

Template for Evidence UI GreenMetric Questionnaire

University : Universitat Internacional de Catalunya (UIC)
 Country : Spain
 Web Address : www.uic.es/en

[2] Energy and Climate Change (EC)

[2.11] Please Provide The Total Carbon Footprint (CO₂ emissions from the last 12 months, in metric tonnes)

CO₂ (electricity)

$$= \text{Electricity usage per year (kWh)} \times \frac{0.241 \text{ kg CO}_2}{1 \text{ kWh}} \times \frac{1 \text{ metric tonne}}{1000 \text{ kg}}$$

$$= 4195706 \text{ kWh} \times \frac{0.241 \text{ kg CO}_2}{1 \text{ kWh}} \times \frac{1 \text{ metric tonne}}{1000 \text{ kg}} = \mathbf{1011.165146 \text{ metric tonnes}}$$

CO₂ (cars)

$$= \text{number of cars entering the university} \times 2 \times \text{approximate travel distance of vehicle each day on campus only (km)} \times \frac{\text{L fuel}^1}{\text{km}}$$

$$\times \frac{\text{kg CO}_2}{\text{L fuel}} \times \frac{1 \text{ metric tonne}}{1000 \text{ kg}}$$

$$= 125 \text{ cars} \times 2 \times 0 \text{ km} \times \frac{0,16 \text{ L gasoline}}{1 \text{ km}} \times \frac{2.13418 \text{ kg CO}_2}{\text{L gasoline}} \times \frac{1 \text{ metric tonne}}{1000 \text{ kg}} = \mathbf{0 \text{ metric tonnes}}$$

NOTE: A distance of 0km is applied since there no movement on campus.

CO₂ (motorcycles)

$$= \text{number of motorcycles entering the university} \times 2 \times \text{approximate travel distance of vehicle each day on campus only (km)}$$

$$\times \frac{\text{L fuel}^1}{\text{km}} \times \frac{\text{kg CO}_2}{\text{L fuel}} \times \frac{1 \text{ metric tonne}}{1000 \text{ kg}}$$

$$= 30 \text{ motocylyce} \times 2 \times 0 \text{ km} \times \frac{0,16 \text{ L gasoline}}{1 \text{ km}} \times \frac{2.13418 \text{ kg CO}_2}{\text{L gasoline}} \times \frac{1 \text{ metric tonne}}{1000 \text{ kg}} = \mathbf{0 \text{ metric tonnes}}$$

NOTE: A distance of 0km is applied since there no movement on campus.

CO₂ (total)

$$= \text{total emissions from electricity usage} + \text{transport (car, motorcycle)}$$

$$= 1011.165146 + 0 = \mathbf{1011.165146 \text{ metric tonnes}}$$

Carbon footprint in 2019 = 1011. 165146 metric tonnes

Total Carbon Footprint (Universitat Internacional de Catalunya, Spain)

¹ The type of fuel and the litre consumed by each vehicle per km must be taken into account. Depending on the type of fuel, a certain emission factor (kg CO₂/L) is associated. You can consult the data in the *Guide for calculating greenhouse gas (GHG) emissions. Version 2020. (Catalan version)* https://canviclimatic.gencat.cat/en/actua/guia_de_calcul_demissions_de_co2/index.html



Description:

In 2019, only the CO₂ emissions from the university's electricity consumption, measuring 1011.165146 metric tonnes, were counted.

The electricity consumed at the Universitat Internacional de Catalunya (UIC) is provided by the peninsula's electricity grid. Therefore, the Catalan Office for Climate Change (OCCC) of the Government of Catalonia recommends using an emission factor of 0.241 kg CO₂/kWh, also known as the electrical mix. This mix reflects the emissions associated with the net production of electricity consumed by the university **(1)**.

On the other hand, the CO₂ emissions associated with vehicles (cars and motorcycles) were zero since there is no movement on campuses.

Additional evidence links:

1. Catalan Office for Climate Change. (2020). *Guide for calculating greenhouse gas (GHG) emissions (Catalan version)*. Generalitat de Catalunya. Retrieved from https://canviclimatic.gencat.cat/en/actua/guia_de_calcul_demissions_de_co2/index.html