EF 2: BUILD NEW HOMES TO ENERGY STAR® STANDARD

New York City Building Code
Proposal developed by the Homes Committee

Summary

Issue:
New homes are not designed to take advantage of cost-effective energy-saving measures. ENERGY STAR is a widely accepted national standard for energy-efficient housing design.

Recommendation:
Require all new residential buildings of three stories or less to be constructed to ENERGY STAR standards.

Proposed Legislation, Rule or Study

Amendments to the New York City Building Code:

1. Amend Chapter 13 to include a new section 1302 as follows:

1302 Energy star homes.

1302.1 Definitions. For the purposes of this Section 1302 only, the definitions found in chapter 4 of the Energy Conservation Construction Code of New York State shall apply. In addition, for the purposes of this Section 1302, the following terms shall have the following meaning:


CERTIFIED HERS RATER. A person with certification as a Certified Home Energy Rater by the Residential Energy Services Network.

1302.2 Energy Star requirements. In addition to the requirements of Section 1301.1.1, any residential building classified in occupancy group R-2 and 3 stories or less or classified in occupancy group R-3 shall be designed and constructed in accordance with the Energy Star homes standards. Any application for a permit for such construction shall include a statement from a registered design professional or certified HERS rater that the construction documents comply with such standards. Prior to sign-off, such building shall schedule a final Energy Star inspection by a certified HERS rater and submit documentation to the department demonstrating that such inspection has been scheduled.

Supporting Information

Issue – Expanded
Residential buildings consume over 37% of the energy used in NYC.¹ Energy is used in homes either through direct burning of fossil fuels or in the use of electricity produced by burning fossil fuels at power plants. This energy use contributes to smog, acid rain, and global warming; the less energy we use in our homes, the less air pollution we generate.²

ENERGY STAR is a certification for homes that have met energy efficiency guidelines established by the U.S. Environmental Protection Agency (EPA). These homes must be at least 15% more energy efficient than required under the 2004 International Residential Code, and "include additional energy-saving features that typically make them 20–
30% more efficient than standard homes.Over 1 million homes have been certified under this program, which relies on tried and true energy-efficiency technologies. The features of ENERGY STAR homes include effective insulation, high-performance windows, tight construction and ducts, efficient heating and cooling equipment, and efficient electrical products and appliances. The EPA uses independent Home Energy Rates to verify compliance with the standard.

**Environmental & Health Benefits**

ENERGY STAR certified homes use less energy than conventional homes, reducing climate change, improving air quality, and increasing energy independence.

This proposal was found to have a high, positive environmental impact per building and to impact a large number of buildings. It was thus given an environmental score of 3.

This proposal was found to have no significant positive health impact.

**Cost & Savings**

As described in the Executive Summary, Bovis Lend Lease prepared cost estimates for each Task Force proposal in the context of well-defined construction projects in specific buildings. Where possible, members of the Technical Committees prepared savings estimates for some of these projects and buildings. These cost and savings estimates are presented in the February 1st draft version of Appendix A. The innate uncertainty in how construction and operation will vary from one building to another, the complexity of the Task Force proposals, and the wide range of applications in which the proposals may be realized mean these figures are truly estimates.

This proposal is not expected to have any significant impact on capital costs.

**Precedents**

Countless jurisdictions across the country have mandated ENERGY STAR for new homes. In Long Island, towns representing more than half of the new home starts in 2008 require compliance with ENERGY STAR.

**LEED**

LEED for Homes requires that the building or space meets the performance requirements of ENERGY STAR for Homes (including third party inspections) as a prerequisite for the Energy & Atmosphere sections. LEED for Existing Buildings requires that a building or space meet a minimum ENERGY STAR rating as outlined by LEED, or for buildings types not addressed by ENERGY STAR demonstrate that the building has an equivalent rating as calculated by an alternative method described by LEED. Therefore, this proposal will assist in achieving LEED certification under these rating systems provided that these provisions are met.

Other rating systems utilize differing criteria for compliance with LEED.

**Implementation & Market Availability**

The expertise and materials to construct ENERGY STAR homes is widely available since over 1 million homes have been certified under the program and it is mandatory across much of Long Island.

As of July 2009, there were 87 Certified HERS Raters statewide (up from 65 in May), a clear indication of how fast the market is adapting to the growing demand. There are 15 Energy Star builders in New York City at the moment, a number that is expected to rise at the same rate as the HERS raters.
ENDNOTES:

1 CITY OF NEW YORK, PLANYC: A GREENER GREATER NEW YORK, 107 (2007),
http://www.energystar.gov/index.cfm?c=new_homes.nh_benefits
(last visited January 21, 2010).
(last visited January 21, 2010).
http://www.energystar.gov/index.cfm?fuseaction=mill_homes.showSplash
(last visited January 21, 2010).
5 RICHARD FAESY, RATCHETING RESIDENTIAL ENERGY CODES UP TO ENERGY STAR: THE LONG ISLAND MODEL AS AN EXAMPLE OF WHAT CAN BE
(last visited January 21, 2010).
7 New York State Energy Research and Development Authority, Resource Locator Map,
http://www.getenergysmart.org/Resources/FindPartner.aspx?t=1
(last visited January 21, 2010).