Ceilings shall be insulated to at least R-38; walls shall be insulated to at least R-13; framed floors shall be insulated to at least R-19; floor slabs on grade shall be insulated to at least R-5.5; basement/crawl space walls shall be insulated to at least R-11. The replacement or recovering of existing low-slope membrane roofs on projects exempted per Section 4.A. shall nonetheless require the verification of existing roof insulation values and augmentation, if needed, to at least R-30.

L. Water Heating. All water heaters shall be Energy Star certified, or have a minimum energy factor (EF) of 0.59, or be a solar or demand-type "flash" heater. Hot water recirculating pump systems with temperature-operating controls or equivalent technology shall be installed in all non-exempt construction and renovations.

Single-family and multifamily buildings with 11 or fewer units having natural gas service located within the adjacent right-of-way shall not use electric resistance water heating as the primary source for hot water.

Single-family and multifamily buildings with 11 or fewer units not having natural gas service located within the adjacent right-of-way or multifamily buildings containing 12 or more units and comprised of more than two stories of residential units may install electric resistance water heaters having a minimum efficiency of 93% in conjunction with a preprogrammed water heater timer in lieu of gas fired water heating. The timer shall be preprogrammed to turn the water heater off between the hours of 3:00 p.m. and 7:00 p.m. from June 1 to September 30 and from 12:00 a.m. to 4:00 a.m. throughout the year. The timer shall have an override capable of restoring power to the water heater for one hour when activated.

Solar collectors shall be the primary source to heat swimming pool water and to preheat industrial process water, including but not limited to, car washes and laundries.

M. Pipe Insulation. All hot water distribution and recirculating system piping shall be thermally insulated from the heater to the end-use fixtures.

Pipe insulation shall have R-value equal to R-4 for piping two inches or less in diameter and R-6 for larger piping.

N. Bathroom Ventilation Systems. Any newly installed bathroom ventilation system in any building shall be on an automatic timer switch.

O. The following appliances when installed by the builder in a new building, including a home, shall be Energy Star certified:

Clothes Washers

Air-source Heat Pumps

Ventilation Fans

Freezers

Air conditioners

Refrigerators

Boilers

Dishwashers

Light Fixtures (exception: T-6 or T-8 fluorescent tubes, standard fixtures with standard-base screw-in compact fluorescent bulbs).

P. Windows. North-, east-, and west-facing window and door glass shall be low-e coated. South-facing glass shall have calculated overhangs or awnings as required to provide minimum shading of 90 percent of the glass surface area at noon on June 20. All glass facing within 10 degrees of west shall be shaded by a minimum of 90 percent at 3 p.m. on June 20, utilizing vegetation or shading structures, or have a maximum solar heat gain coefficient of 40 percent. Exception: unheated greenhouse structures that can be decoupled from the building's conditioned thermal envelope.

Section 5. The following definitions are added to § 9-5-4-2 of the "Woodburning Ordinance" in alphabetical order:

GARBAGE. All solid, semi-solid and liquid wastes generated from residential, commercial and industrial sources, including trash, refuse, rubbish, industrial wastes, asphaltic products, manure, vegetable or animal solids and semi-solid wastes, and other discarded solid and semi-solid wastes.

PAINTS. All exterior and interior house and trim paints, enamels, varnishes, lacquers, stains, primers, sealers, undercoatings, roof coatings, wood preservatives, shellacs, and other paints or paint-like products.

PAINT SOLVENTS. All original solvents sold or used to thin paints or to clean up painting equipment.

TREATED WOOD. Wood of any species that has been chemically impregnated, painted or similarly modified to improve resistance to insects or weathering.

WASTE PETROLEUM PRODUCTS. Any petroleum product other than gaseous fuels that has been refined from crude oil, and has been used, and as a result of use, has been contaminated with physical impurities.

Section 6. The following new section is added to the "Woodburning Ordinance" as § 9-5-4-7 ROA 1994:

§ 9-5-4-7 PROHIBITION ON BURNING CERTAIN MATERIALS

It is unlawful to burn the following in any solid fuel heating device: garbage, treated wood, plastic products, rubber products, waste petroleum products, paints, paint solvents, coal, glossy or colored papers or particle board.

Section 7. SEVERABILITY CLAUSE. If any section, paragraph, sentence, clause, word or phrase of this ordinance is for any reason held to be invalid or unenforceable by any court of competent jurisdiction, such decision shall not affect the validity of the remaining provisions of this ordinance. The Council hereby declares that it would have passed this ordinance and each section, paragraph, sentence, clause, word or phrase thereof irrespective of any provision being declared unconstitutional or otherwise invalid.

Section 8. COMPILATION. This ordinance shall be incorporated in and made part of the Revised Ordinances of Albuquerque, New Mexico, 1994.

Section 9. EFFECTIVE DATE. This ordinance shall take effect five days after publication by title and general summary.