PEBAL®

... PACKAGING IS AN ART.

ESG REPORT PEBAL 2025



Comprehensive report on sustainability, ESG and decarbonization

Introduction

The year 2025 brought another significant reduction in PEBAL's absolute emissions. The total carbon footprint decreased by 14.8% year-on-year. The development of absolute emissions was also influenced by a lower production volume, which is why the company tracks not only the absolute carbon footprint but also emission intensity per unit of production.

-14,8 %

Year-on-year reduction in total carbon footprint

-95,8 %

Decline in Scope 2 Market-Based emissions

786 MWh

PV generation in Dobřany PARK premises

16 %

Share of PV in total electricity consumption

Absolute Emissions vs. Emission Intensity

Absolute emissions ↓

-14,8 %

Total emission intensity ↑

+13,5 %

Scope 1 + 2 Market-Based intensity ↓

-32,1 %

The 2025 results confirm the continued implementation of PEBAL's long-term decarbonisation strategy. Significant progress was achieved particularly in emissions more directly influenced by the company's operations. The primary long-term challenge remains reducing Scope 3 emission intensity.

Company Profile

PEBAL s.r.o. is a Czech family-owned manufacturing company specializing in the production of flexible packaging materials with more than 30 years of tradition.



Basic Information:

Production Location

Dobřany, Plzeň-jih

Focus

Production of flexible packaging materials

Operations

3-shift production mode

Production Facility

Modern production hall built in 2017–2018

Number of Employees

109

The company has long-term investments in the modernization of production technologies, automation and digitalization of production management, energy efficiency, and the introduction of circular economy principles.

ESG Strategic Anchoring

ESG is part of the long-term strategic management of PEBAL. Environmental, social and governance topics are gradually being integrated into the company's decision-making, investments, supply chain management and customer communications.

ESG Timeline

2024

Integration of ESG into corporate strategy

2024–2025

Systematization of ESG reporting and decarbonization management

2025

Carbon footprint calculation for Scope 1, Scope 2 and Scope 3 according to the GHG Protocol

2025

Continued integration of circular economy principles into material flows

2025

Significant expansion of the use of the photovoltaic power plant integrated in the Dobřany PARK premises

2026+

Further development of the ESG management system and supply chain

The company's primary environmental objective remains the long-term reduction of production emission intensity and the gradual reduction of emissions across the entire value chain.

PEBAL Carbon Footprint for 2025

The carbon footprint calculation for PEBAL for the year 2025 was performed in accordance with the GHG Protocol Corporate Accounting and Reporting Standard. The calculation covers all three main emission categories: Scope 1 – direct emissions, Scope 2 – indirect emissions from purchased energy, Scope 3 – other indirect emissions in the value chain.

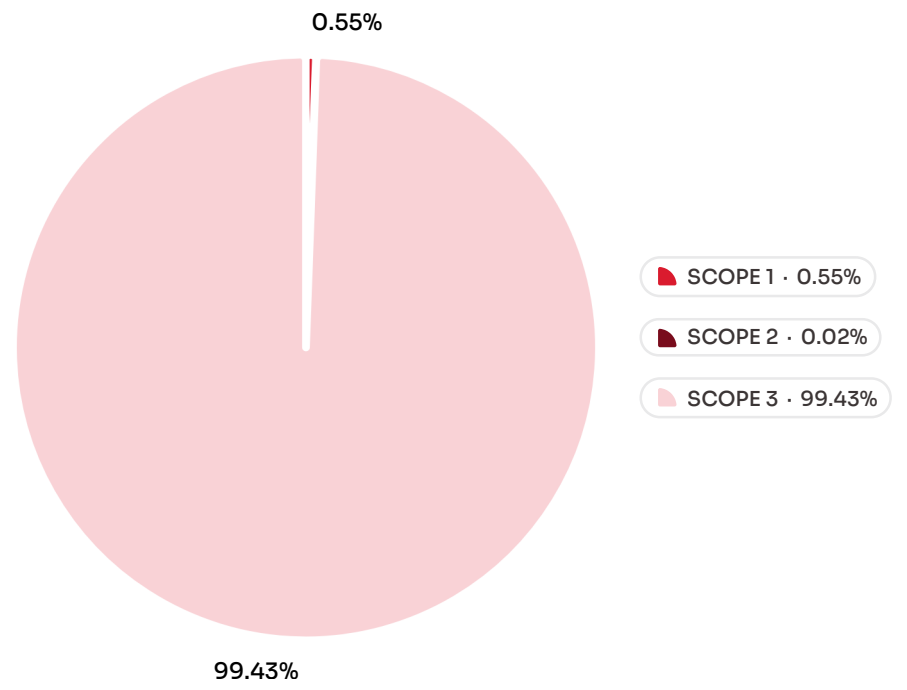
Key Results

Total carbon footprint: 12,814,522 kg CO_2e

Year-on-year change: −14.8%

- **Scope 1:** 70,301 kg CO_2e / −25.7%
- **Scope 2 Market-Based:** 1,978 kg CO_2e / −95.8%
- **Scope 3:** 12,742,243 kg CO_2e / −14.5%

Emission Breakdown by Scope



Context of 2025 Results

The decline in absolute carbon footprint is the result of a combination of operational decarbonization measures and lower production volumes in 2025. The most significant operational improvement was achieved in Scope 2 due to low-emission electricity supply and significantly higher utilization of the company's own photovoltaic power plant. Scope 3 remains the dominant source of emissions, and its absolute year-on-year decline was significantly influenced by lower production volumes.

Carbon Footprint and Emission Intensity Development 2024–2025

A. Absolute Carbon Footprint

15.04 mil.

kg CO_2e

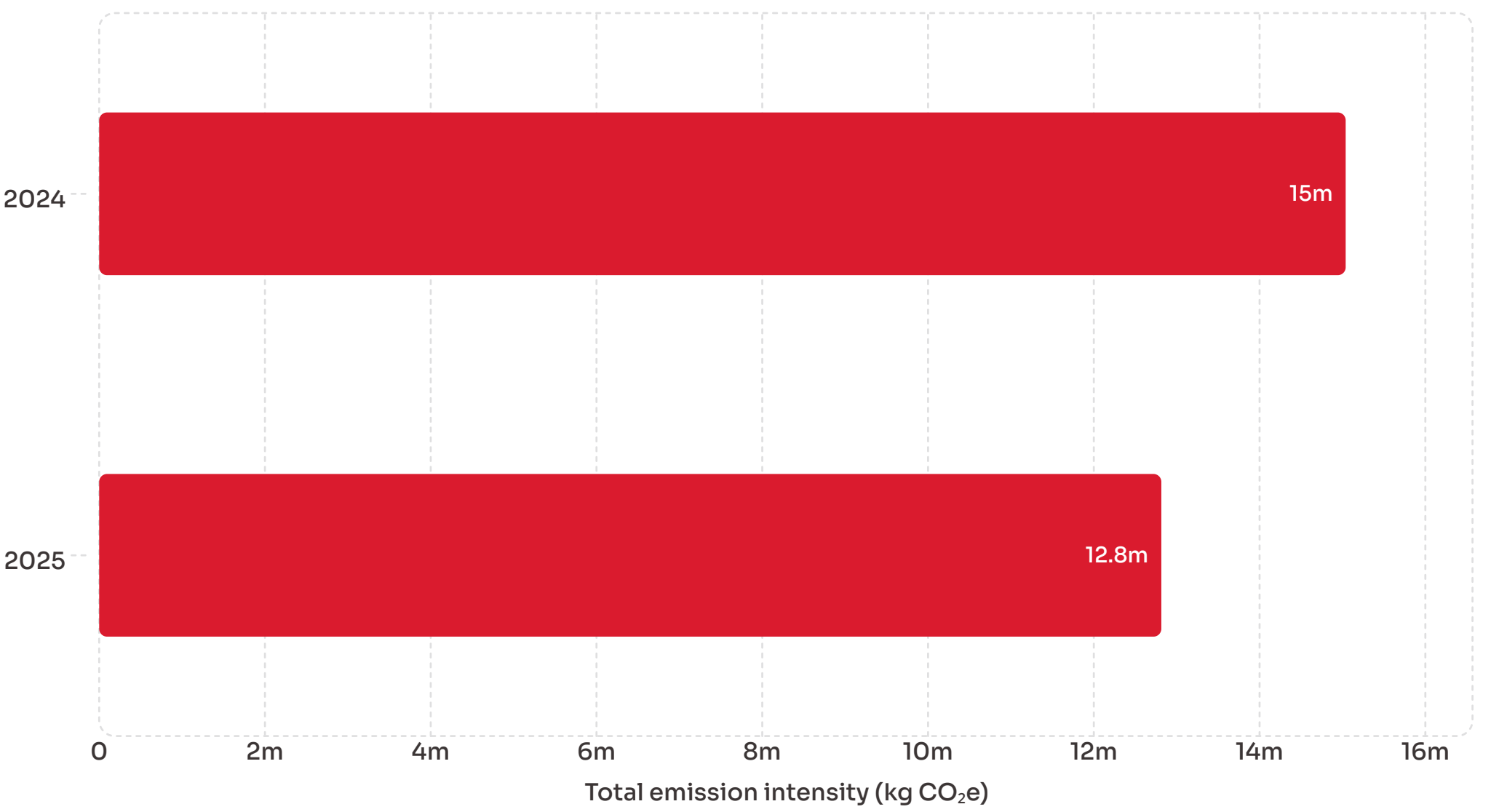
Total carbon footprint 2024

12.81 mil.

kg CO_2e

Total carbon footprint 2025

Year-on-year change: −2.22 mil. kg CO_2e (−14.8 %)



B. Total Emission Intensity

2.08

kg CO_2e/kg

Emission intensity 2024

2.36

kg CO_2e/kg

Emission intensity 2025

Year-on-year change: +13.5 %

Total emission intensity per kilogram of product increased in 2025. A significant factor was the lower production volume, while the structure of material inputs and part of the operational emissions were not distributed across the same amount of production as in the previous year.

C. Scope 1 + 2 Market-Based Emission Intensity

0.0196

kg CO_2e/kg

Scope 1+2 intensity 2024

0.0133

kg CO_2e/kg

Scope 1+2 intensity 2025

Year-on-year change: −32.1 %

This indicator captures emissions more directly influenced by the company's own operations. Its significant decline confirms the improvement in PEBAL's operational decarbonisation even at lower production volumes.

Summary

ABSOLUTE EMISSIONS ↓

−14.8 %

TOTAL INTENSITY ↑

+13.5 %

impact of lower production volume

SCOPE 1+2 INTENSITY ↓

−32.1 %

operational progress

Renewable Energy Sources

One of the most significant environmental achievements of 2025 was the further development of electricity generation from the photovoltaic power plant integrated in the Dobřany PARK premises.

Electricity 2025

4 907 MWh	786 MWh	16,0 %
Total electricity consumption	**PV generation – Dobřany PARK**	**PV share of total consumption**

In 2024, the share of PV generation from the Dobřany PARK premises was approximately 5.5%. In just one year, the share of photovoltaic generation in the company's consumption nearly tripled.

Scope 2

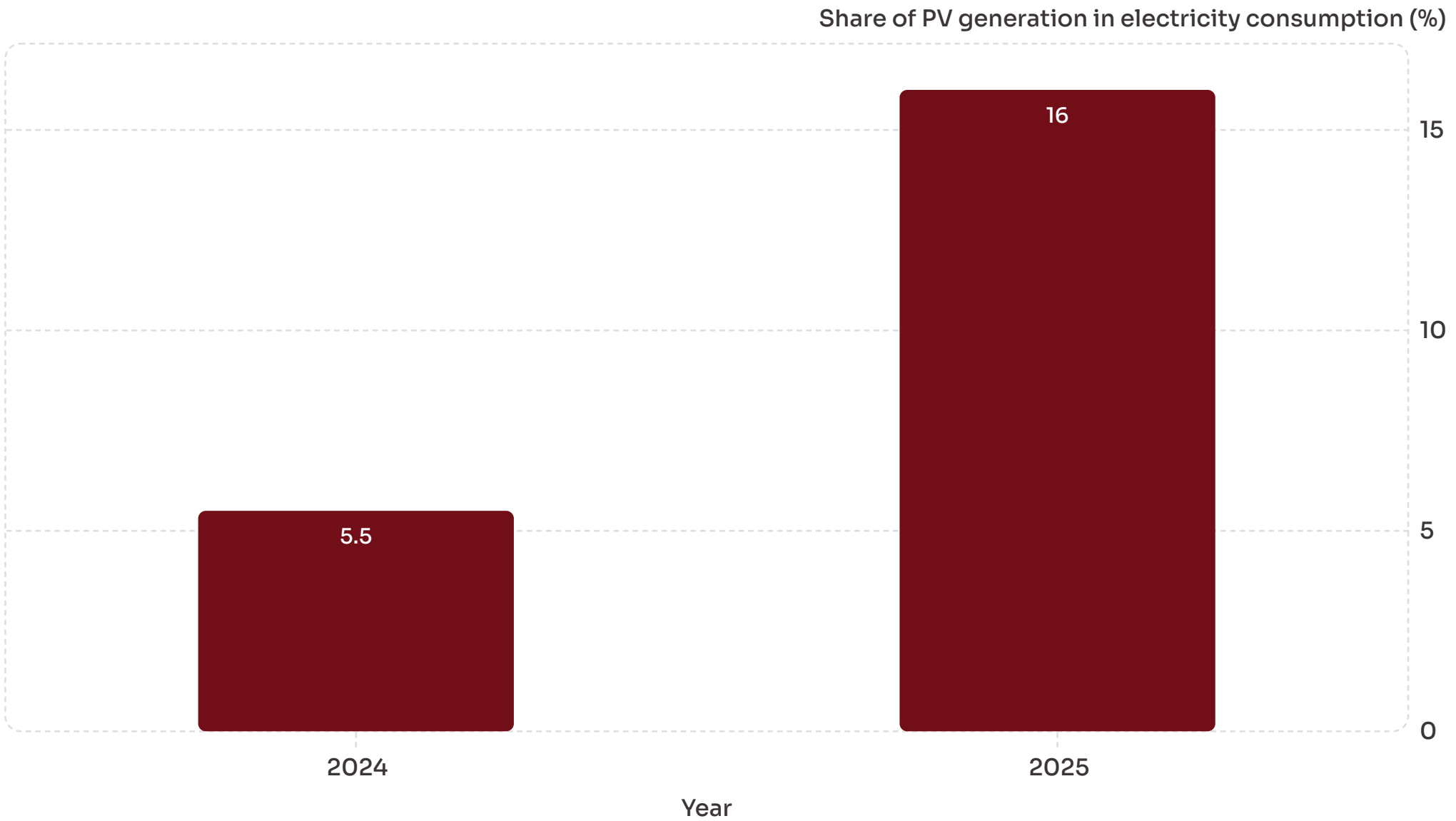
Market-Based

1,98 t CO_2e

Location-Based

1 359,84 t CO_2e

The Market-Based result reflects the actual contractual procurement of low-emission electricity supplies and PV generation from the Dobřany PARK premises, while the Location-Based figure represents the reference footprint corresponding to the average Czech energy mix. Scope 2 Market-Based emissions were reduced to near zero thanks to the combination of photovoltaic generation from the Dobřany PARK premises and a low-emission supplier portfolio.



Circular Economy

Scope 3 represents more than 99% of PEBAL's total carbon footprint. The dominant source of these emissions remains the production of purchased polymeric materials. For this reason, the further development of the circular economy represents one of the company's most significant decarbonization levers.

Secondary Plastic Raw Materials 2025

1 313 316 kg

Secondary plastic raw materials used in 2025

25 741 kg CO_2e

Resulting emissions associated with their processing

The use of secondary materials significantly reduces the need for virgin polymers and helps limit the carbon footprint of material inputs.

The volume of secondary plastic raw materials used remained approximately at the 2024 level, even with a lower overall production volume.

A further goal is to track not only the absolute quantity of secondary raw materials, but also their share of total material inputs. We plan to gradually include this indicator among the key KPIs of ESG reporting.

Main Directions of Further Development

- **Further replacement of virgin polymers with secondary raw materials**
- **Expanding the use of PCR materials**
- **Maximizing internal use of returnable material flows**
- **Collaboration with suppliers to obtain primary emissions data**
- **Optimization of material flows**
- **Further integration of circular economy principles into production processes**

Scope 3 and Supply Chain

In 2025, Scope 3 represented more than 99% of the total carbon footprint. Year-on-year, there was a reduction of **14.5%**.

12 742 243

kg CO_2e

Total Scope 3 emissions in 2025

–14,5 %

Year-on-year Scope 3 decrease

⚠ Important context for year-on-year development: The decline in absolute Scope 3 emissions in 2025 was primarily driven by lower production volumes while maintaining a similar structure of material inputs, supplier portfolio, and emission factors. The dominant source of Scope 3 remains the production of purchased polymeric materials.

Scope 3 Structure

Category	Emissions
Purchased materials	12 699 985 kg CO_2e
Secondary raw materials	25 741 kg CO_2e
Well-to-Tank fuel emissions	15 959 kg CO_2e
Water consumption	317 kg CO_2e
Waste management	assessed consistently with the 2024 methodology

The dominant share of Scope 3 emissions is associated with the production of purchased polymeric materials.

Greatest Potential for Further Decarbonization

01

Reducing Scope 3 emission intensity through changes in material mix

02

Replacing virgin polymers with secondary raw materials

03

Increasing the share of primary emission data from suppliers

04

Broader use of PCR materials

05

Further implementation of circular economy principles in the supply chain

06

Collaboration with key suppliers on low-emission materials

The goal is not only to reduce absolute emissions in line with production volumes, but above all to structurally reduce emissions per unit of product.

Decarbonization Strategy

PEBAL's decarbonization strategy is based on the gradual reduction of production emission intensity, energy efficiency, renewable energy production from the Dobřany PARK premises, and above all on reducing emissions associated with material inputs.

Operational Decarbonization (Scope 1 and Scope 2)

Energy Efficiency

Optimization of production technologies and energy consumption.

Renewable Energy Sources

Development of PV systems in the Dobřany PARK premises and use of low-emission purchased electricity.

Low-Carbon Mobility

Optimization of company transportation and gradual transition to low-emission vehicles.

Value Chain Decarbonization (Scope 3)

Circular Economy

Maximizing the use of internal returned materials.

Secondary Raw Materials and PCR Materials

Gradual substitution of virgin polymers with secondary and PCR materials. Progressive monitoring of their relative share of material inputs.

Supply Chain

Obtaining primary ESG and emissions data from suppliers. Collaboration on low-emission input materials.

The 2025 results show significant progress in emissions more directly controllable by the company's operations. The main long-term challenge remains reducing Scope 3 emission intensity.

Social Area and Governance

PEBAL views ESG as a combination of environmental responsibility, responsible approach to employees, and transparent company management.

Employees

- 109 employees
- Training and education
- Occupational safety
- Professional development
- ESG education
- Employee benefits

Governance

Areas of management and development:

- ESG team and responsibilities
- Supplier code of conduct
- ESG criteria for suppliers
- Double materiality analysis
- Internal ESG audits
- Digitalization of ESG data

Certifications

ISO 9001

BRCGS

ISO 28000

EN 15343

EN 15343 – certification of traceability of recycled plastic materials. Supports transparency and traceability of recycled plastic flows and selected PE formulations, with the possibility of further expansion of the certified scope.

Next Steps

Outlook and Priorities 2026+

The results of 2025 confirm that PEBAL continues its systematic transformation towards low-carbon and circular production.

Priorities for the Next Period

Scope 1

Further optimization of company transport and gradual transition to low-emission technologies.

Scope 2

Maximizing the use of renewable energy production from the Dobřany PARK premises and continued procurement of low-emission electricity.

Scope 3

The goal is to gradually decouple the impact of production volume from structural emission reductions through changes in material mix, greater use of secondary raw materials, and higher-quality primary data from suppliers.

Circularity

Further development of closed material loops and increasing the use of recycled materials.

ESG Data

Improving the quality, digitalization, and transparency of ESG reporting.

Emission Intensity

In addition to absolute emissions, systematically track emission intensity per unit of production and gradually develop standalone KPIs, particularly for Scope 3.

Supply Chain

More intensive engagement of strategic suppliers in decarbonization.

Conclusion

2025 brought a significant reduction in PEBAL's absolute carbon footprint by 14.8%. When interpreting this result, it is important to also consider the lower production volume, which primarily affected absolute Scope 3 emissions. The overall emission intensity simultaneously increased year-on-year from 2.08 to 2.36 kg CO_2e/kg of product.

–14.8 %

Absolute decline in total carbon footprint

–32.1 %

Decline in emission intensity Scope 1 + 2 Market-Based

–95.8 %

Decline in Scope 2 Market-Based

+13.5 %

Total emission intensity trend / 2.08 → 2.36 kg CO_2e/kg of product

Significant progress in operational decarbonization

- Scope 2 Market-Based emissions reduced to near zero
- Emission intensity Scope 1+2 decreased by 32.1%
- PV system covered 16% of electricity consumption (786 MWh)

Main challenge: Scope 3 emission intensity

- Absolute Scope 3 decline influenced by lower production volume
- Overall emission intensity increased from 2.08 to 2.36 kg CO_2e/kg
- Key is the change in material mix and PCR materials

PEBAL will continue to transparently track both absolute emissions and emission intensity so that it is possible to better separate the effect of production volume from structural long-term progress in decarbonization.