

Carbon Footprint Calculation Suvarnabhumi Campus

CO₂ (electricity)

$$\begin{aligned} &= \frac{\text{electricity usage per year (kWh)}}{1000} \times 0,84 \\ &= \frac{13,594,000}{1000} \times 0,84 \\ &= 11,418.96 \text{ metric tons} \end{aligned}$$

CO₂ (bus)

$$\begin{aligned} &= \frac{\text{number of shuttle bus in your university} \times \text{total trips for shuttle bus service each day} \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,01 \\ &= \frac{32 \times 20 \times 3.7 \times 240}{100} \times 0,01 \\ &= 56.83 \text{ metric tons} \end{aligned}$$

CO₂ (cars)

$$\begin{aligned} &= \frac{\text{number of cars entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,02 \\ &= \frac{1,050 \times 2 \times 3.7 \times 240}{100} \times 0,02 \\ &= 372.96 \text{ metric tons} \end{aligned}$$

CO₂ (motorcycle)

$$\begin{aligned} &= \frac{\text{number of motorcycle entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,01 \\ &= \frac{220 \times 2 \times 3.7 \times 240}{100} \times 0,01 \\ &= 39.07 \text{ metric tons} \end{aligned}$$

CO₂ (total)

$$\begin{aligned} &= 11,418.96 + 56.83 + 372.96 + 39.07 \\ &= 11,887.82 \text{ metric tons} \end{aligned}$$

Carbon footprint in 2025 = 11,887.82 metric tons