urban technics

GHG EMISSIONS CALCULATION REPORT

(Scope 1 & 2)

Urban Technics

2024. god.

Urban-Technics

Urban Technics is a domestic company founded in 2003 in Valjevo.

It is a leading manufacturer of extruded plastic parts (PS sheets and foils, plastic profiles, gaskets) for the home appliance industry.

The emissions calculation is based on data from the year 2024.

Production Capacities:

- **2 extrusion lines for PS sheets and films: 5,000 t/year**
- **2 extrusion lines for gaskets: 5,000,000 m/year**
- **8 welding machines for gaskets: 2,200,000 pcs/year**
- **20 extrusion lines for technical profiles: 30,000,000 m/year**
- **3 extrusion lines for construction industry profiles: 3,000 t/year**

Boundary Determination and Emissions Calculation Methodology

Boundary Determination

For the purpose of emissions calculation, an operational boundary approach has been adopted as the basis for quantification and reporting. This boundary encompasses all operational activities of Urban Technics that directly contribute to greenhouse gas (GHG) emissions falling under Scope 1 and Scope 2 categories.

Emissions Calculation Methodology

The GHG emissions inventory for Urban Technics has been prepared in accordance with the guidelines of the Intergovernmental Panel on Climate Change (IPCC). These guidelines provide a methodological framework for quantifying and reporting GHG emissions. For the purpose of this inventory, the majority of the emission factors were sourced directly from the IPCC Guidelines.

Accordingly, data collection for stationary emitters was conducted at the level of physical facilities (plants). The primary activity metric for stationary emitters is the final consumption of energy sources. In the case of Urban Technics, all stationary energy consumers exclusively use electricity.

Data collection for mobile sources was performed at the level of individual emitters (vehicles), with activity recorded as final fuel consumption and mileage per vehicle. Emissions resulting from refrigerant leakage were deemed immaterial for the purposes of this analysis.

Details of the emission factors applied are provided in the appendix to this report.

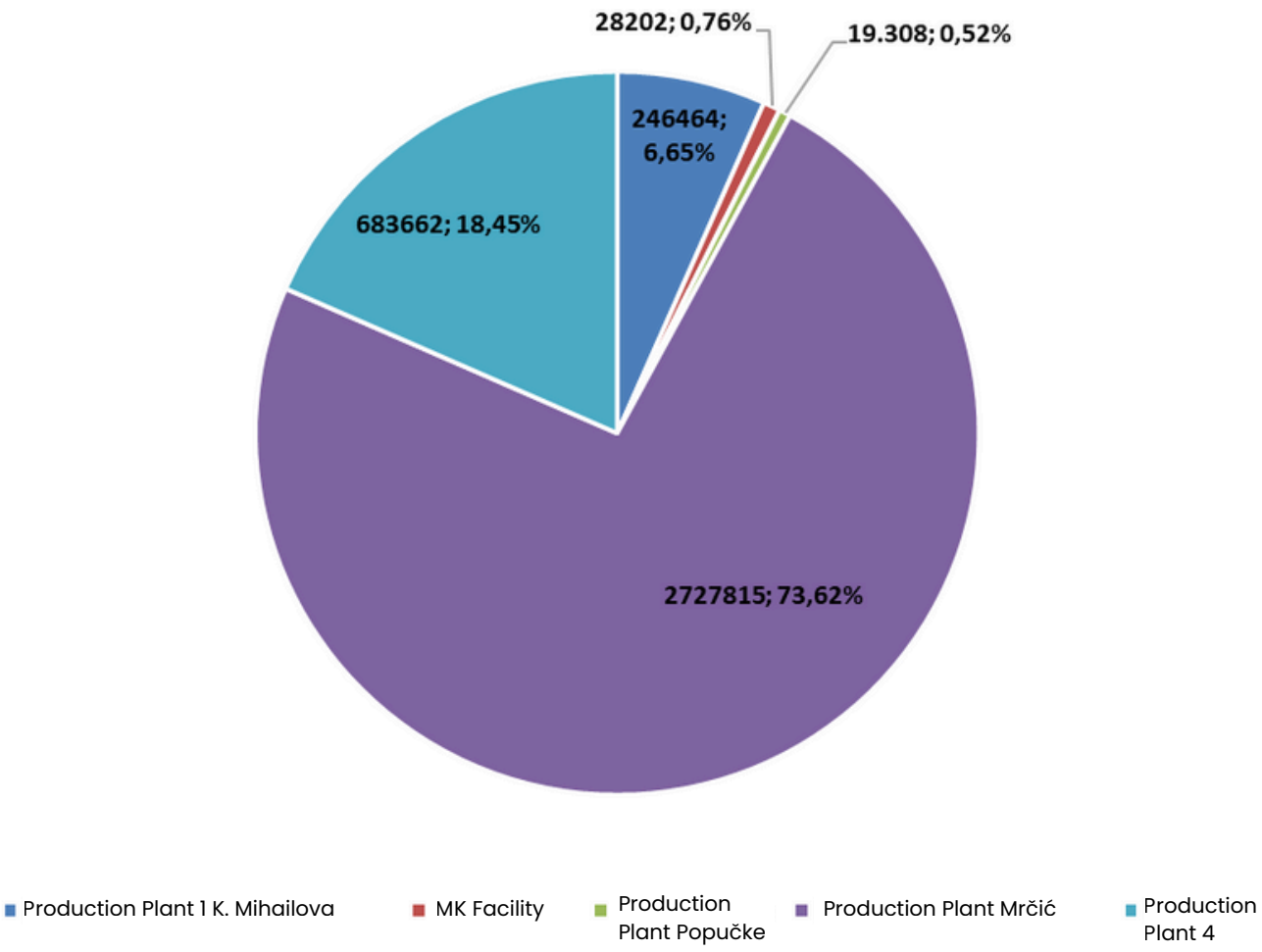
Available Activity Data for Stationary and Mobile Energy Consumers

Table 1: Electricity Consumption by Facility

Year	Location	Facility/Plant Name	Grid Electricity Share [%]	Annual Electricity Consumption [kWh]
2024	Knez Mihailova	Production Hall 1, Knez Mihailova	100%	246,464
2024	Knez Mihailova	MK Facility	100%	28,202
2024	Popučke	Popučke Hall	100%	19,308
2024	Mrčić	Production Plant Mrčić	95%	2,727,815
2024	Suvoborska	Plant 4	100%	683,662
TOTAL:				**3705451**

Available Activity Data for Stationary and Mobile Energy Consumers

Annual Electricity Consumption [kWh]- 2024



Available Activity Data for Stationary and Mobile Energy Consumers

Table 2: Data on Mobile Emission Sources

Year	Vehicle ID Number	Vehicle Model	Year of Manufacture	Fuel Type	Engine Class	Annual Distance Traveled [km/year]
2024	VA050GG	MAN Truck	2005	Diesel	Euro 3	9,376
2024	VA149KU	IVECO Daily Van	2008	Diesel	Euro 4	17,161
2024	VA018BC	Škoda Practic	2009	Diesel	Euro 3	17,478
2024	VA178DF	Volkswagen Touran	2008	Diesel	Euro 4	9,436
2024	VA083OC	Renault Megane	2004	Diesel	Euro 3	3,315
2024	VA081OS	Škoda SUPERB	2016	Diesel	Euro 6	11,826
2024	VA230SE	Škoda OCTAVIA	2024	Petrol	Euro 6	2,039
2024	VA230SF	Škoda OCTAVIA	2024	Petrol	Euro 6	1,114
2024	VA230SH	Škoda KAMIQ	2024	Petrol	Euro 6	2,045
2024	VA169KV	RAV4 SUV 5-door	2021	Petrol	Euro 6	15,514
2024	VA196IS	Volvo XC 90	2019	Diesel	Euro 6	29,139
2024	—	Clark Forklift CMP 18	2008	LPG	—	270
2024	—	Clark Forklift CMP 20	2007	LPG	—	300
2024	—	LINDE	2009	LPG	—	150

Available Activity Data for Stationary and Mobile Energy Consumers

Table 3: Fuel Consumption of Mobile Equipment

Vehicle Model	Share of Distance Traveled by Category [%]				Ownership	Anual Fuel Consumption	Unit	Vehicle Purpose
	Urban cold	Urban Hot	Rural	High way				
MAN Truck	5	95	–	–	Company-owned	2,532	l	Freight
IVECO Daily Van	5	5	–	90	Company-owned	2,574	l	Freight
Škoda Practic	5	85	–	10	Company-owned	1,049	l	Freight
Volkswagen Touran	5	95	–	–	Company-owned	661	l	Passenger
Renault Megane	5	95	–	–	Company-owned	232	l	Passenger
Škoda SUPERB	5	45	–	50	Company-owned	968	l	Passenger
Škoda OCTAVIA	5	45	–	50	Company-owned	127	l	Passenger
Škoda OCTAVIA	5	45	–	50	Company-owned	78	l	Passenger
Škoda KAMIQ	5	65	–	30	Company-owned	143	l	Passenger
RAV4 SUV 5-door	5	45	–	50	Company-owned	1,086	l	Passenger
Volvo XC 90	5	45	–	50	Company-owned	2,661	l	Passenger
Clark Forklift CMP 18	–	–	–	–	Company-owned	1,041	kg	Cargo handling
Clark Forklift CMP 20	–	–	–	–	Company-owned	1,356	kg	Cargo handling
LINDE	–	–	–	–	Company-owned	757	kg	Cargo handling

Results
Scope 1

Table 4: Scope 1 Emissions – Mobile Sources

Year	Vehicle Model	Vehicle Purpose	Energy Consumption [TJ]	Emissions [tonnes CO_2]	Emissions [tonnes CH_4]	Emissions [tonnes N_2O]	Emissions [tonnes CO_2e]
2024	MAN Truck	Freight	0.092252	6.835853	7.97×10^{-4}	2.81×10^{-4}	6.94
2024	IVECO Daily Van	Freight	0.093782	6.949244	0	8.24×10^{-5}	6.97
2024	Škoda Practic	Freight	0.03822	2.832073	5.07×10^{-5}	1.54×10^{-4}	2.88
2024	Volkswagen Touran	Passenger	0.024083	1.784557	0	8.78×10^{-5}	1.81
2024	Renault Megane	Passenger	0.008453	0.62635	1.06×10^{-5}	3.08×10^{-5}	0.64
2024	Škoda SUPERB	Passenger	0.035268	2.613391	0	1.38×10^{-4}	2.65
2024	Škoda OCTAVIA	Passenger	0.00495	0.343034	0	1.93×10^{-5}	0.35
2024	Škoda OCTAVIA	Passenger	0.00304	0.210682	0	1.19×10^{-5}	0.21
2024	Škoda KAMIQ	Passenger	0.005574	0.386251	0	2.17×10^{-5}	0.39
2024	RAV4 SUV 5-door	Passenger	0.042328	2.933346	0	1.65×10^{-4}	2.98
2024	Volvo XC 90	Passenger	0.096952	7.184125	0	3.78×10^{-4}	7.3
2024	Clark Forklift CMP 18	Cargo handling	0.049239	3.107	0.003053	9.85×10^{-6}	3.19
2024	Clark Forklift CMP 20	Cargo handling	0.064139	4.047158	0.003977	1.28×10^{-5}	4.15
2024	LINDE	Cargo handling	0.035806	2.259365	0.00222	7.16×10^{-6}	2.32
TOTAL:							42.78

Results
Scope 2

Table 5: Scope 2 Emissions – Electricity Consumption by Facility

Year	Location	Facility/Plant Name	Emissions [tonnes CO_2e]
2024	Knez Mihailova	Production Hall 1 – Knez Mihailova	167.1519
2024	Knez Mihailova	MK Facility	19.1266
2024	Popučke	Popučke Hall	13.09469
2024	Mrčić	Production Plant – Mrčić	1,850.00
2024	Suvoborska	Plant 4	463.6596
		TOTAL:	2,513.037

The emission factor applied in the calculation of indirect emissions resulting from the purchase of electricity from the grid corresponds to the most recent publicly available data from the Climatiq database, published in 2021.

Conclusion

The greenhouse gas (GHG) emissions inventory resulted in quantified values for direct emissions (Scope 1) amounting to 42.78 tonnes of CO_2e, and indirect emissions (Scope 2) from purchased electricity totaling 2,513.04 tonnes of CO_2e.

Urban Technics is among the country's largest industrial consumers of electricity. As a consequence, Scope 2 emissions represent a significant portion of the company's carbon footprint, highlighting the need for continued improvements in energy efficiency and potential transition to renewable energy sources.

Although Scope 3 emissions, which include other indirect emissions, were not addressed in this project, awareness of their potential impact remains a critical element of comprehensive emissions management.

Date:
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