

## ENERGY EFFICIENCY INDEX

The computation of Energy Efficiency Index aims to raise awareness of the building efficiency of the Proposed Model against the Actual Building's performance so that building owners can gauge and set targets for improvement over time.

The study on energy audits of buildings using EEIs for non-residential buildings was carried out and audit results are updated annually by NUS Centre for Total Building Performance [1] on their website. The EEI serves as a good building performance indicator for energy efficiency, allowing building owners to know where they stand compared to other buildings.

### Calculation of EEI:

$$EEI = (TBEC - DCEC) / (GFA_{\text{excluding carpark}} - DCA - GLA * VCR) * (55 / OH)$$

*where:*

- a) TBEC : Total building energy consumption (kWh/year)
- b) DCEC : Data centre energy consumption (kWh/year)
- c) GFA<sub>excluding carpark</sub> : Gross floor area exclusive of car park area (m<sup>2</sup>)
- d) DCA : Data centre area (m<sup>2</sup>)
- e) GLA : Gross lettable area (m<sup>2</sup>),
- f) VCR : Weighted floor vacancy rate of gross lettable area (%)
- g) 55 : Typical weekly operating hours of office buildings in Singapore (hrs/week)
- h) OH : Weighted weekly operating hours of gross lettable area exclusive of data centre area (hrs/week)

### Reference

- [1] NUS Centre for Total Building Performance:  
[http://www.bdg.nus.edu.sg/buildingenergy/e\\_energy/audit\\_results.html](http://www.bdg.nus.edu.sg/buildingenergy/e_energy/audit_results.html)