ENVIRONMENT COMMITTEE OCTOBER 22, 2007

ENERGY STAR® PROGRAM
STANDARD CONDITIONS OF DRAFT PLAN OF SUBDIVISION APPROVAL
GENERAL FILE 22.22

Recommendation

The Commissioner of Planning recommends:

1. THAT the proposed Conditions of Draft Plan of Subdivision Approval regarding the implementation of the Energy Star® Program attached hereto as Attachment #1, be included as part of the Standard Draft Plan of Subdivision Conditions for all future low rise development in residential subdivisions.

2. THAT this report be forwarded to the Committee of the Whole for its consideration and approval.

Economic Impact

There are no requirements for new funding associated with this report.

Communications Plan

N/A

Purpose

To provide a mechanism by which the City can promote the Energy Star® Program for use in all new construction for low rise residential development through the application of conditions of draft plan of subdivision approval.

Background – Analysis and Options

Energy Star® Program

Energy Star® is internationally recognized as the highest energy efficiency standard in the market. In 2005, Natural Resources Canada expanded the Energy Star® Initiative in Canada to include energy-efficient new homes being built in Ontario. The pilot project in Ontario is managed for Natural Resources Canada by EnerQuality Corporation. Energy Star® can be applied to all low rise residential types regulated by the Ontario Building Code, which include all forms of single detached, attached and stacked housing. The Energy Star® program utilizes the EnerGuide scale for measuring energy efficiency. Using the EnerGuide scale, a typical single detached dwelling is built to EnerGuide 70, whereas Energy Star® would bring that rating up to 80. In order to be certified as "Energy Star®, the builder builds to the EnerGuide for New Houses protocol, and a third party auditor evaluates the house to ensure that the standards have been met.

New homes that are qualified to receive the Energy Star® label will be 30 to 40 percent more energy efficient than those built to minimum Ontario Building Code standards, and will produce 2 to 3 tonnes less greenhouse emissions. The increased efficiency of these homes translates into reduced energy costs for homeowners.

Typical energy-efficient measures contribute to improved quality and comfort in the home, lower energy demands and reduced pollution. The Energy Star® label is earned only by homes that have met strict requirements, allowing homebuyers to rely on the

performance tested, third party verified, government backed Energy Star® label to know they are buying the most efficient house on the market.

An Energy Star Qualified Home

An Energy Star qualified home is a home that has been built by a licensed Energy Star® for New Homes builder. The builder incorporates energy efficient features into the home so that it can meet the Energy Star® for new homes technical specifications. In order to do so, builders typically incorporate the following energy efficiency measures:

- All furnaces, heat pumps, thermostats and fireplaces are Energy Star qualified. The annual fuel utilization efficiency rating (AFUE) of furnaces complies with rigorous Canadian minimum efficiency requirements, resulting in the use of less fuel.
- All heating and cooling ducts, are to be sealed to ensure less leakage at duct joints, therefore less heat is lost as air moves from the furnace to the living areas of the home and air conditioning is evenly and properly distributed.
- All windows, glass doors and skylights comply with Canada's requirements for Energy Star® qualified windows, of which, these features alone could cut more than 10% off the home's energy costs.
- More insulation in the ceilings and walls of an Energy Star® qualified home than required by the Building Code, which reduces heat loss, and puts less strain on heating and cooling systems.
- Energy Star® qualified new homes must meet rigorous air tightness targets. Reduced air movement though the building envelope, as revealed by an air leakage test, means less draftiness for the homeowner. Inclusion of a heat recovery ventilation system (HRV) creates improved air quality.
- Additional homeowner savings if the builder supplies Energy Star® qualified appliances and lighting.

Upon completion of each Energy Star® qualified home, an independent third party Energy Star® for New Homes evaluator verifies that each home has been built to Energy Star® for New Homes technical specifications. After the verification process is complete, Natural Resources Canada issues an Energy Star® for New Homes label and certificate to the homeowner. The label is usually placed on the home's electrical panel and includes a regional service organization seal of authenticity.

Block 39 and the Energy Star Program

The Development Planning Department, together with the TRCA, PowerStream, and Canada Mortgage and Housing Corporation (CMHC) have been working together to develop a pilot "sustainable community" project within the portion of Block 39 adjacent to the Kortright Centre. The purpose of the sustainable community pilot project is to mirror some of the work being undertaken by the TRCA at the Kortright Centre, which is being transformed into the Toronto and Region Conservation Authority's (TRCA) new "Living City Campus". Part of the vision for this campus includes demonstrating sustainable forms of development including the design and construction of two "Archetype" homes which will be used as a demonstration and learning tool for sustainable technologies. The Archetype homes constructed on the Kortright Centre site will be LEED Gold and ENERGY STAR®.

Immediately east of the Kortright Centre, the Block 39 community provides an excellent opportunity to integrate the work at the Kortright Centre with real examples of how more sustainable forms of residential development can occur within the suburban context.

The remaining 8 developers within the north-west portion of the Block 39 plan area have voluntarily agreed to design and build all the homes within their respective subdivisions to ENERGY STAR® standards. This is the first ENERGY STAR® community in Vaughan, and the largest ENERGY STAR® community in York Region. On September 25, 2006, Vaughan Council approved the 8 proposed draft plans of subdivision with conditions that include the generic list of Energy Star® conditions, attached hereto as Attachment #1.

GTA and the Energy Star® Program

In 2006, EnerQuality Corporation reported that there were 802 Energy Star® qualified homes built in Ontario. Pilot projects similar to the development in Block 39 and Energy Star Homes have been approved throughout the GTA including areas such as Milton, Newmarket, Barrie, and Uxbridge.

The Town of East Gwillimbury is the first municipality in Canada to adopt Energy Star® Standards for new housing. On March 20, 2006, the Town of East Gwillimbury Council passed a municipal policy directing developers of residential developments of ten or more units to be constructed to Energy Star® qualification.

Bill 51 – Sustainable Design

On January 1, 2007, Bill 51, the Provincial Government's reform to the Planning Act came into effect. Bill 51 introduces a series of new regulations empowering local municipalities to adopt among other things, sustainable design criteria. Specifically:

- Addition of provincial interest that promotes development that is sustainable, to support public transit and to be pedestrian-oriented as a provincial interest (Clause 2(q)).
- Enables approval authorities to consider subdivision design that optimizes the supply, efficient use and conservation of energy in the review of a draft plan of subdivision (clause 51(24(l)).

The adoption of the Energy Star® program will assist the municipality in achieving sustainable development and delivering high quality energy efficient dwellings to its residents.

Ontario Building Code

The Ontario Building Code provides for minimum standards of construction which govern and mandate the building permit process. Since the Energy Star® construction standards are in excess of the Building Code requirements, the Building Department has no legislative authority by which to enforce this standard on all new construction. However, additional energy efficiency requirements such as Energy Star® can be recommended to be included as a standard condition through dwelling construction governed by a Subdivision Agreement, prior to issuance of a building permit, in order to achieve more energy efficient dwellings than the current Building Code requirements. Council should be aware that the agreements are not applicable law under the Building Code and must be enforced through other means.

On June 28, 2006, the Building Code was amended to introduce more stringent energy efficient standards for residential buildings, which will be phased in its implementation. Effective January 1, 2007, newly built homes will reach a 74 rating on the EnerGuide Scale. By 2012, the Building Code will require that new houses meet requirements for a 80 rating on the EnerGuide scale (Energy Star®).

Relationship to Vaughan Vision 2007

This report is consistent with the priorities set forth in Vaughan Vision 2007, particularly 'A-5', "Plan and Manage Growth".

Regional Implication

N/A

Conclusion

The Commissioner of Planning recommends that the Environment Committee forward a recommendation to Committee of the Whole to introduce Energy Star® Program Standard Draft Plan of Subdivision conditions for all future low rise residential development.

Attachments

1. Standard Energy Star® Conditions of Draft Plan of Subdivision Approval for Residential Development

Report prepared by:

Carmela Marrelli, Planner, ext. 8791
Grant Uyeyama, Manager of Development Planning, ext. 8635

Respectfully submitted,

JOHN ZIPAY
Commissioner of Planning

MARCO RAMUNNO
Director of Development Planning

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ATTACHMENT #1

STANDARD ENERGY STAR® CONDITIONS OF DRAFT PLAN OF SUBDIVISION APPROVAL FOR RESIDENTIAL DEVELOPMENT

1. The Owner shall agree to the ENERGY STAR® conditions as follows:

a) The Owner agrees that wording will be included in the subdivision agreement requiring all residential units to be built to ENERGY STAR® for New Homes Technical Specifications (Version 2.0 or most current) standards, and agrees to comply with the ENERGY STAR® for New Homes Administrative Procedures (September 2006 or most current) process requirements for design, inspection and certification.

b) Prior to the issuance of a building permit, the Owner/builder shall have prepared, by a Certified Energy Evaluator, an ENERGY STAR® for New Homes "Building Option Package" or develop a custom package using EnerGuide for New Houses (EGNH) software with respect to housing design and construction techniques and implementation methods to ensure that all the residential units within the draft plan are ENERGY STAR® qualified. Such package shall be prepared at the Owner's expense and submitted to the Chief Building Official for information.

c) Prior to the issuance of a building permit, the developer and/or builder and/or applicant for the building permit is to provide the Chief Building Official with verification that the proposed homes have been enrolled with EnerQuality Corporation in the ENERGY STAR® for New Homes program, including signing an ENERGY STAR® Participant Administrative Agreement for Builders of ENERGY STAR® Qualified New Houses.

d) Prior to the issuance of an occupancy permit (provisional occupancy certificate), the Owner shall provide testing verification for each dwelling unit to the City to ensure that all homes have been ENERGY STAR® qualified at the completion of construction. ENERGY STAR® labeling shall be affixed to the home.

e) The following notes shall be included in BOLD CAPITAL TYPE on the map to be displayed on the interior wall of the sales office, as approved by the City of Vaughan, prior to offering any units for sale:

"For further information, on proposed and existing land uses, please call or visit the City of Vaughan Development Planning Department, at 2141 Major Mackenzie Drive, (905) 832-8585."

"For detailed grading and berming information, please call the developer's engineering consultant, (name) at _____ ".

"This map is based on information available as of (date of map), and may be revised or updated without notification to purchasers."

"All the residential units within this plan will be built to ENERGY STAR® standards, and shall be ENERGY STAR® qualified prior to the issuance of an occupancy permit (provisional occupancy certificate). The design, inspection, and certification for the ENERGY STAR® program are the responsibility of the developer and/or builder."

[In such circumstances, the Owner is responsible for updating the map and forwarding it to the City for verification.]

2. The Owner shall cause the following warning clauses to be included in a schedule to all Offers of Purchase and Sale, or Lease for all lots/blocks:

   a) within the entire Subdivision Plan:

      - "Purchasers and/or tenants are advised that all of the residential units within this Plan will be built to ENERGY STAR® standards, and shall be ENERGY STAR® qualified prior to the issuance of an occupancy permit (provisional occupancy certificate). The design, inspection, and certification process for the ENERGY STAR® program is the responsibility of the developer and/or builder."