

## Effective Green Building Policy- The City of Vancouver Case



*Governments at the federal, provincial and municipal levels are increasingly adopting green building initiatives in an effort to meet several challenges, including the fluctuating cost of energy as well as the looming prospect of climate change.*

By Sylvia Coleman and Stefan Storey

GLOBE-Net (November 2, 2009) - Green building policies, or those policies designed to install green buildings, take the form of two types: mandatory

and voluntary. The City of Vancouver has implemented both types of policy in their commercial and the residential sectors, and it is a combination of these policies that is fostering the greening of new building stock.

### Green Building Policy at the City of Vancouver

The City of Vancouver has produced several green building initiatives over the last decade. David Ramslie, the City of Vancouver's Sustainable Development Program Manager, notes that the creation of the sustainability office in the early 2000s, along with the development of the 2010 Winter Olympics Athlete's Village in South East False Creek, were major drivers of green building policy development at the City.

These developments took place in a wider cultural context of growing environmental concerns, and had their roots in concern about climate change. Recommendations made in response to the City-commissioned report on climate change in 1990, called "Clouds of Change," constituted the tipping point and helped pave the way towards subsequent sustainability initiatives, and in particular, green building initiatives.



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### Defining green buildings and performance targets

Before a green building policy can be set, policy makers need to be able to **define green building**. That definition is largely provided by meeting green building standards and targets that the industry understands, such as LEED™, Energy Star, and others. The setting of targets and limits for energy and water consumption, greenhouse gas emissions and the like is a primary means of instituting a policy driver. However, building design and construction are highly competitive fields, and it can be a point of pride in green building circles to go beyond the latest benchmark or target. As a result, the boundaries of innovative green design are continually being explored and improved upon, particularly where civic commitment and leadership is relatively progressive.

### Voluntary becomes Mandatory

The City of Vancouver has tended to adopt otherwise voluntary green building initiatives that have already gained some traction in the industry, and made them mandatory. In the process of meeting the **City's Sustainability Principles** and climate change targets, the City has instituted voluntary initiatives like LEED into regulations, by-laws and building codes. In the context of climate change, the City adopted **the 2030 Challenge**, a US-generated voluntary initiative that encourages the reduction of fossil-fuel GHG-emitting consumption in new buildings.

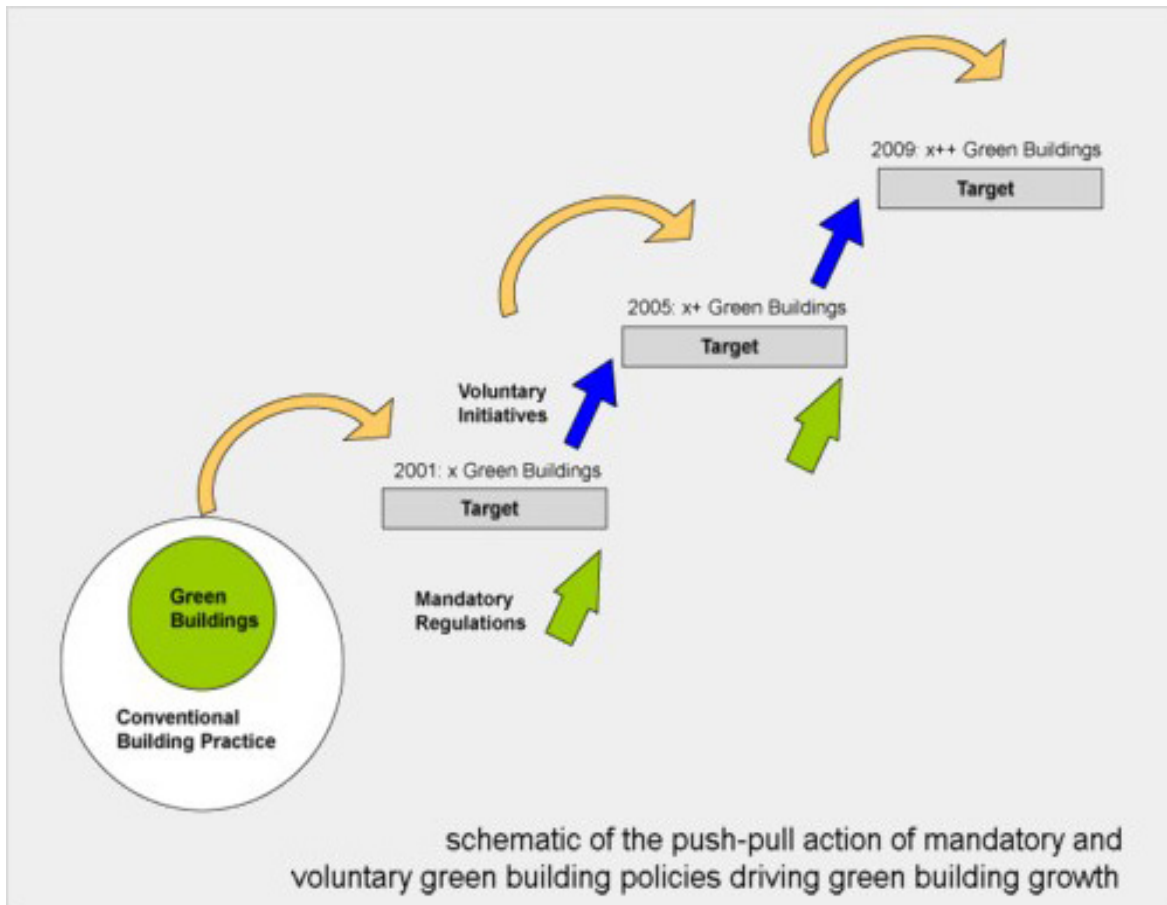
The Challenge aims for 50% reductions from the regional average by 2010, and carbon neutrality by 2030. The organisation has published an "interim system" that outlines how to achieve carbon neutrality while using existing building standards and codes, including the LEED System. The 2030 Challenge has captured much attention in both green building and political circles in North America, and is currently the most focused initiative regarding carbon neutrality in buildings. In the interim, the City instituted regulations and by-laws that aim for the reduction of GHG emissions by 33% from 2007 levels, by 2020.

#### Mandatory initiatives by the City of Vancouver

For the 2010 Winter Olympics, the City determined that all new venues constructed for the games had to meet LEED Silver standards, constituting an international showcase of green buildings. The following year, in 2004, the Canadian federal government adopted a target of LEED Gold for its capital projects, while the City of Vancouver officially required LEED Gold for its own new civic buildings.

Because the LEED standard itself is voluntary, the City further required the achievement of specific energy points in order to ensure a 30% reduction in energy use in all new civic buildings. In 2005, the City's Green Building Strategy provided by-laws to support environmental performance in buildings, and in 2008 the **BC Building Code** was given a green update in an effort to address water and energy efficiency.

The same year, the **Green Homes Program** similarly mandated a set of environmental requirements for one-and two-family homes, projecting energy savings of 33% over conventional construction. According to Ramslie, the aim has been first to raise baseline knowledge in the industry. Later in 2008, the City's **EcoDensity Charter** was approved, committing the Vancouver to make environmental sustainability, housing affordability and livability a primary goal in all city planning decisions.



## Push-Pull

The action of voluntary and mandatory green building policies takes the form of a "push-pull" relationship. Mandatory initiatives push the growth of green building in the market, while voluntary measures pull. It primarily is the combination of these two, along with other drivers such as technology innovation that leads to market transformation. Each mechanism works poorly in isolation: mandatory initiatives alone can be slow to change and therefore lack innovativeness over time, while solely voluntary initiatives can evolve all too fast as they strive to meet the whims of the market.

Mandatory foundations, Voluntary innovation

As [James Russell discusses](#) regarding LEED in the carbon-neutral era, the encouragement of green and sustainable buildings over conventional buildings is best enabled when mandatory initiatives first set the foundation for targets that, for example, enable energy efficiency or carbon neutrality.

In addition, as the [Green Building Impact Report 2008 \[pdf\]](#) indicates, "technology incentives and energy prices that reflect true environmental and social costs" are also required to support and enhance the uptake of LEED-like measures in the mass market. Once formerly exotic initiatives become legal, they can then enter mainstream practice. Voluntary initiatives, in a competitive marketplace, will then allow design

innovation, based on the foundation of mandatory initiatives. The next and final article in the "Building Tomorrow" series will look at the environmental attributes of retrofitting versus rebuilding.

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