

CORPORATE CARBON FOOTPRINT 2025

Lumetra Components s.r.o.

Measuring what we emit, cutting what we can

Scope 1 and Scope 2 greenhouse gas inventory prepared in accordance with the GHG Protocol Corporate Standard and Scope 2 Guidance

2,517.6

t CO₂e Scope 1 + 2 (market-based)

-30.8 %

vs. base year 2023

65.4

t CO₂e per € million revenue

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About this report

This report presents the Scope 1 and Scope 2 greenhouse gas (GHG) emissions of Lumetra Components s.r.o. for the calendar year 2025, with comparative figures for 2024 and the base year 2023. Scope 3 emissions are outside the boundary of this inventory.

Item	Description
Standard	GHG Protocol Corporate Accounting and Reporting Standard; GHG Protocol Scope 2 Guidance
Reporting period	1 January – 31 December 2025
Base year	2023 (first year with complete, verified activity data)
Consolidation approach	Operational control
Scopes covered	Scope 1 and Scope 2 (Scope 3 not included)
Gases	CO ₂ , CH ₄ , N ₂ O and HFCs (no PFCs, SF ₆ or NF ₃ in operations)
GWP values	IPCC Fifth Assessment Report (AR5), 100-year horizon
Scope 2 methods	Dual reporting: location-based and market-based
Verification	Not externally verified (limited assurance planned for 2030 reporting)
Prepared by	Sustainability team with Sustainly carbon accounting software

Executive summary

In 2025, Lumetra Components s.r.o. emitted 2,517.6 t CO₂e across Scope 1 and 2 (market-based) — 30.8 % less than in 2023, while revenue grew to €38.5 million. Emissions intensity fell by 40.7 %.

2,517.6 t CO₂e

Scope 1 + 2 emissions
market-based, 2025

-30.8 %

Change vs. base year
2023
target -55 % by 2030

499.7 t CO₂e

Scope 1 – direct
fuels, fleet, refrigerants

2,017.9 t CO₂e

Scope 2 – market-
based
electricity and district heat

65.4 t/€m

Revenue intensity
t CO₂e per € million (-40.7
% vs. 2023)

545 kg/t

Product intensity
kg CO₂e per tonne of
parts

33 %

Renewable electricity
1,800 MWh GoO + 420
MWh own PV

1,308.6 t CO₂e

Scope 1 + 2 location-
based
for comparison

Share of total emissions 2025 (market-based)

■ Scope 1 · 20 % ■ Scope 2 (market-based) · 80 %



Key messages

- Purchased electricity remains the dominant source (80 % of the market-based footprint): our injection - moulding machines run around the clock.
- A renewable electricity contract with guarantees of origin (1,800 MWh) and a new 500 kWp rooftop PV plant cut Scope 2 market-based emissions by a third.
- Replacing 10 of 14 LPG forklifts with electric models reduced LPG use by 62 %; office heat pumps cut natural gas use by 16 %.
- We are ahead of our linear pathway to a 55 % cut by 2030, but the next steps (process heat, fleet) are harder than switching contracts.

Organisational & operational boundaries

The inventory covers all facilities and vehicles over which Lumetra Components s.r.o. has operational control. There are no subsidiaries, joint ventures or leased-out assets.

Organisational boundary

Lumetra Components s.r.o. is a single legal entity headquartered in Žilina, Slovakia, producing injection-moulded plastic components for the automotive and appliance industries. All three sites below are included at 100 %.

Site	Activity	Control	Status
Žilina plant	Injection moulding, assembly, offices (11,800 m ²)	Owned – operational control	Included
Martin warehouse	Finished-goods storage and dispatch (4,200 m ²)	Leased – operational control	Included
Company fleet	6 delivery vans, 18 company cars, 14 forklifts	Owned and leased	Included

Operational boundary – emission sources

Scope	Category	Sources
Scope 1	Stationary combustion	Natural gas for space heating and drying of plastic granulate
Scope 1	Mobile combustion – fleet	Diesel and petrol in company vans and cars
Scope 1	Mobile combustion – forklifts	LPG in internal forklifts
Scope 1	Fugitive emissions	HFC refrigerants in process chillers (R-410A) and temperature-control units (R-134a)
Scope 1	Process emissions	None – injection moulding does not release process GHGs
Scope 2	Purchased electricity	Grid electricity for all sites (incl. GoO-backed supply)
Scope 2	Purchased heat	District heating at the Martin warehouse

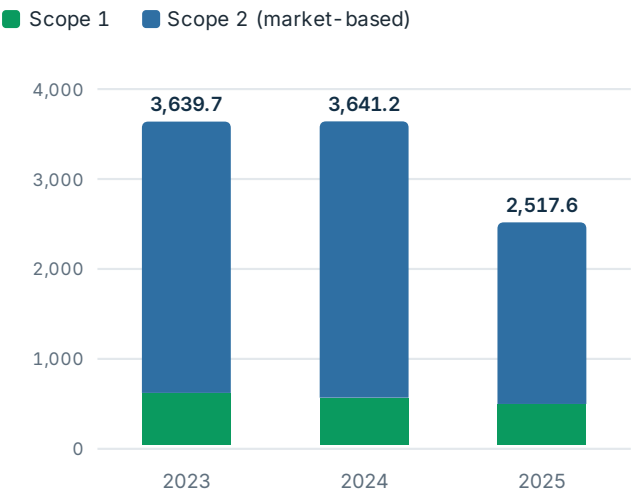
What is not included

Scope 3 emissions — for example purchased plastic granulate, transport by external carriers, business travel or the use and disposal of sold products — are not part of this inventory. Electricity from our own rooftop PV is self-consumed and has zero Scope 2 emissions; it is reported as energy use for transparency.

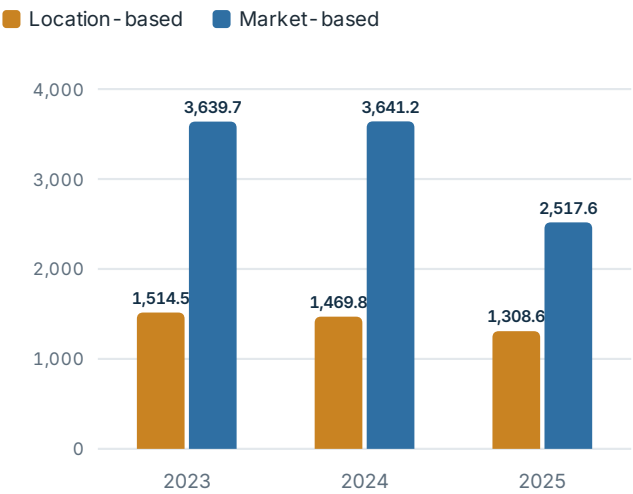
Results 2023–2025

Total Scope 1 and 2 emissions fell from 3,639.7 t CO₂e in 2023 to 2,517.6 t CO₂e in 2025 (market-based). Under the location-based method, which reflects the average Slovak grid, emissions were 1,308.6 t CO₂e.

Scope 1 + 2 emissions (t CO₂e, market-based)



Location-based vs. market-based total (t CO₂e)



t CO ₂ e	2023	2024	2025	Change vs. 2023
Scope 1	622.1	569.8	499.7	−19.7 %
Scope 2 (market-based)	3,017.6	3,071.4	2,017.9	−33.1 %
Total Scope 1 + 2 (market-based)	3,639.7	3,641.2	2,517.6	−30.8 %
Scope 2 (location-based)	892.4	900.0	808.9	−9.4 %
Total Scope 1 + 2 (location-based)	1,514.5	1,469.8	1,308.6	−13.6 %

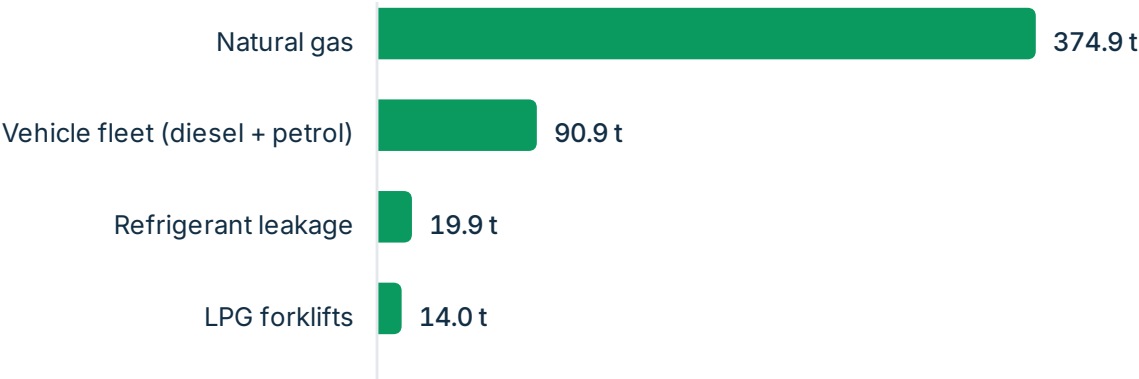
Why is market-based higher than location-based?

Slovakia's grid is dominated by nuclear and hydro power, so its average emission factor is low (112 kg CO₂e/MWh). Much of that low-carbon power is sold abroad as guarantees of origin, which leaves a much higher residual mix (420 kg CO₂e/MWh) for companies that buy no certificates. Our market-based result therefore depends directly on how much certified renewable electricity we purchase.

Scope 1 – direct emissions

Direct emissions were 499.7 t CO₂e in 2025, 20 % of the market-based total. Natural gas for heating and granulate drying is by far the largest direct source.

Scope 1 emissions by source, 2025 (t CO₂e)



Source	Use	Activity data	Emission factor	t CO ₂ e
Natural gas	Heating, granulate dryers	2,050 MWh	182.9 kg/MWh	374.9
LPG forklifts	Forklifts	9,000 l	1.557 kg/l	14.0
Diesel	Vans and company cars	27,000 l	2.512 kg/l	67.8
Petrol	Vans and company cars	11,000 l	2.100 kg/l	23.1
R-410A	Process chillers – top-up	9.0 kg	GWP 1,924	17.3
R-134a	Temperature-control units – top-up	2.0 kg	GWP 1,300	2.6
Scope 1				499.7

Observations

- Natural gas use fell by 16 % since 2023 after heat pumps took over office heating in 2024.
- LPG use dropped by 62 % as 10 of 14 forklifts were replaced by lithium-ion electric models in spring 2025.
- Fleet emissions are almost flat: fewer diesel kilometres were offset by more petrol cars in the sales team.

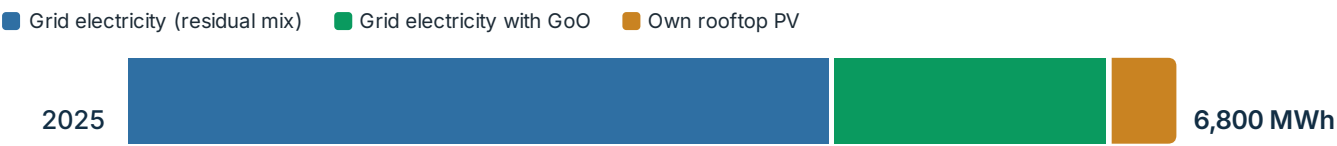
Refrigerants: small volumes, high impact

Topping up just 9.0 kg of R-410A releases about as much as burning 7,000 litres of diesel. A chiller leak in 2023 (18 kg) drove the high base-year value. Quarterly leak checks are now in place and chillers will move to natural refrigerants.

Scope 2 – purchased energy

We used 6,800 MWh of electricity in 2025. 6,380 MWh came from the grid, of which 1,800 MWh were covered by guarantees of origin from Slovak hydro power; 420 MWh came from our own rooftop PV plant.

Electricity supply 2025 (MWh)



Only grid electricity without guarantees of origin carries market-based emissions.

Scope 2 source	Consumption	Location-based (t CO ₂ e)	Market-based (t CO ₂ e)
Purchased electricity	6,380 MWh	714.6	1,923.6
District heat (Martin)	410 MWh	94.3	94.3
Total Scope 2		808.9	2,017.9

Quality criteria for the market-based method

Guarantees of origin were bought for the reporting year, for electricity produced in Slovakia, and cancelled in our name in the national registry. They meet the GHG Protocol Scope 2 quality criteria. District heat uses the supplier's published emission factor for both methods.

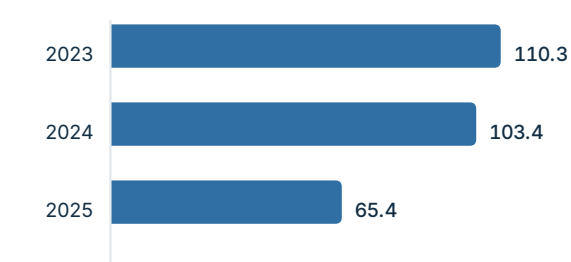
Purchased electricity by site

Site	Consumption
Žilina plant	5,900 MWh
Martin warehouse	480 MWh
Company fleet	EV charging included in Žilina

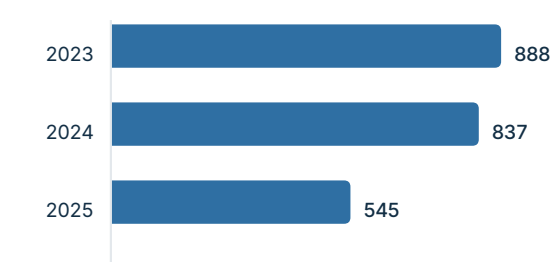
Intensity metrics

Intensity metrics show emissions relative to business activity. They let us track decarbonisation independently of growth.

t CO₂e per € million revenue



kg CO₂e per tonne of parts produced



Intensity (market-based)	2023	2024	2025
t CO ₂ e / € million revenue	110.3	103.4	65.4
kg CO ₂ e / tonne of parts	888	837	545
t CO ₂ e / FTE	23.9	23.0	15.4
t CO ₂ e / € million revenue (location-based)	45.9	41.8	34.0

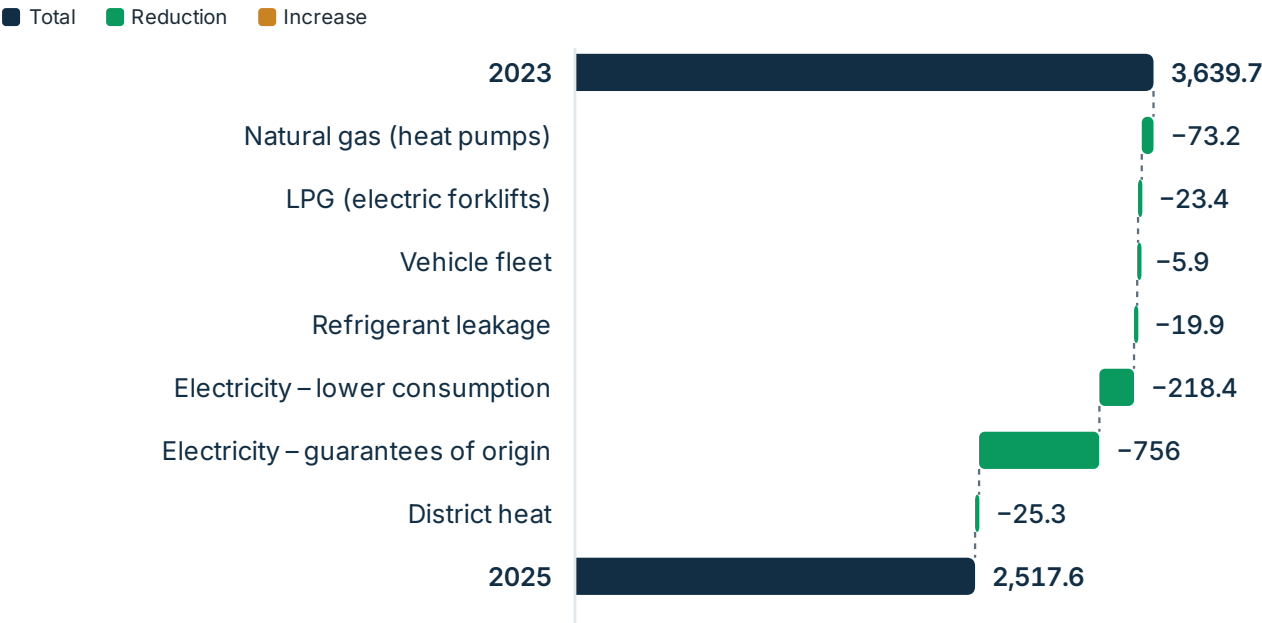
Activity data	2023	2024	2025
Revenue (€ million)	33.0	35.2	38.5
Production (t of parts)	4,100	4,350	4,620
Employees (FTE)	152.0	158.5	163.0

Revenue intensity is the metric requested most often by our automotive customers. Product intensity is used for customer-specific carbon disclosures.

Drivers of change 2023–2025

The bridge below explains the 30.8 % reduction in market-based emissions between 2023 and 2025, source by source.

Change in Scope 1 + 2 emissions, 2023–2025 (t CO₂e, market-based)



The electricity effect is split into a volume effect (fewer MWh at the residual-mix factor) and a contract effect (MWh covered by guarantees of origin).

What drove the reduction

About two thirds of the reduction comes from the renewable electricity contract (756 t CO₂e). Real efficiency gains — servo-driven moulding machines, heat pumps, electric forklifts — contributed the rest, even though production grew.

What it means

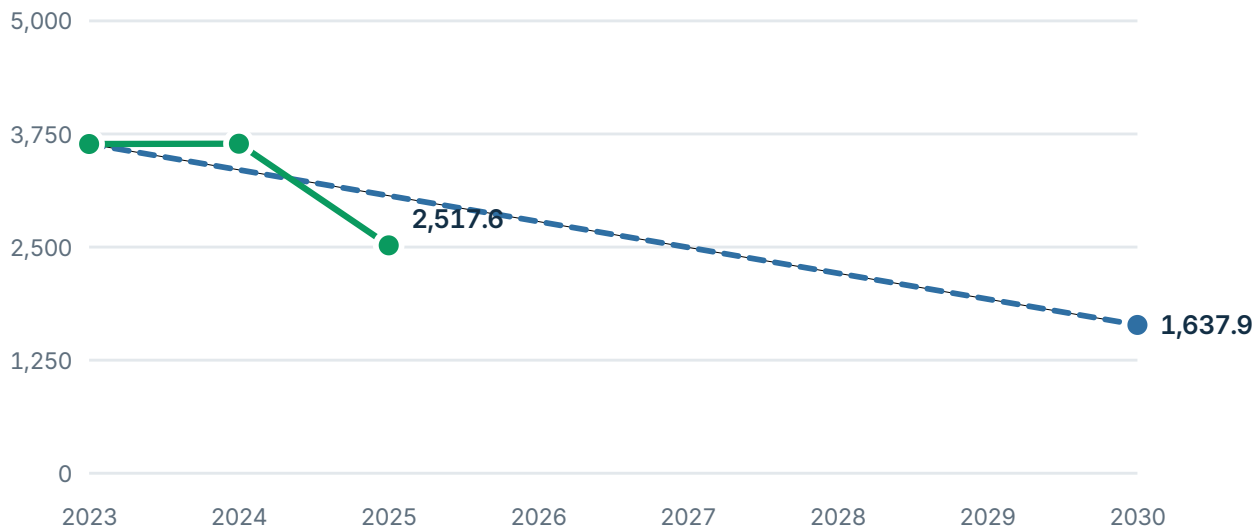
Contractual instruments are a legitimate and fast lever, but they do not reduce physical energy use. That is why our plan focuses on efficiency and on-site generation, and why we also report location-based results.

Reduction targets & action plan

We aim to reduce absolute Scope 1 and 2 emissions (market-based) by 55 % by 2030 compared with 2023, to 1,637.9 t CO₂e. This is in line with a 1.5 °C-aligned absolute contraction pathway.

Scope 1 + 2 emissions vs. target pathway (t CO₂e, market-based)

■ Actual emissions ■ Linear pathway to -55 % by 2030



We are currently below the pathway; staying there requires the measures listed below.

Measure	Scope	Timing	Saving (t CO ₂ e/yr)	Status
Expand rooftop PV to 1.2 MWp	2	2026–27	~ 220	Approved
100 % renewable electricity (GoO / PPA)	2	2027	~ 1,900	Tender in preparation
Replace remaining hydraulic moulding machines (×9)	2	2026–29	~ 180	3 ordered
Electric granulate dryers with heat recovery	1	2027	~ 150	Feasibility study
Electric vans and plug-in policy for company cars	1	2026–28	~ 60	2 vans ordered
Chillers with natural refrigerant (propane)	1	2026	~ 20	Tender running

Methodology & data quality

Calculation approach

Emissions are calculated by multiplying activity data by emission factors. Refrigerant emissions are calculated with the mass - balance method from service records (refilled quantities).

$$\text{Emissions (t CO}_2\text{e)} = \text{activity data} \times \text{emission factor (}\times \text{ GWP for refrigerants)}$$

Scope 2 dual reporting

The location -based method uses the average emission factor of the Slovak grid. The market-based method uses the emission factors of contractual instruments: zero for electricity covered by guarantees of origin, the national residual mix for all other grid electricity, and the supplier - specific factor for district heat.

Base year recalculation

The base year 2023 will be recalculated if structural changes (acquisitions, divestments, outsourcing) or methodology changes alter base-year emissions by 5 % or more.

Data sources and quality

Source	Data source	Quality
Electricity	Supplier invoices, sub-meters, GoO cancellation statements	Measured
Natural gas	Supplier invoices (MWh, gross CV)	Measured
Fleet fuels	Fuel - card records (litres)	Measured
LPG	Delivery notes for cylinders	Measured
Refrigerants	Service logs of certified technicians	Measured

Uncertainty

All activity data are based on invoices or meter readings, so overall uncertainty is low (estimated ±5 %). The largest uncertainty lies in emission factors, especially the residual mix, which is published with a one-year delay.

Emission factors & glossary

The table lists the emission factors used for 2025. Factors are applied consistently to all years shown; earlier years were recalculated where factors were updated.

Source	Factor	Reference
Natural gas	182.9 kg CO ₂ e/MWh	DEFRA 2025
LPG forklifts	1.557 kg CO ₂ e/l	DEFRA 2025
Diesel	2.512 kg CO ₂ e/l	DEFRA 2025
Petrol	2.100 kg CO ₂ e/l	DEFRA 2025
R-410A	GWP 1,924	IPCC AR5
R-134a	GWP 1,300	IPCC AR5
Electricity – SK grid average	112 kg CO ₂ e/MWh	Location-based, national grid mix
Electricity – SK residual mix	420 kg CO ₂ e/MWh	Market-based, AIB residual mix
District heat (Martin)	230 kg CO ₂ e/MWh	Supplier-specific (both methods)

Glossary

Term	Meaning
CO ₂ e	Carbon dioxide equivalent – all greenhouse gases expressed as the amount of CO ₂ with the same warming effect.
Scope 1	Direct emissions from sources the company owns or controls (fuels, vehicles, refrigerants).
Scope 2	Indirect emissions from the generation of purchased electricity, heat, steam or cooling.
Location-based	Scope 2 method using the average emission intensity of the grid where energy is consumed.
Market-based	Scope 2 method using emission factors from contracts and certificates the company has chosen.
Guarantee of origin (GoO)	EU certificate proving that one MWh was produced from a renewable source.

Disclaimer

This document is an illustrative example prepared by Sustainly to show what a corporate carbon footprint report can look like. Lumetra Components s.r.o. and all figures are fictional. Emission factors are rounded illustrative values and must be replaced by current official factors in a real report.