

ESG REPORT PEBAL 2024



Comprehensive Sustainability, ESG and Decarbonisation Report

Introduction

The year 2024 was a pivotal period for PEBAL in the areas of sustainability, ESG and decarbonisation. Thanks to targeted measures, we significantly reduced our total carbon footprint, improved the efficiency of material flows, expanded renewable energy sources and advanced our ESG strategy to align with current European requirements.

-23,2%

Reduction of Total Emissions

Year-on-year emission reduction

+10%

Production growth

Increase in output

A year-on-year reduction in total emissions of **-23,2 %** was achieved despite production growth exceeding 10%. The year 2024 confirmed that our decarbonisation strategy is functional, measurable, and delivers tangible results.

List of Abbreviations

Abbreviation	Name	Description
CO ₂	Carbon dioxide	Greenhouse gas, basis for emission calculations
ESG	Environmental, Social, Governance	Sustainability assessment framework
ESRS	European Sustainability Reporting Standards	EU standards for ESG reporting
VSME	Voluntary Standard for Micro, Small & Medium Enterprises	Basic ESG reporting for SMEs
GHG	Greenhouse Gas Protocol	Methodology for calculating Scope 1–3 emissions
EUDR	EU Deforestation Regulation	EU regulation on deforestation
CBAM	Carbon Border Adjustment Mechanism	Carbon border tariff
PPWR	Packaging and Packaging Waste Regulation	Regulation on packaging and packaging waste
CO ₂ e	CO ₂ equivalent	Standardised emission indicator
Scope 1	Direct emissions	Emissions from company-owned sources
Scope 2	Indirect energy emissions	Emissions from purchased energy
Scope 3	Indirect value-chain emissions	Emissions from suppliers and customers
OZE	Renewable energy sources	Low-emission energy resources
FVE	Photovoltaic power plant	Solar energy source
PPA	Power Purchase Agreement	Long-term electricity procurement
ICMI	Internal Circular Material Index	Circularity metric for materials
ICMO	Internal Circular Material Optimization	Optimisation of material flows
IME	Internal Material Efficiency	Material efficiency indicator
ISO 9001	Quality Management System	Quality certification
BRCGS	Brand Reputation through Compliance Global Standard	Product safety standard
ISO 28000	Security Management for Supply Chain	Supply chain security
EN 15343	Traceability of Recycled Plastics	Recycled plastic traceability
RecyClass	Plastic recyclability	European recycling certification
KPI	Key Performance Indicators	Performance indicators
NetZero Lab VŠB	Academic institution	Support for emission calculations

Company Profile

PEBAL s.r.o. is a Czech family-owned manufacturing company, **a producer of flexible packaging materials** with a 30-year tradition.

Basic company data:

Production site

Dobřany, Plzeň - South

Employees

108

Operation

3-shift mode

Focus

production of flexible packaging materials



Facilities: modern manufacturing hall built in 2017–2018

The company continuously invests in technology modernisation, production digitalisation and circular material management.

Strategic **ESG** Framework

The year 2024 marked the firm integration of ESG into the company's strategic management.

Key milestones:

ESG embedded into corporate strategy (2024)

1

2

ESG team established, responsible for decarbonisation strategy, reporting and ESRS implementation

Double materiality assessment completed (2025)

3

4

Supplier Code of Conduct implemented (2025) – to be expanded with sustainable procurement audits in 2026

ESG team performance-based incentives introduced

Carbon Footprint of PEBAL for 2024

In 2024, the company achieved its historically lowest emission intensity and one of the strongest year-on-year improvements in the industry.

Key results for 2024:

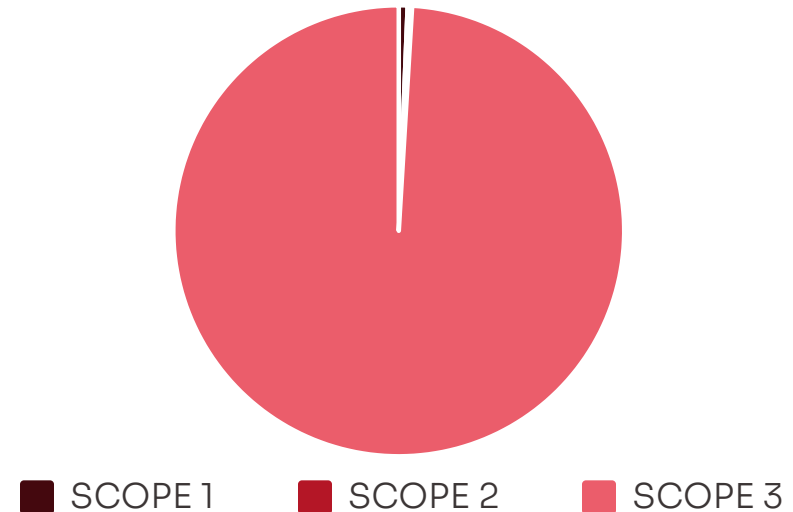
Total emissions: 15 038 534 kg CO₂e

Year-on-year change: -23,2 %

Emission intensity:

- 2023: 3,01 kg CO₂e/kg
- 2024: 2,08 kg CO₂e/kg (-30,9 %)

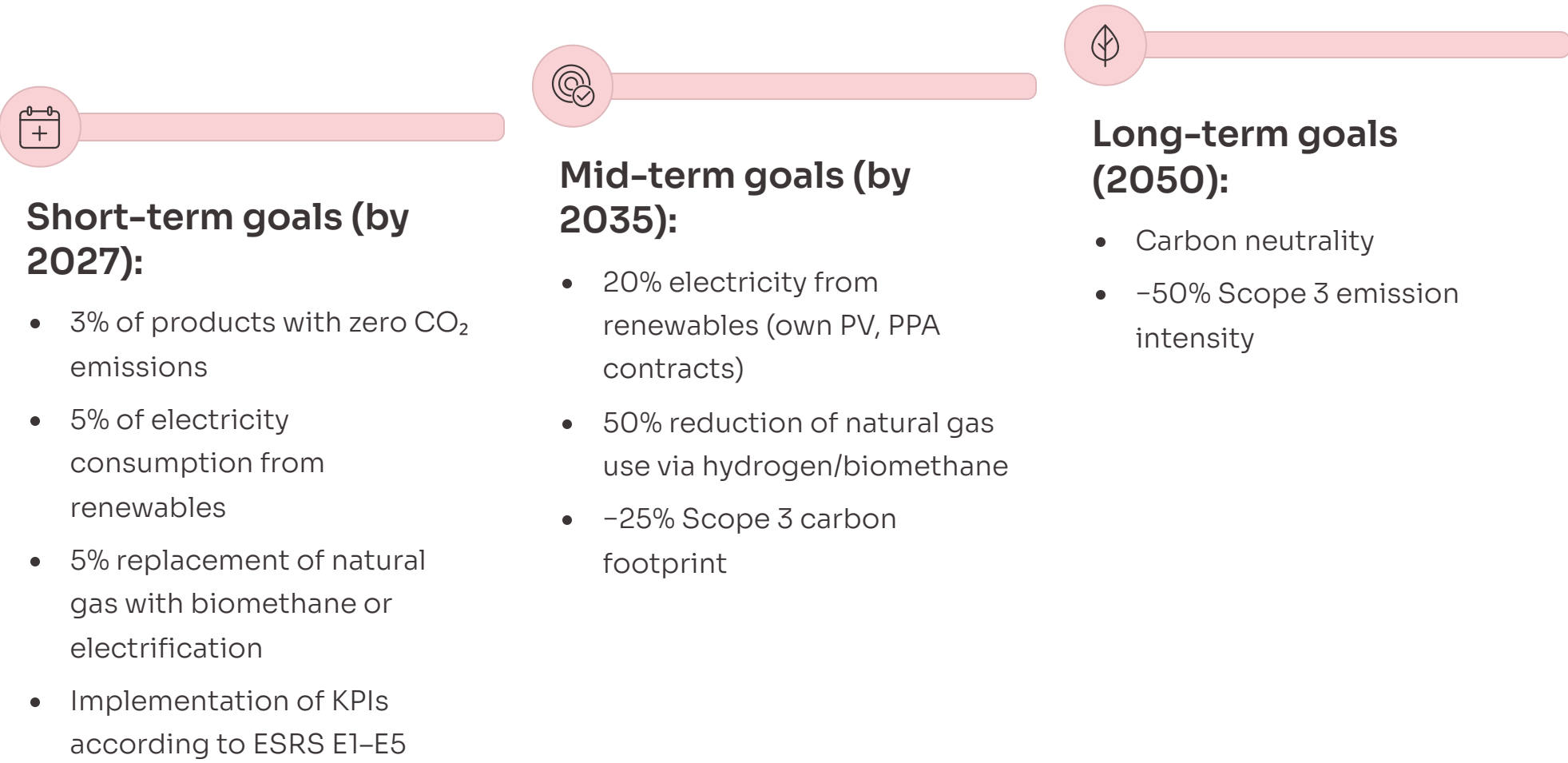
Emissions by Scope:



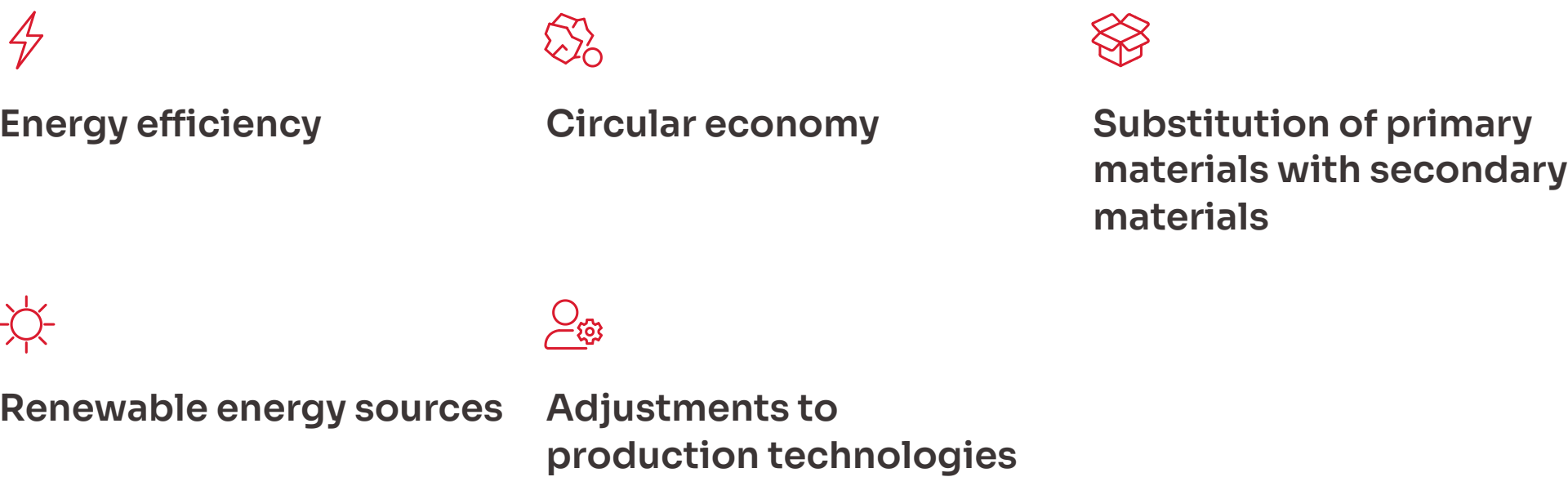
A reduction in Scope 2 of **-82,6 %** was achieved through the combination of own photovoltaic generation and a low-emission electricity supplier (Slovenské elektrárny a.s. – 55.5 g CO₂/kWh).

Decarbonisation Strategy

PEBAL’s decarbonisation strategy defines goals and measures up to 2050. It focuses on reducing emission intensity, improving energy efficiency, circular material flows, and gradually replacing natural gas with low-emission alternatives.



Main decarbonisation levers include:



Key Measures and Projects in 2024



Energy:

- Own photovoltaic power plant produced **317,5 MWh** (5.5% of annual consumption)
- Transition to a low-emission electricity supplier
- Energy audit and modernisation of technological equipment



Material flows & circularity:

- 1 310 tonnes of secondary raw materials used → saving 7,8 million kg CO₂e
- Implementation of ICMI, ICMO, IME methodologies
- 5% increase in internal return-material utilisation
- Start of digitalisation of waste flows



Production processes:

- Replacement of equipment with lower energy intensity
- Improved internal material logistics
- Optimisation of waste management



Scope 3 and Supply Chain

Scope 3 remains the most significant category (**99% of emissions**). In 2024, extensive mechanisms were prepared to manage it.

Key steps:



Supplier Code of Conduct implemented



ESG criteria for suppliers (environmental, social, governance)



Supplier training on ESG and decarbonisation (starting 2025)



Cooperation with NetZero Lab VŠB – primary data calculation according to GHG Protocol



Preparation of a digital Scope 3 tracking system

Suppliers are engaged in transitioning to more sustainable raw materials, recyclates and low-emission material flows.

Social and Governance Areas (ESG)

Employee training:

- ESG training system launched in 08/2024
- Training programmes for all levels: production, managers, purchasing, development

Governance & reporting:

- Preparation for first ESRS reporting (2025)
- Integration of VSME standards
- Regular internal ESG audits

Certifications:



ISO 9001

(2024)



BRCGS

(2024)



ISO 28000

(2025)

Customer Benefits

Cooperation with PEBAL provides customers with advantages in reducing their own Scope 3 emissions:



thanks to our recycles and circular flows, customers can reduce their emissions by up to **40 %**



transparent reporting enables integration into customer ESRS systems



competitive advantage in tenders and public procurement

Outlook and Goals for 2025–2026

2025:

- First basic VSME reporting
- EN 15343 certification (recyclate traceability)
- Digitalisation of all VSME-related data
- Development of new recyclable mono-structures

2026:

- First complete report according to VSME
- Preparation for RecyClass certification
- New company tool Emissio for product carbon footprint calculation
- Compliance with EUDR, CBAM, PPWR legislation

Conclusion



The year 2024 confirmed that PEBAL has a solid foundation for long-term transformation towards low-carbon and circular production. The significant reduction in emissions, improved efficiency of material flows, development of renewable energy sources and implementation of ESG principles strengthen our position among the most responsible packaging material manufacturers in Europe.

PEBAL is ready not only to meet legislative obligations but to become a sustainability leader within its industry.