

JOINT MEDIA RELEASE

Keppel Bay Tower certified as Singapore's first Green Mark Platinum (Zero Energy) commercial building

- *Annual energy savings of over 2.2 million kWh*
- *Surpassed original target of becoming Singapore's first super low energy high-rise existing commercial building*

Singapore, 9 December 2020 – The Building and Construction Authority (BCA) has certified Keppel Bay Tower, owned and operated by Keppel Land Limited (Keppel Land), as a Green Mark Platinum (Zero Energy) building. It is the first commercial building in Singapore to achieve this accolade. A Green Mark Platinum (Zero Energy) building must, in addition to achieving a low energy use index (EUI) of less than 115 kWh/m² per year, also have all of its energy consumption, including plug load, supplied from renewable sources, both on-site and off-site.

Mr Tan Swee Yiow, CEO of Keppel Land, said, "In line with Keppel's Vision 2030, Keppel Land places sustainability at the heart of our strategy and operations. We are committed to doing our part in greening the built environment and are delighted by BCA's recognition of Keppel Bay Tower as the first Green Mark Platinum (Zero Energy) commercial building in Singapore, which is an important affirmation of our efforts to leverage technological innovations to enhance the environmental performance of our buildings. We hope that this will pave the way for more zero energy commercial buildings in the years to come, and look forward to further pushing the envelope of environmental sustainability in Singapore and beyond."

Commenting on the achievement, Mr Kelvin Wong, CEO of BCA, said, "This is a significant milestone in our green building journey and I applaud Keppel Land's commitment and efforts in this outstanding accomplishment. It also demonstrates how research and innovation can make zero energy, high rise commercial buildings a reality. I believe this is just the first of many more to come and I look forward to upcoming contributions from across the Built Environment value chain to realise our collective goal of a greener and more sustainable Singapore."

In 2018, BCA awarded Keppel Land with a grant of up to S\$1.28 million under the Green Buildings Innovation Cluster (GBIC) programme to implement new and emerging energy-efficient technologies at Keppel Bay Tower. The aim of this programme is to experiment with, exhibit and exchange knowledge of energy-efficient solutions with stakeholders.

The energy-efficient technologies that were piloted at Keppel Bay Tower include a high-efficiency air distribution system, an innovative cooling tower water management system, integrated sensor technology to optimise fresh air intake, smart LED lighting solutions, and an intelligent building control system.

By February 2020, Keppel Land had achieved a reduction of 22.3% in annualised energy consumption of the building, exceeding its initial target of 20%. Following the successful pilot,

some of these technologies, such as the high-efficiency air distribution system, are currently being replicated to the rest of the building. In addition, an assembly of photovoltaic (PV) panels spanning over 400m² will be installed on the roof of the 18-storey Keppel Bay Tower, as well as its six-storey podium block. The installation of the PV panel system will generate an energy yield of about 100,000 kWh per annum.

Upon completion of these initiatives, Keppel Bay Tower's annualised energy consumption, or EUI, will be less than 115 kWh/m² per year, a reduction of over 30% from its 2017 Green Mark Platinum level and almost 50% less compared to typical office buildings in Singapore¹. This translates to energy savings of over 2.2 million kWh a year from its 2017 baseline, which is equivalent to the amount of energy required to power more than 400 homes² in Singapore for one year. This also translates to cost savings of approximately S\$400,000 annually. The remaining energy use will be offset through the purchase of Renewable Energy Certificates (RECs) through Keppel Land's electricity retailer, Keppel Electric, which are generated from PV panels installed at Keppel Offshore & Marine's yards in Singapore.

Earlier in January 2020, Keppel Bay Tower became the first commercial development in Singapore to utilise renewable energy to power all its operations, including the offices of tenants in the building. The purchase of RECs, together with the installation of onsite PV panels at Keppel Bay Tower, will result in a reduction of over 2,400 tonnes of carbon emissions per annum.

Throughout this journey, Keppel Land collaborated with different stakeholders, including business partners and tenants. For example, the company collaborated with Envision, a global leading smart energy management company and tenant in Keppel Bay Tower, to introduce a smart building control system to further improve the energy efficiency of the building. It also partnered Signify Singapore³ to roll out a scheme for Keppel Bay Tower's tenants to replace their existing office lamps with energy-efficient LED lighting with no upfront capital investment required. This initiative helps tenants enjoy about 30% savings on their utility bills and reduces the total building energy consumption by about 5%.

As a sustainable landlord, Keppel Land encourages its tenants to adopt green practices. In 2019, Keppel Land achieved 100% participation from all its office tenants at Keppel Bay Tower in signing green leases, which is a demonstration of the company's commitment to work with its tenants to provide energy-efficient, resource-efficient and healthier interior spaces for building occupants. The green leases have incorporated the requirements of the BCA-HPB Green Mark (for Healthier Workplaces) Certified standard, which focuses on the health and well-being of building occupants in green offices.

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¹ Average EUI of large office buildings (>15,000m² GFA) in 2018 was 219 kWh/m² per year. Source: BCA Building Energy Benchmarking Report (Statistics and Figures) 2019.

² Based on average energy consumption of a five-room Housing and Development Board flat, which is 418 kWh/month. Source: SP Services.

³ Formerly known as Philips Lighting.