

## **MEDIA RELEASE**

### **BCA TO LAUNCH WORLD'S FIRST HIGH-RISE ROTATABLE LABORATORY FOR THE TROPICS IN 2016, DEVELOPED IN COLLABORATION WITH CALIFORNIA'S LAWRENCE BERKELEY NATIONAL LABORATORY**

- *BCA SkyLab, world's first high-rise rotatable laboratory for the tropics developed in collaboration with Lawrence Berkeley National Laboratory (LBNL), to be launched in first half of 2016*
- *New Green Mark 2015 launched in September to further drive sustainable outcomes for Singapore*
- *Positive trends on Singapore's building energy performance observed in the BCA Building Energy Benchmarking Report (BEBR) 2015*

**Washington D.C., 18 November 2015** – The Building and Construction Authority (BCA) of Singapore will be launching the World's first high-rise rotatable laboratory for the tropics, the BCA SkyLab, in the first half of next year. Developed in collaboration with Lawrence Berkeley National Laboratory (LBNL) in California, the BCA SkyLab complements BCA's existing Zero Energy Building (ZEB) to further green building research and development efforts in Singapore.

2 To keep abreast of the latest energy efficiency and R&D technologies in the United States (US) and facilitate knowledge exchange between Singapore and the US, Dr John Keung, CEO of BCA, led a green building delegation to Boston last week and is attending the Greenbuild International Conference and Expo in Washington D.C. today.

3 At the event, BCA has set up a 36-square meter Singapore Green Pavilion themed "Singapore - Marking a Decade of Sustainability" to showcase the key milestones and achievements in the country's green building movement for the past decade with six information panels. The BCA SkyLab and its key features are also showcased at the pavilion.

#### **The World's First High-Rise Rotatable Laboratory for the Tropics – The BCA SkyLab**

4 Built on the rooftop of a six-storey building at the BCA Academy, the BCA SkyLab is constructed on a rotatable platform to enable tests to be carried out at any orientation to the sun and wind. The BCA SkyLab is part of BCA's plans to further accelerate the pace of research, development and application of energy-efficient building technologies in the tropics. To build this facility for test-bedding green building technologies in Singapore, BCA inked a partnership agreement with US-based LBNL in November 2012.



*Figure 1: Artist Impression of the BCA SkyLab developed in collaboration with California's Lawrence Berkeley National Laboratory (LBNL) to be launched in 2016*

5 "We are very pleased to be sharing our expertise in FLEXLAB with BCA to develop the BCA SkyLab in Singapore. Singapore is at the forefront of the green buildings movement in the tropics. This collaboration with BCA will help to open up more opportunities and frontiers for research in green technologies in a tropical climate, and we are happy to be part of this initiative," **said Ms Cindy Regnier**, Group Leader for Commercial Building Systems and FLEXLAB Executive Manager. FLEXLAB (Facility for Low Energy experiments in Buildings) is Berkeley Lab's series of experimental testbeds focused on RD&D of integrated systems and grid enabled controls. She also manages several research projects focused on deployment of low energy systems and technologies.

6 The BCA SkyLab is expected to be completed with a pipeline of technologies to start test-bedding by the first half of next year.

7 **Dr John Keung, Chief Executive Officer of BCA, said**, "BCA is glad to be collaborating with the LBNL on this meaningful initiative. With the BCA SkyLab, we are moving another step closer to the ambitious goal of achieving 'low-energy high-rise' buildings and "zero-energy low-rise' buildings in the tropics. We will continue to work closely with our US counterparts to further drive the research and development of green building technologies and sustainable solutions for Singapore."

### **BCA's Green Mark 2015 scheme**

8 Positioned as an international green building benchmark system for the tropics, BCA introduced a new version of the Green Mark scheme called the "Green Mark 2015" in September this year to further push the boundaries on environmental sustainability. The Green Mark 2015 was developed through a collaborative framework involving more than 100 industry specialists and experts, and 12 taskforces led by BCA. The collaboration was complemented by extensive consultation with industry bodies and academia. This version,

which was developed for new non-residential buildings, will incorporate key changes, with an expanded focus to address sustainability in a more balanced and holistic manner.

9 A bonus section on advanced green building efforts is included, to spur efforts beyond requirements.

10 Key benefits for building occupants and users include a stronger emphasis on indoor environmental quality in relation to enhanced health and well-being, and buildings that are equipped with smart controls and analytics to assist in the management and optimisation of building resources

11 The revamped scheme will enable projects to analyse its energy effectiveness in both the optimisation of energy efficiency as well as energy consumption. Greater recognition for renewable energy will be considered; this will accelerate solar PV adoption by further encouraging the use of renewable energy through solar feasibility studies and solar ready roof design. The scheme has been launched for piloting and will be fine-tuned before full implementation.

12 BCA also released the Building Energy Benchmarking Report (BEBR) 2015 for the second year. The report provides a comparative study which covers commercial buildings and consists of two years' data.

The three key findings in the report are:

- (i) In Singapore, commercial buildings achieved **better energy performance in 2014** compared to 2013, with retail buildings showing the most significant improvement.
- (ii) BCA Green Mark certified commercial buildings in Singapore **continued to perform better** than non-certified buildings.
- (iii) In Singapore, tenants' electricity consumption **continued to be comparable** to that of their building owners, reaffirming the potential for tenants to play more active roles in improving the energy performance of their premises.

13 **Dr John Keung, CEO of BCA**, commented, "Green Mark 2015 will play a more prominent role in driving and communicating sustainability outcomes in Singapore, as buildings consume more than 30% of the total electricity. It will recognise the leadership of building owners who drive improvements to the overall environmental credentials of projects. Such leadership by the building owners will add a layer of accountability and integrity to the projects teams in business sustainability reporting. The scheme also sets an international benchmark for green buildings in the tropics."

14 On top of Greenbuild Conference, BCA will also be participating in another international event – the inaugural Buildings Day held as part of the Conference of the Parties (COP21) in Paris on 3 December 2015. During the event, BCA will reinforce its commitment to green 80% of Singapore's building stock by 2030, and highlight BCA's ongoing initiatives under the 3rd Green Building Masterplan.

## **About Building and Construction Authority**

The Building and Construction Authority (BCA) of Singapore champions the development of an excellent built environment for Singapore. BCA's mission is to shape a safe, high quality, sustainable and friendly built environment, as these are four key elements where BCA has a significant influence. In doing so, it aims to differentiate Singapore's built environment from those of other cities and contribute to a better quality of life for everyone in Singapore. Hence, its vision is to have "a future-ready built environment for Singapore". Together with its education arm, the BCA Academy, BCA works closely with its industry partners to develop skills and expertise that help shape a future-ready built environment for Singapore. For more information, visit [www.bca.gov.sg](http://www.bca.gov.sg).

### **For media queries, please contact the Communications Department:**

Megan Chow Aiyan

Executive Communications Manager

DID: +65 6804 4153

Email: [megan\\_chow@bca.gov.sg](mailto:megan_chow@bca.gov.sg)

Leong Ee Leng

Director, Corporate Communications Department

DID: +65 6804 4165

Email: [leong\\_ee\\_leng@bca.gov.sg](mailto:leong_ee_leng@bca.gov.sg)