



University : Al –Nahrain University  
Country : Iraq

### 7.2.3 Carbon management process and reducing carbon dioxide emissions

#### CO<sub>2</sub> (electricity)

$$\begin{aligned} &= \frac{\text{electricity usage per year (kWh)}}{1000} \times 0,84 \\ &= (7559973 \text{ kW}/1000) \times 0.84 \\ &= 6350.4 \text{ 3 metric tons} \end{aligned}$$

#### CO<sub>2</sub> (bus)

$$\begin{aligned} &= \frac{\text{number of shuttle bus in your university} \times \text{total trips for shuttle bus service each day} \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,01 \\ &= ((20 \times 2 \times 2 \text{ km} \times 240) / 100) \times 0.01 \\ &= (19200 / 100) \times 0.01 \\ &= 1.92 \text{ metric tons} \end{aligned}$$

#### CO<sub>2</sub> (cars)

$$\begin{aligned} &= \frac{\text{number of cars entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,02 \\ &= ((250 \times 2 \times 2 \text{ km} \times 240) / 100) \times 0.02 \\ &= (240000 / 100) \times 0.02 \\ &= 48 \text{ metric tons} \end{aligned}$$

#### CO<sub>2</sub> (motorcycle)

$$\begin{aligned} &= \frac{\text{number of motorcycle entering your university} \times 2 \times \text{approximate travel distance of vehicle each day inside campus only (KM)} \times 240}{100} \times 0,01 \\ &= ((10 \times 2 \times 2 \text{ km} \times 240) / 100) \times 0.01 \\ &= (9600 / 100) \times 0.01 \\ &= 0.96 \text{ metric tons} \end{aligned}$$

#### CO<sub>2</sub> (total)

$$\begin{aligned} &= 6350.3 + 1.92 + 48 + 0.96 \\ &= 6401.18 \text{ metric tons} \end{aligned}$$

**Carbon footprint in 2021 = 6401.18 metric tons**