Does Building Green Create Value?

By Gil Yaron, LL.M, LL.B, BA&Sc and Melissa Noel, MBA, BSc
Light House Sustainable Building Centre Society, Vancouver, BC

The number of certified buildings in Canada has continued to grow steadily since 2000, despite the recent downturn in the North American real estate market. Outside of the United States, Canada has the largest number of LEED certified buildings in the world, with 3,768 projects certified as of 2011 (Watson, 2011). A 2008 study found the reported dollar value of non-residential LEED projects in Canada represented 13% of total non-residential permit values (Leslie, 2008). Around the world, exponential growth is forecasted for LEED certified and "LEED like" buildings over the next two decades (see Figure 1). Experts also estimate an additional 30% of green buildings are currently being built to LEED standard, but are not being registered or certified. In the wake of strong market activity, the question now is whether building green translates into tangible value for property owners and developers.

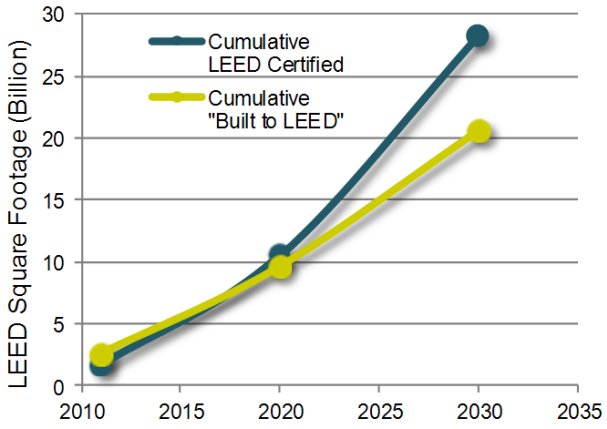

Figure 1: Current and Projected Cumulative LEED and LEED-Like Square Footage Globally (US, Canada, India & Italy)

Studies Show the Benefits of Building Green

There is growing evidence to suggest that improved performance and market recognition associated with green certification increases the value of a building. A recent study published by Singapore's Building & Construction Authority and the National University of Singapore found renovated commercial buildings to be more energy efficient with higher valuations attributable to lowered operating expenses (Marusiak, 2012). The literature also suggests that a building's performance and green building certification impact its assessed value (AV) and market value (MV). One study that encompassed all buildings in the United States over 50,000 square feet found that LEED certification has a positive effect on market values and assessed values (Dermisi, 2009). Specifically:

- ENERGY STAR designation increases AV and MV substantially.
- The effect of LEED rating/level on AV and MV is based on the level of geographic aggregation.
- LEED-Existing Building (EB) Gold has a strong positive effect on AV, while LEED-EB at the Silver level has a similar effect on both AV and MV.
- LEED New Construction (NC) at the Gold level has a strong positive effect on MV
- LEED Core & Shell (CS) at the Gold and Silver levels almost doubles that effect on AV when making adjustments for building location.

Using sophisticated statistical techniques to ensure comparability between green and conventional properties, another recent survey of more than 26,000 US office buildings certified through LEED or Energy Star found they sell for a premium of about 13 per cent. However, the study noted that the building's efficiency is the ultimate determinant in these calculations, not the fact that the building is certified. (Eichholtz P., 2010). Premiums of 5.3% for Energy Star certified buildings and 9.9% for LEED-certified buildings were also observed in a similar study (Miller, 2008 citing Miller, Jay and Florance, 2008).

Studies also show that the rate of return on investment is higher for green building upgrades. A survey conducted by the Building Owners & Managers Association (BOMA International), US Green Building Council, and the Real Estate Forum found that 65% of respondents acknowledged a 5% increase in their ROI compared to the year before, as a result of 'green' building investments (Burr, 2008).

These studies are often dismissed in Canada for a variety of reasons. Most studies consider American building inventory, making them inapplicable to Canadian markets. Others are discounted because they take a snapshot of the market and do not account for changes over time. Furthermore, anecdotal industry experience suggests that even if savings are realized on green buildings through reduced construction costs, long-term operational efficiencies, higher market values and leasing rates, these savings may be offset by increased property taxes resulting from higher assessed property values.

Sustainability in Building Valuations

Part of the problem is that current valuation and appraisal techniques do not address the issue of sustainability in buildings. In 2007, representatives from nations around the world signed the Vancouver Valuation Accord -- an agreement to address the interrelationship between sustainability and value. The Accord was a recognition of the absence of sustainability indicators in the valuation and appraisal of buildings. Since that time, academics, governments, investors and industry have continued to wrestle with the question of whether, and to what degree, "green" buildings are worth more than conventional buildings and to address gaps in current appraisal and valuation techniques to better account for sustainability elements (Lorenz, 2011).

Capturing the Value in Green Buildings

The investment potential associated with green building, particularly building retrofits, in North America is staggering. According to one recent study by the Deutsche Bank, the United States alone offers a $279 billion dollar investment opportunity with resulting energy savings over 10 years totaling more than $1 trillion based on an average 30% efficiency gain. The commercial real estate sector is estimated to offer $72 billion of investment potential alone (DBCCA, 2012).

Investors, owners and property managers are starting to explore the value of certified buildings through concepts such as risk, life cycle costing, and operational efficiency. A recent report from the Institutional Investors Group on Climate Change (IIGCC) [1] sets out the increasing trend amongst institutional investors to consider sustainability and ESG (environmental, social and governance) indicators in regard to the risk and potential performance of their real estate portfolios (IIGCC, 2013). An American survey of 718 executives in architecture, construction, real estate consulting, corporate owner-occupants, developers, engineers, real estate owners, corporate tenants and real estate service providers found that fifty-six percent of executives said their companies were extremely or very committed to following environmentally-sustainable practices in their operations, citing energy efficiency, ongoing operations and maintenance costs and building value as the primary reasons for incorporating green features into a construction project (see Figure 2). However, despite this commitment, the survey found only 48% would seek LEED certification, down from 53% in 2010 and 61% in 2008, which begs the question whether certification itself, or simply the inclusion of green features, enhances the value of a sustainably-built building (Turner Construction, 2012).

[1] Institutional Investors Group on Climate Change (IIGCC) is a forum for collaboration on climate change for European investors. It provides investors with a platform to encourage public policies, investment practices, and corporate behaviour that address long-term risks and opportunities associated with climate change. IIGCC currently has over 80 members, including some of the largest pension funds and asset managers in Europe, representing around €7.5trillion in assets.

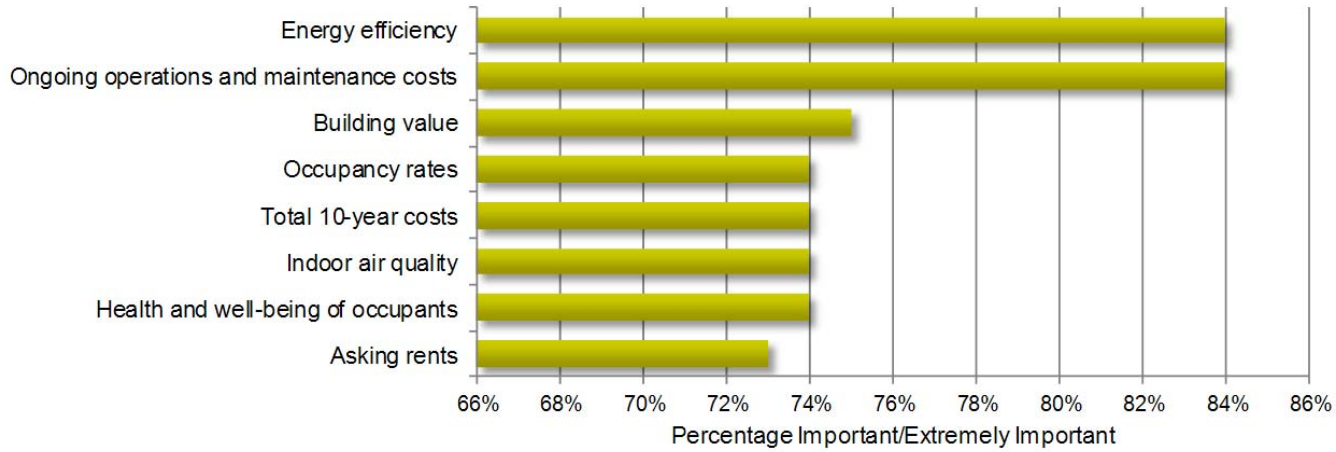

Figure 2: Importance of sustainability factors when evaluating green building features (2012).[3]

The Green Building Valuation Report

To address the gaps in the research around building valuation, Light House is initiating a first-of-its-kind Green Building Valuation Report for the Canadian market starting in 2013. The annual report will track and compare key financial indicators for green certified and conventional commercial buildings in seven major Canadian cities, including market value, assessed value, leasing rates and operating costs.

An invaluable resource to the Canadian building construction and real estate sectors, the Green Building Valuation Report will provide longitudinal trends analysis based on Canadian market data to better assess the value of the nation's green building inventory. The study will consider the value of building certification and provide ongoing assessment of the ability of property appraisal and valuation techniques to capture the value of high performing buildings.

About Light House Research Services

Light House is dedicated to advancing green building and the sustainable infrastructure and economic systems into which green buildings are intrinsically integrated. Light House projects cut across all scales of building and development, from buildings to regions, and across the residential, institutional, commercial, and industrial sectors. We provide research, advisory and project management services to businesses, policy makers and the real estate and construction industries. These are part of the full-suite of other services that we offer, including sustainable land use planning, policy, facilitation, rating system documentation, energy audits and post-occupancy evaluations.

[3] Source: Turner Construction, 2012

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For more information about Light House’s research services, contact
Gil Yaron
Director, Special Projects & Partnerships
778.668.3675
gil@lhsbc.com