

Green is the colour of future real estate

Being green will no longer be a 'good to have' but a 'must have' to retain tenants. BY LEE NAI JIA

CONCEIVED by the late Lee Kuan Yew as a Garden City, Singapore is rapidly evolving to become a City in a Garden, upholding sustainability as one of its key tenets. While we witness world-class gardens and community engagement coming to fruition, real estate market participants must step forward as important stakeholders and frame a suitable response to support the nationwide enterprise.

Construction is one of the largest consumers of raw materials, and research has shown that the construction sector alone is responsible for almost half of the world's carbon emissions. To encourage more resource-efficient buildings, the Building and Construction Authority (BCA) launched the Green Mark Scheme to evaluate buildings for their environmental impact and performance, and offered incentives for building owners to attain the Green Mark rating for their properties.

In 2008, the Building Control Act was amended, requiring all-new buildings and buildings that undergo major retrofitting works to achieve a minimum sustainability standard equivalent to the basic Green Mark certification level. After the amendments were made, the rise in electricity consumption by commerce and service-related sub-sectors moderated from an annual 6 per cent in 2010 to 2 per cent in 2014.

The Housing & Development Board (HDB) is also exploring sustainable solutions through its HDB Greenprint, a comprehensive and integrated framework of goals and strategies to promote greener HDB town development and sustainable homes. HDB will pilot Greenprint at Yuhua estate in Jurong, and residents can look forward to sustainable and green initiatives such as solar panels, sensor-controlled LED lighting, pneumatic waste conveyance system, enhanced pedestrian networks and extended cycling networks.



South Beach has a sustainable microclimatic canopy which covers the open spaces within the development.

The project is scheduled to complete by the end of 2015. A similar project, Greenprint@Teck Ghee, was launched on July 4, 2015.

Complementing government initiatives, the private sector has been actively exploring sustainable solutions, and developers are building more Green Mark-certified buildings.

Building green is no longer as costly as before; when the Green Mark Scheme was launched, the government had to offer cash incentives and bonus gross floor area to encourage developers to go green. Achieving the Green Mark status for new buildings is relatively easier today; the cost premium for Green Mark certification ranges from 0 to 2 per cent while the payback period ranges from zero to three years.

On the supply side, developers in Singapore are also committed to go

green as part of their corporate social responsibility strategy to create a sustainable community. Newly completed office buildings awarded the Green Mark Platinum status from 2014 to 2015 include CapitaGreen and South Beach Tower.

CapitaGreen has extensive vertical greenery to reduce urban heat gain, and a cool void to reduce energy consumption. Its double-skin facade design, which comprises tropical facade design with low-emissivity glass, reduces solar heat.

The mixed-use South Beach development – which won two Green Mark Platinum awards, one each for its commercial and residential components – has a sustainable microclimatic canopy which covers the open spaces within the development. The canopy optimises thermal comfort and regulates daylight and wind while harvesting renewable energy and rainwater.

The building shape and slanting facades of the towers are also oriented to catch prevailing winds and direct air flow to the lower areas of the development. Strategically-positioned sky gardens and vertical green walls also help to minimise the "urban heat island effect".

Besides working towards attaining higher green standards, developers have also explored new initiatives to help create greener working environments. A case in point is City House, which was conferred the Green Mark Pearl Prestige Award. Beyond retrofitting City House with several green features, the owner, City Developments, engaged tenants to sign up for the "1 degree Celsius UP" programme. Tenants who do so are committed to reducing energy usage by raising the air conditioning temperature.

The demand for green buildings is likely to trend upwards. Green Mark certification is a pre-requisite for most corporations seeking office space in Singapore. Some multinational corporations, such as Johnson and Johnson, Wells Fargo, HSBC, Shell and Texas Instruments, mandate LEED certification or its equivalent (i.e. Green Mark) for all their projects as part of their corporate social responsibility policies.

Besides brand positioning, companies prefer to be housed in green buildings because they improve the work experience. According to a study co-authored by University of Notre Dame management professors Edward Conlon and Ante Glavas, employees of the same financial institution working in green buildings were found to be more productive and engaged in their work compared to their colleagues working in non-green buildings. Firms in green buildings also experience higher recruitment and retention rates in the US.

Additionally, research shows that green-labelled buildings fetch higher returns. Piet Eichholtz from Maastricht University in the Netherlands

and his collaborators found that green-labelled commercial buildings in the US command at least a 6 per cent rent premium and an eight percentage-point higher occupancy rate.

Deng Yongheng from the National University of Singapore found that Green Mark certified residential properties can offer a price premium of up to 15 per cent over equivalent non-Green Mark certified projects.

While there is certainly a business case to go green, more incentives may be required for developers to achieve higher green standards.

First, while some corporate occupiers expect the buildings they are in to have some form of green certification, they are less concerned whether the building is Green Mark Certified, Green Mark Gold, Green Mark Gold Plus or Green Mark Platinum. Additionally, factors such as location, accessibility to public transport and amenities may well outweigh green considerations.

Second, the cost of attaining either the Green Mark Gold Plus or the Green Mark Platinum certification remains somewhat prohibitive. According to the BCA, the green cost premium for a commercial building attaining Green Mark Gold Plus is about 2-4.5 per cent, and it will take anywhere between two and four years for the investment to pay back.

Attaining Green Mark Platinum status requires a higher green cost premium of 3-5 per cent, and a longer payback period of two-and-a-half to six years. Notwithstanding, the green cost premium is expected to decline as technological advancements make it cheaper to go green.

This is especially so under the new Green Mark Scheme 2015, which will encourage innovation that helps reduce cost and shorten the payback period. The new Green Mark 2015 provides a platform to recognise the promotion of leadership, integrated design and collaboration along the entire construction value chain.

Need to upgrade

Third, it is also expensive for existing commercial buildings to retrofit to attain the Green Mark status. According to the BCA, the retrofitting costs for an existing building range from S\$1 million to S\$9.5 million, and the payback period ranges from five to seven years. However, that has not discouraged owners from retrofitting their buildings; the list includes Six Battery Road, Tong Eng Building, Manulife Centre and City House.

The need to retain tenants and preserve rent makes it necessary to refurbish and make the building green. However, whether to retrofit or not may become a Catch-22 situation with rents anticipated to correct in 2016: it will be harder to realise a return on investment but landlords risk losing tenants if they do not retrofit.

Going forward, the rent premium for green buildings is likely to diminish when more and more buildings become Green Mark certified. However, landlords need to constantly upgrade to remain relevant, especially when green standards move up over time.

In the future, Zero Energy buildings (ZEBs) – buildings that produce enough energy to run themselves – will be the benchmark for developers. To date, ZEBs in Singapore include ZEB @ BCA Academy, Tsao Residence and CDL Green Gallery @ Singapore Botanic Gardens Heritage Museum.

Additionally, there will be more CarbonNeutral developments that have their carbon emissions reduced to "net zero". The first CarbonNeutral building in Singapore is 11 Tampines Concourse. Tampines Concourse's carbon emissions have been reduced to "net zero" by offsetting some 6,750 tonnes of carbon dioxide generated during the construction phase and first-year operations in 2009. Being green will no longer be a "good to have" but a "must have" for building owners to retain tenants and preserve their rents.

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