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 (CO_2 emissions from the last 12 months, in metric tonnes)

CO_2 (electricity)

$$= Electricity\ usage\ per\ year\ (kWh)\ x\ \frac{0.241\ kg\ CO_2}{1\ kWh}\ x\ \frac{1\ metric\ tonne}{1000\ kg} =$$

$$= 3644343\ kWh\ x\ \frac{0.241\ kg\ CO_2}{1\ kWh} x \frac{1\ metric\ tonne}{1000\ kg} = 878.286663\ metric\ tonnes$$

CO_2 (cars)

$$71 = number\ of\ cars\ entering\ the\ university\ x\ 2\ x\ approximate\ travel\ distance\ of$$

$$vehicle\ each\ day\ on\ campus\ only\ (km)\ x \frac{L\ fuel^1}{km} x \frac{kg\ CO_2}{L\ fuel} x \frac{1\ metric\ tonne}{1000\ kg}$$

$$= 71\ cars\ x\ 2\ x\ 0\ km\ x\ \frac{0.16\ L\ gasoline}{1\ km}\ x\ \frac{2.13418\ kg\ CO_2}{L\ gasoline} x \frac{1\ metric\ tonne}{1000\ kg} = 0.30\ metric\ tonnes$$

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

CO_2 (motorcycles)

$$0 = number\ of\ motorcycles\ entering\ the\ university\ x\ 2\ x\ approximate\ travel\ distance\ of$$

$$vehicle\ each\ day\ on\ campus\ only\ (km)\ x\frac{L\ fuel^1}{km} x \frac{kg\ CO_2}{L\ fuel} x \frac{1\ metric\ tonne}{1000\ kg}$$

$$= 0\ motocycles\ x\ 2\ x\ 0\ km\ x\ \frac{0.16\ L\ gasoline}{1\ km}\ x\ \frac{2.13418\ kg\ CO_2}{L\ gasoline}\ x\ \frac{1\ metric\ tonne}{1000\ kg} = 0\ metric\ tonnes$$

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

CO_2 (total)

$$= total\ emissions\ from\ electricity\ usage + transport\ (car, motorcycle) = 878.286663\ metric\ tonnes\ + 0.30$$
$$= 878.586663\ metric\ tonnes$$

Carbon footprint in 2023 = $878.586663\ metric\ tonnes$

Figure 1. 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 CO_2/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:

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 CO_2/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 CO_2 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