

CLIMATE PROTECTION CONCEPT FOR ESSLINGEN UNIVERSITY

SUMMARY

WHERE ARE WE?

The issues of climate protection and sustainability play an important role at the Esslingen University of Applied Sciences. This is demonstrated by the **anchoring of these topics in strategic plans** and the **mission statement** of the university as well as diverse activities within the framework of **teaching and research** and the **environmental management system (EMAS)**. In addition, the university has **legal obligations to reduce greenhouse gas (GHG) emissions and energy** under the Baden-Württemberg Climate Protection and Climate Change Adaptation Act (KlimaG BW) and the Energy Efficiency Act (EnEfG). The university's GHG emissions in **2022** amount to **10,852 t CO₂e**. This is 1.59 t CO₂e per member of the university community and 0.12 t CO₂e per m² of net floor area. 95 % of GHG emissions are attributable to the areas of **commuting, procurement and buildings (heat and electricity)** (see Table 1).

Table 1: Greenhouse gas emissions by emission source 2022

Emission source	GHG emissions	Share
HEATING	1,690 t CO ₂ e	15.6 %
ELECTRICITY	2,097 t CO ₂ e	19.3 %
PROCUREMENT	2,396 t CO ₂ e	22.1 %
AIR CONDITIONING	12 t CO ₂ e	0.1 %
EXTERNAL EVENTS	321 t CO ₂ e	3.0 %
FOOD SERVICES	81 t CO ₂ e	0.7 %
WASTE / WATER / WASTEWATER	13 t CO ₂ e	0.1 %
BUSINESS TRIPS	145 t CO ₂ e	1.3 %
VEHICLE FLEET	43 t CO ₂ e	0.4 %
COMMUTING	4,054 t CO ₂ e	37.4 %

Esslingen University of Applied Sciences has three campuses: Esslingen City Centre, Esslingen Flandernstraße and Göppingen. The majority of the university's buildings belong to the state of Baden-Württemberg. The **Landesbetrieb Vermögen und Bau** is responsible for structural measures and the management of these buildings. Table 2 shows the electricity and heating consumption of the three campuses.

Table 2: Energy and heat consumption per campus in 2022 (excluding rentals)

	City Centre	Flandernstraße	Göppingen
ENERGY SUPPLY	Green electricity	Green electricity	Green electricity
ENERGY CONSUMPTION	2,561,813 kWh	1,075,127 kWh	574,190 kWh
HEAT SUPPLY	District heating	Natural gas	Natural gas
HEAT CONSUMPTION	3,223,000 kWh	3,009,501 kWh	1,147,433 kWh

A new campus is currently being built in Esslingen Neue Weststadt. The Flandernstrasse location will be closed upon completion and relocated to the new facility.

WHERE DO WE WANT TO GO?

A **climate protection scenario** based on GHG emission data from 2022 was developed in order to determine potential areas for reduction by 2030. This takes into account **changes in basic conditions** for energy supply, the transport sector and dietary behaviour as well as **climate protection measures at the Esslingen University of Applied Sciences**. It will result in a reduction of 4,230 t CO₂e (see Table 3 for the distribution between emission sources).

Table 3: Savings by emission source

Emission source	Reduction	
HEATING	- 1,439 t CO ₂ e	- 85 %
ELECTRICITY	- 1,706 t CO ₂ e	- 81 %
FOOD SERVICES	- 15 t CO ₂ e	- 19 %
BUSINESS TRIPS	- 3 t CO ₂ e	- 2 %
VEHICLE FLEET	- 19 t CO ₂ e	- 44 %
COMMUTING	- 1,048 t CO ₂ e	- 26 %

The Esslingen University of Applied Sciences has set itself the **target** of achieving at least the calculated reduction potential of **4,230 t CO₂e** by the **year 2030**. In the long term, the university is aiming for **climate-neutral operations**.

HOW CAN WE ACHIEVE OUR TARGETS?

In order to achieve the GHG reduction target, a catalogue of measures was drawn up with a total of **57 measures** in the areas of „Buildings and Energy“, „Space Management“, „Adaptation to Climate Change“, „Mobility“, „Procurement“, „Student Life and Campus“, „Wastewater and Waste“, and „Food Services and Health“. The implementation of the measures will be **actively communicated**. **External and internal stakeholders** will also be involved. The **progress and success** of the measures will be **monitored** and the measures will be adjusted if necessary. Effective implementation will be achieved through **bundling these activities** in the **Sustainability Centre**. The university strives to maintain and uphold the climate protection management.

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