University : UzSWLU

Country : Uzbekistan

Web Address: https://www.uzswlu.uz/en#

[2] Energy and Climate Change (EC)

GREENHOUSE GAS EMISSIONS INVENTORY FOR UZBEKISTAN STATE WORLD LANGUAGES UNIVERSITY

Methodology:

- GHG Protocol Corporate Standard methodology
- Average emission factors from the United States Environmental Protection Agency (EPA) and the Intergovernmental Panel on Climate Change (IPCC) guidelines
- Assumed average distance of 10 km for all commuting modes

Source Organization:

- University records
- University survey

[2.11] Please Provide The Total Carbon Footprint (CO_2 emission in the last 12 months, in metric tons)

Scope 1 Emissions:				
Emission Source	Activity	Emission Factor (EF)	Emissions (CO2e)	Source Organization
Fuel Consumption (Gasoline)	16195 L	2.31 kg CO2e/L	37411.14 kg CO2e	University records
Fuel Consumption (Natural Gas)	22000 m³	1.96 kg CO2e/m³	43120 kg CO2e	University records
Refrigerants	72 refrigerators	Assumed EF: 1,000 kg CO2e/unit	72,000 kg CO2e	University records
Waste Disposal	2,628 kg	Assumed EF: 0.1 kg CO2e/kg	262.8 kg CO2e	University records
Scope 1 Total Emissions:			80.865,94 kg CO2e	

Scope 2 Emissions:				
Emission Source	Activity	Emission Factor (EF)	Emissions (CO2e)	Source Organization
Electricity Consumption (Total)	1304912 kWh	0.44 kg CO2e/kWh	574161,28 kg CO2e	University recor
Scope 2 Total Emissions:			**574161,28 kg CO2e**	

Scope 3 Emissions:				
Emission Source	**Activity**	**Emission Factor (EF)**	**Emissions (CO2e)**	**Source Organization**
Waste Generated	949,995 kg	Assumed EF: 0.1 kg CO2e/kg	94,999.5 kg CO2e	University records
BEV (Battery Electric Vehicles)	20,805 cars	0 kg CO2e/km	0 kg CO2e	University survey
ESS (Electricity Storage Systems)	307,630 cars	0.24 kg CO2e/km	738,312 kg CO2e	University survey
DSL (Diesel)	81,360 cars	0.27 kg CO2e/km	219,672 kg CO2e	University survey
LPG (Liquefied Petroleum Gas)	125,990 cars	0.25 kg CO2e/km	314,975 kg CO2e	University survey
CNG (Compressed Natural Gas)	282,875 cars	0.2 kg CO2e/km	565,750 kg CO2e	University survey
Subway	1,817,540 passengers	0.05 kg CO2e/passenger-km	908,770 kg CO2e	University survey
Bus	756,070 passengers	0.12 kg CO2e/passenger-km	907,284 kg CO2e	University survey
Electric Scooters	1,825 scooters	0.03 kg CO2e/km	5,475 kg CO2e	University survey
Bicycles	5,475 bicycles	0 kg CO2e/km	0 kg CO2e	University survey
Walking	846,190 pedestrians	0 kg CO2e/km	0 kg CO2e	University survey
Scope 3 Total Emissions:			**3,535,463 kg CO2e**	

Description:

Our university's total greenhouse gas (GHG) emissions amount to 4,762,388.45 kg CO2e, as calculated using the GHG Protocol Corporate Standard methodology and

emission factors from the United States Environmental Protection Agency (EPA) and the Intergovernmental Panel on Climate Change (IPCC) guidelines. The data for these calculations were gathered from our university records and a university survey.

The emissions were categorized into three scopes, as follows:

1. Scope 1 Emissions: Direct emissions from our university's activities, including fuel consumption, refrigerants, and waste disposal. These accounted for 80.865,94 kg CO2e, or approximately 3.6% of the total emissions.

2. Scope 2 Emissions: Indirect emissions resulting from our university's electricity consumption. This amounted to 574161,28 kg CO2e, or approximately 22.2% of the total emissions.

3. Scope 3 Emissions: Other indirect emissions, including waste generated and commuting, which accounted for the largest portion of the emissions at 3,535,463 kg CO2e or approximately 74.2% of the total emissions.

It is essential to consider that these calculations are based on average emission factors and assumed distances, so they might not be entirely accurate for our university's specific situation. However, they still provide valuable insights into our university's environmental impact and can guide future efforts to reduce GHG emissions.

Considering the significant share of Scope 3 emissions, it would be beneficial for our university to implement strategies targeting waste reduction and more sustainable commuting options. This may include promoting recycling, composting, and other waste diversion programs, as well as encouraging the use of public transport, carpooling, cycling, and walking. Additionally, our university could look into energy efficiency improvements and renewable energy sources to reduce Scope 2 emissions. It is crucial for our university to continuously monitor and evaluate its GHG emissions, set reduction targets, and work on implementing effective mitigation strategies to contribute to global climate change mitigation efforts.