



# Corporate Report

NO: R030

COUNCIL DATE: FEBRUARY 26, 2007

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## REGULAR COUNCIL

TO: **Mayor & Council** DATE: **July 14, 2010**  
FROM: **Acting General Manager, Planning and Development** FILE: **6700 – 01**  
**0550-20-21**  
SUBJECT: **Built Green™ and Energy Efficiency for Residential Buildings**

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## RECOMMENDATION

It is recommended that Council receive this report as information.

## INTENT

The purpose of this report is to:

- Follow up on a recent delegation to Council by David Kelly of the Canadian Home Builders' Association of British Columbia ("CHBA"), regarding the Built Green™ BC Program;
- Advise Council of the potential to use the Built Green™ standard in the application of improved energy efficiency guidelines; and
- Advise Council of the current initiatives and opportunities underway to support energy efficient development in the City of Surrey.

## BACKGROUND

At the November 20, 2006, Regular Council Land Use meeting, Council received a delegation from Mr. David Kelly of the CHBA. Mr. Kelly presented the Built Green™ BC Program to Council as an environmental solution for residential housing in Surrey. Council received the delegation and resolved that the matter be referred to staff and the Environmental Advisory Committee ("EAC") for review. The report from the delegation was received by the EAC, as information, at its meeting of December 6, 2006.

Built Green™ is an industry driven voluntary program that promotes "green" building practices to reduce the impact that building has on the environment. Built Green™ BC is

a program of best practices for new home construction. The focus of the program is to improve energy efficiency and environmental sustainability of new residential construction. The Natural Resources Canada (NRCan) initiative, EnerGuide for New Houses, is an integral part of the Built Green™ BC program. The program in British Columbia is administered by the provincial body of the CHBA.

## **DISCUSSION**

### **The Built Green™ Program**

The presentation to Council noted that the Built Green™ BC Program provides an opportunity to encourage and support environmentally friendly housing in the following ways:

- The CHBA informs builders of energy efficiency and environmental sustainability in construction;
- The CHBA is the delivery agent for the EnerGuide program and Environmental Sustainability program provided under the federal Natural Resources Program. A year ago, the CHBA introduced a new program as part of the EnerGuide program called Built Green™;
- The Built Green™ program seeks to encourage homebuilders to build to best practices of energy efficiency and environmental sustainability in single family, townhouse, duplex and multi-unit (4-storey or less) residential construction;
- The federal program uses the EnerGuide Rating tool. This tool is based on a scale from 1 to 100, measuring the energy efficiency of a house built to code. Most houses in BC rate around 70 out of 100, whereas 20-30 year old houses rate between 50 and 65. Following the principles of Built Green™, a new house will rate between 72 and 80. After construction, each house is examined and tested by a third party and receives a label.

Mr. Kelly proposed that the Built Green™ standard of the CHBA be used as the focus for energy efficiency by residential builders in the City of Surrey.

The CHBA and the Built Green™ program are among several programs that have been highlighted by the Planning and Development Department for discussion and presentation at an upcoming Energy Efficiency Workshop.

### **Community Action on Energy Efficiency – Energy Efficiency Workshops**

As recently reported to Council, the City of Surrey has been successful in obtaining a grant through the Community Action on Energy Efficiency (CAEE) program of the BC Ministry of Energy Mines and Petroleum Resources to conduct workshops with staff, and with developers, builders, consultants and EAC representatives, along with government and energy utility representatives as resources.

The workshop with representatives of the development industry will highlight energy performance guidelines and provide tools to promote their implementation. The City has invited representatives from government, energy utilities, local developers, builders, building design professionals, and City Planning and Development staff as attendees. The planned agenda will include the following:

1. Background – rationale for energy performance, including federal and provincial context, and benefits to the municipality, developers, consumers and public (e.g., estimated energy savings and Greenhouse Gas reduction); a summary of current City of Surrey energy performance and sustainable development policies; an introduction to energy performance guidelines; an outline of the provincial Energy Efficiency Plan, and a strategy for promotion of improved energy performance.
2. Incentive Programs - overview of government and energy utility incentives and resources provided by representatives from government and energy utilities. (MEMPR, NRCan - CBIP, R-2000 and EnerGuide agents), Green Buildings BC, BC Hydro and Terasen.
3. Energy Performance Agencies – presentations by industry agencies that provide resources or guidelines for energy performance, e.g., Canadian Green Building Council BC (Provincial LEED agents), and Built Green™ (local EnerGuide agent) - CHBA-BC (local R-2000 agents).
4. Engineering and Design Consultants – presentation of software and energy modelling as a design tool (e.g., CBIP, EnerGuide and R-2000 program modelling software.)
5. Developer Panel Discussion – presentation of brief case studies of local developer initiatives and the related business cases for energy performance. This will be followed by a discussion on how to effectively promote energy performance measures, including the benefits, challenges and resources required.

This workshop is primarily focused on residential developers; however, it is likely that some of the details around creating a more energy efficient development standard can also be applied to other development types (commercial, institutional, industrial) through additional processes and at a later point in time.

The workshop is tentatively scheduled for early March 2007, and it is expected that the outcome of this workshop will include the following:

- A summary of workshop proceedings, including proposed guidelines, resources and recommendations for implementation.
- Energy Performance Guidelines to be implemented on a voluntary basis. The City's Consultant will prepare case study reports for selected projects to document results, including a description of energy efficiency measures, estimate of annual energy savings, Greenhouse Gas reduction, incremental cost, simple payback, and return on

investment. Estimated annual energy savings of City-wide implementation is to be reviewed, based on Building Permit and Development Permit applications.

- Information materials and "how-to" kit. This reference information will be in formats suitable for both major developers constructing multi-family or commercial buildings and smaller developers working on ground-oriented housing projects.

## CONCLUSION

The Built Green™ program incorporates measures that exceed those mandated through the Building Code. Despite the fact that the Built Green™ program may prove cost effective in the long term, the City lacks the legal mandate to require developers to build to a higher standard than those specified by the Province through the BC Building code. The Built Green™ program is, however, a good step in the direction towards improved environmental and energy conserving building practices.

It is hoped that through developer and builder workshops, such as the upcoming CAEE Energy Efficiency Workshop, a new set of voluntary Performance Guidelines will be developed that will lead and encourage developers to consider even greater energy efficient residential construction methods in the future.

The presentation made to Council by David Kelly of the CHBA, with regard to the Built Green™ program represents one of the important initiatives currently underway in promoting energy efficient buildings and construction. Mr. Kelly has been invited to participate as a presenter at the upcoming Energy Efficient Workshop sponsored by the City of Surrey with funding provided by the CAEE program.

Mr. Kelly's input, along with that of other presenters, will hopefully promote increased interest in energy efficient building techniques by builders and developers in Surrey and will provide background and contextual information in the development of the City's Sustainability Charter.

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