



Carbon Footprint Assessment under the Energy and Climate Change Indicator Abylkas Saginov Karaganda Technical University (STU)

This section presents the assessment of the university's carbon footprint within the framework of the Energy and Climate Change (EC) indicator. The calculations reflect the total CO₂ emissions generated over the last 12 months and are based on the consumption of electricity and campus transportation activities.

The following calculations demonstrate the estimated carbon emissions from major sources within the university campus.

CO₂ Emissions from Electricity Consumption

CO₂ (electricity) = 14,389 metric tons

CO₂ Emissions from the University Bus

CO₂ (bus) = 0,024 metric tons

CO₂ Emissions from Cars

CO₂ (cars) = 5,76 metric tons

CO₂ Emissions from Motorcycles

CO₂ (motorcycles) = 0,048 metric tons

Total CO₂ Emissions

CO₂ (total) = 14,389 + 0,024 + 5,76 + 0,048 = 14,395 metric tons

The total CO₂ emissions of Karaganda Technical University named after Abylkas Saginov in 2025 amounted to 14,395 t CO₂-eq. The largest share of emissions is associated with electricity consumption — 14,389 t CO₂-eq., which constitutes the main part of the university's overall carbon footprint.

Compared to the baseline year 2024, when total emissions were 15,360 t CO₂-eq., the university managed to reduce emissions by 965 t CO₂-eq., corresponding to a reduction of approximately 6.3 %. This indicates a positive trend in the university's efforts to reduce its carbon footprint.

Monitoring of greenhouse gas emissions at the university is carried out as part of environmental reporting and participation in international sustainable development rankings. Systematic accounting of CO₂ emissions began in 2024, which is used as the baseline year for subsequent performance comparisons. As



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previously reported, total emissions (Scope 1 and Scope 2) in the baseline year amounted to 15,360 t CO₂-eq.