

## Experts review progress of green buildings in Singapore

In the past eight years, the number of green building projects in Singapore has grown from 17 to 1,600 - about 20-per cent of Singapore's total gross floor area. -ST

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To meet the BCA's goal of greening 80 per cent of building stocks by 2030, the BCA said at a media conference on Wednesday that much more can be done. Education in schools, among building users and financial institutions are where green awareness needs to continue growth, said Dr John Keung, chief executive of BCA.

### THE STRAITS TIMES

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#### Here is the full statement from the Building and Construction Authority:

The International Panel of Expert (IPE) on Sustainability of the Built Environment reviewed Singapore's progress on its green building movement. BCA's Green Building Masterplan has set the framework for policies and initiatives such as legislation and incentives to further the adoption of green buildings. The five-member foreign experts and eight-member local experts in the field of green buildings met from 24 to 26 June to discuss what more Singapore can do to further advance the effort in green buildings.

The expert panel supported BCA's plan to focus on greening existing buildings and to engage building users and tenants using BCA's user-centric Green Mark schemes. This will complement and intensify the green building efforts.

They also felt that the current incentive approach can continue to encourage building owners to go for higher Green Mark ratings and save both energy and money and to build up a critical mass of green buildings in Singapore.

In a recent study by BCA on 36 commercial buildings, results have shown that an efficient chiller system can improve energy efficiency by up to 42 per cent after retrofitting. This contributes to an overall energy savings of 16 per cent of the total building consumption. The total energy saved was 85 GWh per annum. This energy saving can be used to power another 17,860 HDB 5-room flats for a year<sup>[1]</sup> (See Annex A). In terms of monetary savings, owners of these 36 buildings saved a total of \$22.7 million per year.

The international experts also shared their perspectives on exploring some form of building energy performance disclosure and labelling for benchmarking and improvement purposes to heighten awareness and broaden the reach of green buildings to building owners and consumers. In addition, it is also important to educate the younger generation on environmental sustainability and continue to train a pool of capable green building workforce. They also recommended the need for continual government and industry support of the research, development and deployment (RD&D) of innovative and effective green building technologies. All these efforts will help strengthen Singapore's position as a global leader in green buildings in the tropics and sub-tropics.

These recommendations will be reviewed by BCA for adaptation and inclusion in the third Green Building Masterplan which will be unveiled in September, at the International Green Building Conference to be held during the Singapore Green Building Week from 9-13 September 2013.

#### Singapore's Efforts in Greening the Built Environment

The number of green building projects in Singapore has grown from 17 in 2005 to about 1,600 in eight years. This translates to 47 million m<sup>2</sup> of Gross Floor Area (GFA), or 20 per cent of Singapore's total GFA. Singapore is thus well on track to meet its goal of greening 80 per cent of Singapore's building stocks by 2030.

The 2nd Green Building Masterplan launched in 2009 has been instrumental in achieving such stellar results. Recognising BCA's outstanding achievement in leading the green building movement and energy efficiency improvement, the US-based energy efficiency coalition, Alliance to Save Energy, will confer on BCA the International Star (I-Star) Award<sup>[2]</sup> in October 2013. Singapore is the first country outside of America and Europe to receive this Award.

Dr John Keung, CEO of BCA, said, "The award is testament to our progress in greening Singapore's built environment through BCA's Green Building Masterplan. With a robust plan that looks into all

aspects of creating a sustainable built environment, I am confident that our vision of becoming a global leader in green buildings, with particular expertise in the tropics and sub-tropics, can be realised in the next few years."

With a focus on greening our existing buildings, several initiatives, including the \$100 million Green Mark Incentive Scheme for Existing Buildings was introduced to encourage retrofitting and upgrading works for improving building energy efficiency. The scheme was fully committed earlier this year, co-funding up to 50 per cent of the costs of energy efficient equipment and professional services for 81 projects.

A pilot Building Retrofit Energy Efficiency Financing (BREEF) scheme was also introduced in 2011 to provide credit facilities for commercial building owners. Under the scheme, building owners can carry out energy efficient retrofits under an Energy Performance Contract (EPC) arrangement. BCA currently co-shares 50 per cent of the risk of any loan default for 5 projects with the participating financial institution issuing the loans.

### **Legislation for Existing Buildings**

Buildings consume about one-third of Singapore's total end-use electricity. To give a greater push for energy efficiency in existing buildings and to improve Singapore's energy security, productivity and growth, landmark legislation for energy efficiency was introduced to mandate minimum environmental sustainability standards for existing buildings. The Regulations will be implemented from the 3rd quarter of 2013 and building owners will have to fulfil three requirements under the Building Control Act:

Achieve minimum Green Mark standards for existing buildings when a cooling system is installed or retrofitted (effective from early January 2014)

Carry out three-yearly energy audit on building cooling systems and compliance with design system efficiency (effective from early January 2014)

Submit building information and energy consumption data annually (effective from 1 July 2013)

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