

# New energy rating launched for office buildings

The Building & Construction Authority's Green Mark for Super Low Energy, more rigorous than the Green Mark Platinum, is for office buildings using under 100 kwh per sq m a year

**Singapore** SOLAR shades, natural ventilation and renewable energy panels are some of the prospective energy-saving features the national regulator wants to see in more Singapore buildings.

To intensify the move to a greener future, the Building & Construction Authority (BCA) has launched a new energy rating for buildings that are at least 60 per cent more energy-efficient than the 2005 building codes.

This was announced on Wednesday, the first day of the Singapore Green Building Week (SGBW) event held at the Marina Bay Sands.

Under the new rating, called Green Mark for Super Low Energy, office buildings cannot use more than 100 kilowatt hour (kwh) per sq m a year.

To help more buildings qualify for the voluntary rating, the BCA is working with industry professionals, including property developers, to build such super-low-energy buildings, said its chief executive officer Hugh Lim.

The BCA is also doing more rigorous research and innovation to further push the frontier for green buildings, he added.

"By setting such new performance benchmarks, Singapore can play an important role in mitigating climate change," he said.

Previously, the highest class under the Green Mark, the BCA's benchmarking scheme, was the Green Mark Platinum, awarded to buildings that

save at least half of the energy listed in the 2005 building codes.

More than 10 organisations, including Defence Science and Technology Agency, Singapore Management University and City Developments, have pledged to attain at least one super-low-energy project rating in the next five years, a BCA spokesman said.

The authority is now working with property developer Keppel Land to convert Keppel Bay Tower, a Green Mark Platinum building, into a super-low-energy building.

Last year, Keppel Land was awarded S\$1.28 million from the BCA's Green Buildings Innovation Cluster to

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conduct a pilot on super-low-energy technologies in its building in HarbourFront.

Technologies to be tested in the 18-storey building this month include a smart lighting system, a fresh air intake system that regulates the flow of outside air into the tower, and a cooling tower system that regulates the structure's temperature without the need for chemical water treatment.

It is not common for buildings in Singapore to have all of these technologies within the same structure.

If successful, the building's annual energy consumption is expected to go down by 20 per cent, from 145kwh per sq m a year to 115kwh per sq m a year, said a company spokesman.

This would save the company S\$250,000 a year, and translates to an estimated overall annual energy savings of about 1.5 million kwh, equivalent to the energy required to power more than 250 five-room HDB flats for a year.

It will also mean annual savings of about 7,000 cu m of water, enough to fill three Olympic-size swimming pools.

When applied to the entire building, annual energy consumption is estimated to fall to 92kwh per sq m, the spokesman added.

The pilot is expected to be completed by July 2020.

Speaking at the SGBW opening ceremony, National Development Minister Lawrence Wong said that next year's green building week would be in a different format and include areas like smart facilities management.

"We don't just want to continue with the status quo, we're looking to see how the entire week can be revamped and improved," he said.

"So come next year, we are planning an international built-environment week... Essentially, we want to make this bigger and better all under one roof, where there can be a comprehensive showcase of new and innovative technologies."