

## Green Mark Incentive Scheme for Existing Building 2.0 (GMIS-EB 2.0)

### Illustration on Computation of Maximum Grant Amount

**Example:**

An office building, with a Gross Floor Area of 18,000 sqm, targets to achieve **Green Mark SLE** certification by retrofitting the following equipment:

Proposed Measure 1: Replacement of 2nos. of 400RT Chiller Plant System, Estimated Qualifying Cost \$1,800,000

Proposed Measure 2: Replacement of 23nos. of AHUs with VSD, Estimated Qualifying Cost \$1,400,000

Proposed Measure 3: Replacement to LED Lightings, Estimated Qualifying Cost \$70,000

**Calculation of Maximum Grant Amount:**

Based on scheme guidelines, the following applies for this project:

- Funding factor: \$35 / tonne
- Funding cap: \$900,000 or up to 50% of qualifying cost, whichever is lower

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>Measures</b>	<b>Baseline Energy Consumption/yr based on energy audit (kwh/yr)</b>	<b>Estimated Energy Consumption/yr (kwh/yr)</b>	<b>Estimated Energy Savings/yr (kwh/yr)</b> <b>[A – B]</b>	<b>Estimated Carbon Abated/yr (tonnesCO<sub>2</sub>e/yr)</b> <b>[C x 0.408*/1000]</b>
1: Replacement of Chiller Plant	992,342	439,426	552,916	225.59
2: Replacement of AHU	839,098	225,908	613,190	250.18
3: Replacement of Lightings	53,453	5,880	47,574	19.41
*Using 0.408 kgCO <sub>2</sub> e/kWh as the conversion factor (CF) for this scheme on the average CO <sub>2</sub> emissions abated per kWh of electricity saved.			<b>Total Carbon Abated/yr (tonnesCO<sub>2</sub>e/yr)</b>	<b>495.18</b>

$$\begin{aligned}
 \text{Estimated Grant Amount from Estimated Carbon Abated} &= \text{Sum of Estimated Carbon Abated for All Measures} \times \text{Funding Factor} \times \text{Equipment Useful Lifespan} \\
 &= 495.18 \text{ tonnesCO}_2\text{e/yr} \times \$35/\text{tonnes} \times 15\text{yrs} \\
 &= \$259,969.50
 \end{aligned}$$

$$\begin{aligned}
 \text{Total Estimated Qualifying Cost} &= \$1,800,000 + \$1,400,000 + \$70,000 = \$3,270,000 \\
 \text{50\% of total Estimated Qualifying Cost} &= \$1,635,000
 \end{aligned}$$

$$\begin{aligned}
 \text{Maximum Grant Amount} &= (\text{Estimated Grant Amount from Estimated Carbon Abated}) \text{ or } (50\% \text{ of total Estimated Qualifying Cost}) \text{ or } (\text{Funding Cap of } \$900,000), \text{ whichever is lowest} \\
 &= \mathbf{\$259,969.50}
 \end{aligned}$$