

ENERGY-EFFICIENT NOVENCO® ZERAX® FANS INSTALLED AT THE ZERO ENERGY KEPPEL BAY TOWER IN SINGAPORE



KEPPEL BAY TOWER - A ZERO ENERGY BUILDING

Keppel Bay Tower is an exceptional commercial building, matched only by its unparalleled location.

The 18-storey Keppel Bay Tower, owned and operated by Keppel Land, has been certified as a Green Mark Platinum (Zero Energy) building by the Building and Construction Authority (BCA), which makes it the first commercial building in Singapore to achieve this distinction.

TOP 5 TECHNOLOGIES

The transformation began in 2018, when the Building and Construction Authority (BCA), a part of the Ministry of National Development of the Singapore Government, awarded Keppel Land with a grant of

over \$1 million under the Green Buildings Innovation Cluster (GBIC) programme to implement new and emerging energy-efficient technologies at Keppel Bay Tower. The tower had already achieved the Singapore Green Mark Platinum status and the aim of the GBIC initiative was to reduce the energy consumption by a further 20%.

Over 50 applicants applied to take part in the GBIC competition. Out of them, the BCA chose 5 technology partners for the trial at the tower.

NOVENCO Building & Industry's proposal to retrofit an existing centrifugal fan in an air handling unit with a high efficiency ZerAx® axial fan was chosen due to the significant energy reduction potential indicated by probing measurements and verification techniques. The ease of the retrofit work

was a further contributing factor for choosing the up-to-date and the most efficient fan in the world, the NOVENCO® ZerAx® fan.



Highly efficient NOVENCO® ZerAx® axial fan

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RETROFIT IN LESS THAN 10 HOURS

The energy-efficient technologies implemented at Keppel Bay Tower include the most modern technologies such as the innovative and highly efficient EC+ concept of NOVENCO® ZerAx® axial fans with high efficiency motors and Danfoss VFD®s. The retrofit work went smoothly and was completed in an impressive time of less than 10 hours.

The energy savings of 43% achieved through use of the ZerAx EC+ fans have been verified by the independent adjudicators Nanyang Technological University (NTU).

The impact the ZerAx EC+ fans have on the annual energy consumption of the building resulted in February 2020 in a 22.3% reduction, which exceeded the initial target of 20%.

The Keppel Land company is now in the process of replacing the remaining 21 centrifugal fans with high efficiency NOVENCO ZerAx fans at the Keppel Bay Tower.

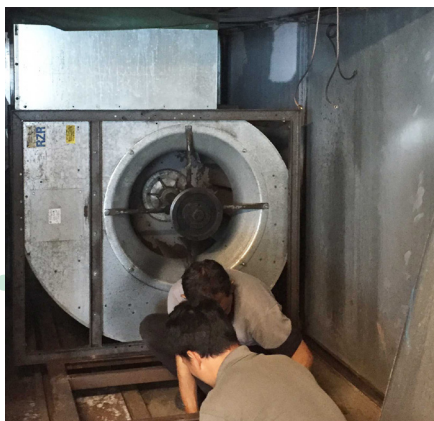
For more information about this successful story, please refer to www.theedgesingapore.com/news/sustainability/keppel-bay-tower-certified-singapore-first-green-mark-platinum-zero-energy.

FACTS

- ENERGY SAVINGS OF 43%
- 20+ YEARS LIFETIME
- VERY LOW SOUND LEVELS
- EASY RETROFIT SOLUTION



Keppel Bay Tower- the first Green Mark Platinum (Zero Energy) commercial building in Singapore



Before retrofit - centrifugal fan



After retrofit - NOVENCO ZerAx EC+