

carbon emissions in tCO₂e

1. ES 7.1 – Total carbon emissions in 2024 in scope 1 and 2 in tCO₂e

1.1. Scope 1 emissions covering fuel consumption by Bialystok University of Technology vehicles

TABLE 1. List of fuel consumption by Bialystok University of Technology in 2024

Fuel type	Volume in liters	Mass per liter of fuel	Quantity in kilograms	CO ₂ equivalent of 1 liter of fuel in kilograms	tCO ₂ e per year
Diesel	13 337.64	0.84	15 878.14	2.64	35.21
Petrol	5 123.94	0.7475	6 854.77	2.35	12.04
				SUM	47.25

1.2. Scope 2 emissions associated with indirect generation through consumed electricity and heat

TABLE 2. List of electricity consumption by Bialystok University of Technology in 2024

Facility	Consumption per year in [MWh]	kgCO ₂ equivalent per 1 MWh	tCO ₂ e per year
Campus	639.12	597	769.56
Facility in Hajnówka	28.41		16.96
Hołny Mejera Facility	50.84		30.35
Biogas plant	7.01		4.19
SUM	725.39		821.05

TABLE 3. List of heat consumption by Bialystok University of Technology in 2024

Facility	Heat consumption in [GJ]	Heat consumption in [MWh]	tCO ₂ equivalent per 1 MWh	tCO ₂ e per year
Campus	37 500.35	10 416 763.89	0.414	4 312 540.25
Facility in Hajnówka	225.00	62 500.00		25 875.00
SUM	37 725.35	10 479 263.89		4 338 415.25

1.3. Total emissions for 2024 based on Scope 1 and 2 emissions

TABLE 4. List of tCO₂e emission produced by the Bialystok University of Technology in 2024

Media type	tCO ₂ e per year
Fuels	47.25
Electricity	2 821.05
Heat	4 338 415.25
SUM	4 341 283.56

2. ES 7.2 Relation of total emissions to overall indoor area in tCO₂e/m² for 2024

TABLE 5. List of total CO₂ equivalent production by Bialystok University of Technology in 2024 per unit area

Total emission tCO ₂ e per	Overall area in [m ²]	tCO ₂ e/m ²
4 341 283.56	128 882.38	33.68