



GHG Emissions Report 2025

Nipro PharmaPackaging Croatia

Abstract

Nipro PharmaPackaging Croatia continues to strengthen its environmental performance by reducing its greenhouse gas footprint while supporting sustainable business growth and increasing operational efficiency. This report demonstrates the Company's commitment to responsible manufacturing, transparent climate reporting, continuous improvement, and the long-term transition toward a more sustainable and lower-carbon future.

Table of Contents

1. Executive summary	3
1.1 Key Highlights	3
1.2 Year-on-Year Performance Summary	3
1.3 Key Achievements and Challenges	3
2. Company Profile	5
2.1 About Nipro PharmaPackaging Croatia	5
2.2. Reporting Scope and Organizational Boundary	5
2.3 Operational Overview.....	5
3. Methodology and Reporting Framework	6
3.1 Reporting Standards and Frameworks.....	6
3.2 Reporting Boundary	6
3.3 Greenhouse Gas Accounting Approach	8
3.4 Data Sources and Assumptions.....	8
3.5 Emission Factors and Calculation Methodology	9
3.6 Data Quality and Limitations	10
4. Climate Governance and Strategy	11
4.1 Climate Change Commitment.....	11
4.2 Climate-Related Responsibilities and Governance	11
4.3 Climate Targets	12
4.4 Decarbonization Strategy	13
4.5 Climate Risks and Opportunities	14
5. GHG Emissions Inventory	16
5.1 Total GHG Emissions.....	16
5.2 Emissions by Scope	16
5.3 Year-on-Year Comparison	18
6. Scope 1 Emissions	20
6.1 Scope 1 Emissions Overview	20
6.2 Stationary Combustion.....	21
6.3 Mobile Combustion	21
6.4 Scope 1 Performance Analysis	22



7. Scope 2 Emissions	23
7.1 Scope 2 Emissions Overview	23
7.2 Electricity Consumption	23
7.3 Location-Based and Market-Based Reporting	24
7.4 Scope 2 Performance Analysis	25
8. Scope 3 Emissions	26
8.1 Scope 3 Overview	26
8.2 Material Scope 3 Categories	27
8.3 Scope 3 Performance Analysis	31
9. Emissions Performance and Trends	33
9.1 Emissions by Scope	33
9.2 Emissions by Category	33
9.3 Emissions Contribution Analysis	34
9.4 Key Emission Drivers	35
9.5 Environmental Performance Indicators	36
10. Conclusions and Outlook	37
10.1 Conclusion	37
10.2 Outlook	38



1. Executive summary

1.1 Key Highlights

This Greenhouse Gas (GHG) Emissions Report presents the climate performance of Nipro PharmaPackaging Croatia (NPC) for the 2025 reporting year and provides a comparison with 2024 results. The report has been prepared in accordance with the GHG Protocol Corporate Accounting and Reporting Standard.

In 2025, NPC recorded total GHG emissions of **21,312.3 tCO₂e**, representing a **0.5% decrease** compared to **21,413.0 tCO₂e** in 2024. This reduction was achieved despite a **7.1% increase in production volume**, demonstrating continued progress in improving operational efficiency and reducing the carbon intensity of manufacturing activities.

1.2 Year-on-Year Performance Summary

Scope 1 emissions increased from **2,131.6 tCO₂e** to **2,347.1 tCO₂e** (+10.1%), primarily driven by higher natural gas consumption. Scope 2 emissions increased from **2,092.3 tCO₂e** to **2,318.1 tCO₂e** (+10.8%) due to increased electricity consumption. Both categories increases are associated with higher production output.

Scope 3 emissions remained the largest contributor to the Company's carbon footprint, accounting for **16,647.2 tCO₂e** or approximately **78% of total emissions**. Compared to 2024, Scope 3 emissions **decreased by 3.2%**, mainly due to lower emissions from capital goods, business travel, and employee commuting. Purchased Goods and Services remained the most significant emission source, contributing 12,608.1 tCO₂e and representing more than 75% of total Scope 3 emissions.

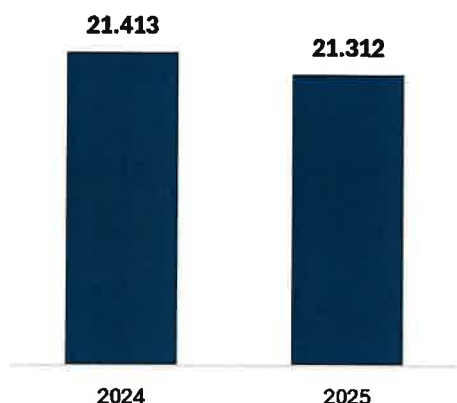
1.3 Key Achievements and Challenges

NPC achieved notable improvements in emissions intensity indicators during 2025. Total emissions per produced piece decreased from **29.37 gCO₂e/piece** to **27.30 gCO₂e/piece** (-7.0%), while cradle-to-gate emissions **decreased by 7.9%** and emissions per kilogram of glass processed **improved by 10.2%**.

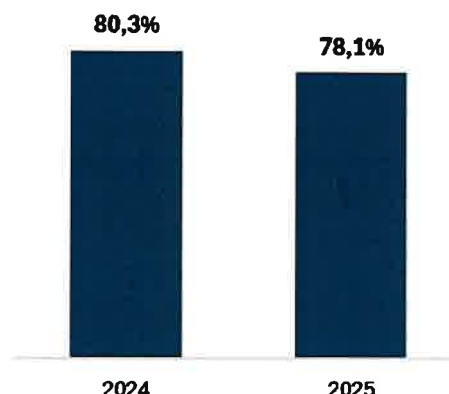


These results indicate that environmental performance improved despite increased production levels.

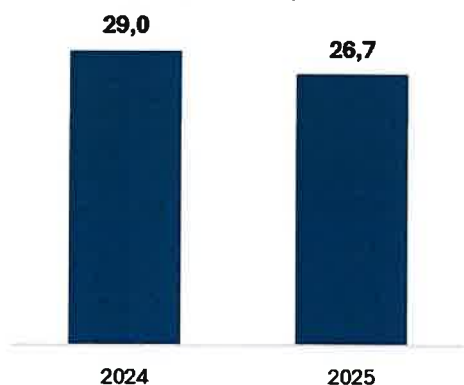
Total GHG emissions



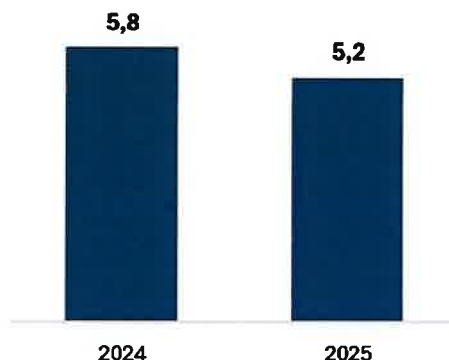
Scope 3 share



Emission per piece
(gCO₂e)



Emission per kg of glass
(gCO₂e)



Looking ahead, NPC will continue focusing on energy efficiency, renewable energy procurement, supplier engagement, logistics optimization, and value-chain decarbonization initiatives. The Company remains committed to reducing its environmental impact, improving emissions transparency, and supporting the long-term sustainability objectives of the Nipro Group and its stakeholders.



2. Company Profile

2.1 About Nipro PharmaPackaging Croatia

Nipro PharmaPackaging Croatia (NPC) is a manufacturing company specialized in the production of high-quality pharmaceutical primary packaging components, including glass ampoules and glass vials used by pharmaceutical manufacturers worldwide. The facility operates as part of the global Nipro Group and serves customers across Europe and international markets, supplying packaging solutions that support the safe storage and delivery of pharmaceutical products.

As a manufacturer of pharmaceutical packaging, NPC's operations are energy-intensive and rely on a complex supply chain involving glass tube production, packaging materials, transportation services, utilities, and capital equipment. Environmental sustainability and operational efficiency are therefore important aspects of the Company's long-term business strategy and responsible manufacturing approach.

2.2. Reporting Scope and Organizational Boundary

This report covers greenhouse gas emissions associated with the operations of Nipro PharmaPackaging Croatia for the reporting year ending 31 December 2025. The inventory has been prepared using the operational control approach and includes direct emissions from company-owned or controlled sources (Scope 1), indirect emissions from purchased electricity (Scope 2), and relevant upstream and downstream value-chain emissions (Scope 3).

2.3 Operational Overview

During 2025, NPC continued to expand production while maintaining a focus on environmental performance improvement. Total production increased from approximately **729 million pieces in 2024 to 781 million pieces in 2025**, representing a **growth of 7.1%**. Total glass processed **increased for 9.7%**, reflecting higher manufacturing output and customer demand.

The Company employed approximately **235 employees** at year-end and generated total greenhouse gas emissions of **21,312 tCO₂e**, of which **78% originated from Scope 3 activities** across the value chain. Despite increased production volumes, total emissions decreased slightly compared with the



previous year, demonstrating ongoing improvements in emission intensity and resource efficiency.

NPC remains committed to supporting the sustainability objectives of the Nipro Group through continuous improvement of manufacturing processes, responsible resource management, supplier engagement, and transparent climate-related reporting in line with emerging regulatory requirements.

3. Methodology and Reporting Framework

3.1 Reporting Standards and Frameworks

This report has been prepared in accordance with the **GHG Protocol Corporate Accounting and Reporting Standard** and the **GHG Protocol Corporate Value Chain (Scope 3) Standard**.

The report incorporates climate-related disclosures aligned with the principles of the **Corporate Sustainability Reporting Directive (CSRD)** and the **European Sustainability Reporting Standard ESRS E1 – Climate Change**, covering governance, strategy, climate risks and opportunities, greenhouse gas emissions, and emissions performance indicators.

3.2 Reporting Boundary

The reporting boundary includes all activities under the operational control of Nipro PharmaPackaging Croatia. Emissions are classified according to the GHG Protocol into Scope 1, Scope 2, and Scope 3 categories. The inventory covers manufacturing operations, utility consumption, company vehicles, purchased goods and services, capital goods, transportation activities, waste management, employee commuting, business travel, and selected downstream activities.

Scope 3 categories were assessed for relevance and materiality considering emission magnitude, data availability, stakeholder expectations, the Company's ability to influence emission sources, and the significance of individual categories to the overall greenhouse gas inventory. This assessment was performed in accordance with the materiality and relevance principles of the GHG Protocol Scope 3 Standard.



The following Scope 3 categories were assessed as relevant and material to the Company's operations:

- Category 1 – Purchased Goods and Services
- Category 2 – Capital Goods
- Category 3 – Fuel and Energy Related Activities
- Category 4 – Upstream Transportation and Distribution
- Category 5 – Waste Generated in Operations
- Category 6 – Business Travel
- Category 7 – Employee Commuting
- Category 9 – Downstream Transportation and Distribution
- Category 12 – End-of-Life Treatment of Sold Products

Categories 8, 10, 11, 13, 14 and 15 were assessed as not applicable or not material to the Company's business model:

Category 8

Category 8 is assessed as not material. Assets leased by company assessed in Category 1 (Warehousing) and Category 3 (Fuels and energy).

Category 10

Category 10 is assessed as not material. While ampoules and vials undergo filling and sterilization by pharmaceutical customers, associated emissions are driven by customer-specific processes and not significantly influenced by the product itself.

Category 11

Assessed as not applicable, as the company produces inert glass packaging (ampoules and vials) that do not consume energy or generate emissions during use. Therefore, no use-phase emissions occur.

Category 13

Assessed as not applicable as no assets owned and leased to others by the Company.



Category 14

Assessed as not applicable, as there are no franchise operations.

Category 15

Assessed as not applicable, as there are no investments relevant for this category.

3.3 Greenhouse Gas Accounting Approach

NPC applies the **operational control approach** for consolidating greenhouse gas emissions. Emissions are reported in **metric tonnes of carbon dioxide equivalent (tCO₂e)** and include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and other greenhouse gases where relevant.

Emission calculations were performed using a combination of:

- Activity-based methodology
- Supplier-specific emission factors (if available)
- Spend-based estimation methods
- Life-cycle assessment (LCA) emission factors (if available)

The selected methodology for each category reflects the best available data and follows the hierarchy recommended by the GHG Protocol.

3.4 Data Sources and Assumptions

Activity data were collected from internal and external sources, including:

- Natural gas and electricity invoices
- Production and operational records
- Vehicle fuel consumption records
- Supplier purchasing data
- Logistics and transportation documentation
- Waste management reports
- Travel and expense records
- Employee commuting surveys



- Sales and distribution records

The reporting period follows the Company's financial reporting cycle and covers all significant operational activities during 2025. Where primary data were unavailable, conservative assumptions and recognized estimation methods were applied.

3.5 Emission Factors and Calculation Methodology

Emission factors were obtained from internationally recognized sources, including:

- UK DEFRA Greenhouse Gas Conversion Factors
- ADEME Emissions Database
- Supplier-specific environmental data
- Nipro internal life-cycle assessment factors
- Industry-standard EEIO (Environmentally Extended Input-Output) factors for spend-based calculations

Examples of calculation methods include:

Activity-Based Method

$$\text{Emissions (kg CO}_2\text{e)} = \text{Activity Data} \times \text{Emission Factor}$$

Spend-Based Method

$$\text{Emissions (kg CO}_2\text{e)} = \text{Expenditure (€)} \times \text{EEIO Emission Factor}$$

Transportation-Based Method

$$\text{Emissions (kg CO}_2\text{e)} = \text{Distance} \times \text{Weight} \times \text{Transport Emission Factor}$$

These methodologies provide a consistent and comparable basis for year-on-year emissions reporting.



3.6 Data Quality and Limitations

NPC continually seeks to improve the quality, completeness, and accuracy of environmental data. The majority of Scope 1 and Scope 2 emissions are based on primary activity data, while certain Scope 3 categories require the use of secondary data, industry-average emission factors, or estimation techniques.

Although every reasonable effort has been made to ensure accuracy, some uncertainty remains inherent in greenhouse gas accounting, particularly within complex supply chains and downstream value-chain activities. Future reporting cycles will focus on increasing supplier-specific data collection, improving value-chain transparency, and further enhancing the robustness of emissions calculations.

The methodology applied in this report provides a reliable and transparent representation of NPC's greenhouse gas footprint and supports informed decision-making, emissions reduction planning, and compliance with evolving sustainability reporting requirements.



4. Climate Governance and Strategy

4.1 Climate Change Commitment

Nipro PharmaPackaging Croatia (NPC) recognizes climate change as a significant environmental, operational, and business challenge that requires continuous action to reduce greenhouse gas (GHG) emissions and improve resource efficiency. As part of the Nipro Group, the Company is committed to responsible manufacturing practices and the integration of environmental sustainability principles into its business operations.

NPC's climate ambition is to continuously improve its carbon performance by reducing emissions intensity, increasing operational efficiency, promoting responsible supply chain management, and supporting the transition to a lower-carbon economy. The Company seeks to decouple business growth from environmental impact by reducing emissions per unit of production while maintaining high standards of quality, safety, and customer service.

The 2025 results demonstrate progress toward this objective, with total greenhouse gas emissions decreasing despite growth in production volumes and sales activity. This reflects the Company's commitment to embedding environmental considerations into operational and strategic decision-making.

4.2 Climate-Related Responsibilities and Governance

Climate-related topics are managed through NPC's existing management and governance structure. Responsibility for environmental performance is shared across operational, technical, procurement, logistics, and management functions to ensure effective implementation of sustainability initiatives throughout the organization.

Senior management is responsible for:

- Reviewing environmental and climate-related performance
- Monitoring greenhouse gas emissions and key sustainability indicators
- Establishing environmental objectives and improvement initiatives
- Allocating resources for emissions reduction projects
- Supporting compliance with applicable environmental regulations and reporting requirements



Operational departments contribute to climate management through continuous monitoring of energy consumption, fuel use, production efficiency, waste generation, transportation activities, and supplier performance. Annual GHG reporting provides management with the information needed to evaluate performance and identify opportunities for further emissions reductions.

4.3 Climate Targets

Nipro PharmaPackaging Croatia is committed to continuously improving its environmental performance and reducing the greenhouse gas emissions associated with its operations and value chain. To support this commitment, the Company has established the following climate-related objectives:

Climate targets

Objective	Baseline Year	Target Year
Reduce Scope 1 and Scope 2 emissions intensity per unit produced	2024	2030
Improve overall energy efficiency of manufacturing operations	2024	2030
Increase the share of lower-carbon and renewable electricity sources	2025	2030
Increase supplier-specific emissions data coverage for material suppliers	2025	2030
Reduce emissions intensity associated with purchased goods and services	2025	2030

Table 4.1: Climate targets

Progress against these objectives will be monitored through annual greenhouse gas reporting and reviewed as part of the Company's environmental management and continuous improvement processes. Future targets may be refined as data quality improves, decarbonization opportunities are further evaluated, and Group-level sustainability objectives evolve.



4.4 Decarbonization Strategy

NPC's decarbonization strategy focuses on both operational emissions (Scope 1 and Scope 2) and emissions generated throughout the value chain (Scope 3).

Key strategic priorities include:

Improving Energy Efficiency

The Company continuously evaluates opportunities to optimize manufacturing processes, improve equipment efficiency, reduce energy losses, and enhance the utilization of production assets. Increased production output combined with improved emissions intensity indicators demonstrates the effectiveness of ongoing efficiency initiatives.

Reducing Carbon Intensity of Operations

Particular attention is given to reducing emissions associated with:

- Natural gas consumption
- Electricity consumption
- Company vehicle fleet operation
- Production and utility systems

Future improvement initiatives may include the increased use of renewable energy sources, equipment modernization, and process optimization projects.

Supply Chain Engagement

Scope 3 emissions represent approximately 78% of NPC's total carbon footprint and therefore remain a key focus area for future reductions. Purchased Goods and Services account for over 75% of Scope 3 emissions and represent the largest decarbonization opportunity.

The Company aims to strengthen collaboration with strategic suppliers to:

- Improve carbon footprint transparency
- Increase the use of supplier-specific emissions data
- Encourage emissions reduction initiatives throughout the supply chain
- Support sustainable sourcing practices



Sustainable Logistics

NPC continues to evaluate logistics optimization opportunities to reduce transportation-related emissions through route planning, transport consolidation, and cooperation with logistics providers committed to improving environmental performance.

4.5 Climate Risks and Opportunities

Climate change presents both risks and opportunities that may affect NPC's operations, supply chain, customers, and long-term business performance.

Physical Risks

Potential physical climate risks include:

- Extreme weather events affecting logistics and transportation networks
- Increased frequency of heat waves impacting operational efficiency
- Flooding or infrastructure disruptions affecting suppliers and supply chains
- Energy supply interruptions and increasing utility costs

These risks could impact production continuity, delivery reliability, and operating costs.

Transition Risks

Transition risks may arise from:

- Evolving environmental regulations and reporting requirements
- Carbon pricing mechanisms and energy market changes
- Customer expectations regarding sustainability performance
- Supply-chain decarbonization requirements
- Increased demand for climate-related disclosures under CSRD and ESRS standards



Climate Opportunities

At the same time, climate action creates opportunities for long-term value creation through:

- Reduced energy consumption and operating costs
- Improved manufacturing efficiency
- Enhanced supplier and customer relationships
- Increased competitiveness in sustainability-focused markets
- Better preparedness for future regulatory developments
- Strengthened corporate reputation and stakeholder trust

NPC views climate management not only as a compliance requirement but also as an opportunity to improve business resilience, operational excellence, and long-term sustainable growth. Through continuous monitoring of emissions performance and implementation of targeted reduction initiatives, the Company aims to contribute positively to both environmental and business objectives.



5. GHG Emissions Inventory

5.1 Total GHG Emissions

Nipro PharmaPackaging Croatia's total greenhouse gas (GHG) emissions for the 2025 reporting year amounted to **21,312.3 tCO₂e**, representing a decrease of **0.5%** compared with **21,413.0 tCO₂e** reported in 2024. This reduction was achieved despite a significant increase in production volumes, demonstrating continued improvement in operational efficiency and emissions intensity.

Total GHG Emissions by Scope

Emission Scope	2024 (tCO ₂ e)	2025 (tCO ₂ e)	Change
Scope 1	2,131.6	2,347.1	+10.1%
Scope 2	2,092.3	2,318.1	+10.8%
Scope 3	17,189.2	16,647.2	-3.2%
Total	21,413.0	21,312.3	-0.5%

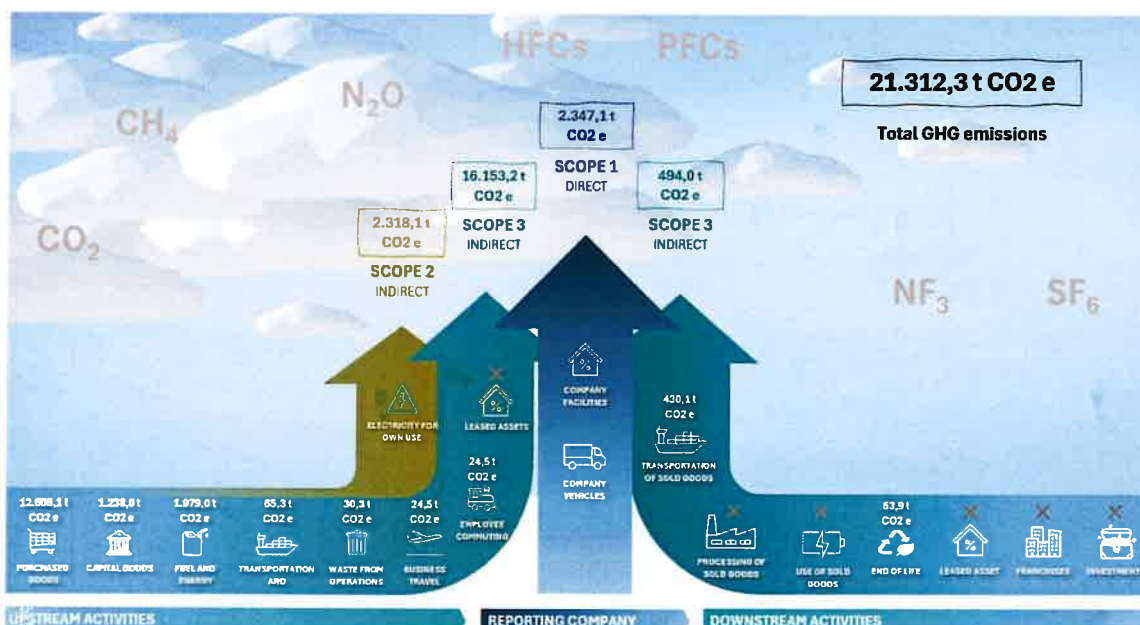
Table 5.1: Total GHG emissions by scope

5.2 Emissions by Scope

The Company's emissions profile continues to be dominated by value-chain emissions. In 2025, Scope 3 emissions accounted for approximately **78.1%** of total emissions, while Scope 1 and Scope 2 represented **11.0%** and **10.9%**, respectively.



Emissions by Scope – 2025



Picture 5.1: Overview of 2025 GHG emissions by scope

The Company's carbon footprint comprises direct emissions from fuel combustion and company vehicles (Scope 1), indirect emissions associated with purchased electricity (Scope 2), and indirect emissions throughout the value chain (Scope 3). Scope 3 emissions remain the most significant contributor to the Company's overall carbon footprint.

Emissions Distribution – 2025

Scope	Emissions (tCO ₂ e)	Share of Total
Scope 1	2,347.1	11.0%
Scope 2	2,318.1	10.9%
Scope 3	16,647.2	78.1%
Total	21,312.3	100%

Table 5.2: Share of emissions by scope



The predominance of Scope 3 emissions reflects the Company's dependence on emissions-intensive raw materials, purchased goods, external energy supply, transportation activities, and other value-chain processes. As a result, future decarbonization efforts will require not only operational improvements but also close collaboration with suppliers and logistics partners.

5.3 Year-on-Year Comparison

Comparison with 2024 highlights several important developments in NPC's emissions profile.

Scope 1 emissions increased by **10.1%**, primarily due to higher natural gas consumption associated with increased manufacturing activity. Scope 2 emissions increased by **10.8%**, reflecting increased electricity demand resulting from higher production output. Despite these increases, Scope 3 emissions decreased by **3.2%**, driven mainly by lower emissions from capital goods, business travel, and employee commuting activities.

The most notable achievement during 2025 was the improvement in emissions efficiency. Production increased from approximately **729 million pieces to 781 million pieces**, while total emissions decreased. Consequently, emissions intensity per produced piece improved from **29.37 gCO₂e/piece to 27.30 gCO₂e/piece**, representing a reduction of approximately **7.0%**. Cradle-to-gate emissions intensity improved by **7.9%**, while emissions per kilogram of glass processed improved by **10.2%**.



Key Performance Indicators

Indicator	2024	2025	Change
Total Emissions (tCO ₂ e)	21,413.0	21,312.3	-0.5%
Production Volume (pieces)	729.1 million	780.6 million	+7.1%
Emissions per Piece (gCO ₂ e/piece)	29.37	27.30	-7.0%
Cradle-to-Gate Emissions (gCO ₂ e/piece)	28.97	26.67	-7.9%
Emissions per kg Glass (kgCO ₂ e/kg)	5.81	5.22	-10.2%

Table 5.3: Key environmental performance indicators

Overall, the 2025 inventory demonstrates that Nipro PharmaPackaging Croatia successfully maintained stable total GHG emissions while supporting business growth and increasing manufacturing output. The results confirm continued progress toward improving environmental performance and reducing the carbon intensity of operations, while highlighting the importance of addressing value-chain emissions as the primary source of the Company's greenhouse gas footprint.



6. Scope 1 Emissions

6.1 Scope 1 Emissions Overview

Scope 1 emissions represent direct greenhouse gas (GHG) emissions from sources owned or controlled by Nipro PharmaPackaging Croatia. For the 2025 reporting year, total Scope 1 emissions amounted to **2,347.1 tCO₂e**, representing an increase of **10.1%** compared with **2,131.6 tCO₂e** reported in 2024. Scope 1 emissions accounted for approximately **11.0%** of the Company's total GHG footprint in 2025.

The Company's Scope 1 inventory consists of two primary emission sources:

- Stationary combustion of natural gas used in manufacturing operations
- Mobile combustion associated with company-owned and controlled vehicles

Scope 1 Emissions Summary

Source	2025 (tCO ₂ e)	Share of Scope 1
Stationary Combustion (Natural Gas)	2,317.5	98.7%
Mobile Combustion (Company Vehicles)	29.5	1.3%
Total Scope 1	2,347.1	100%

Table 6.1: Scope 1 emissions by source



6.2 Stationary Combustion

Stationary combustion is the largest source of direct emissions within NPC's operations and results primarily from the combustion of natural gas used in production processes and facility operations.

During 2025, the Company consumed approximately **12.67 million kWh of natural gas**, generating **2,317.5 tCO₂e** of direct emissions. Natural gas is used to support manufacturing activities and remains a critical energy source for pharmaceutical glass packaging production.

Natural Gas Emissions

Indicator	2025
Natural Gas Consumption	12,666,740 kWh
Emissions	2,317.5 tCO ₂ e
Share of Scope 1	98.7%

Table 6.2: Natural gas consumption and associated emissions

Given the significance of natural gas consumption within the Company's emissions profile, improvements in energy efficiency and fuel-use optimization remain important priorities for future emissions reduction initiatives.

6.3 Mobile Combustion

Mobile combustion emissions arise from fuel consumption by company-owned vehicles used for business purposes.

During 2025, NPC's vehicle fleet consumed diesel and petrol fuels, generating **29.5 tCO₂e** of direct emissions. Diesel consumption represented the majority of fleet-related emissions due to the composition of the vehicle fleet and mileage travelled during the reporting year.



Fleet Fuel Consumption

Fuel Type	Consumption	Emissions (tCO ₂ e)
Diesel	8,465.6 L	21.8
Petrol	3,760.0 L	7.8
Total	12,225.6 L	29.5

Table 6.3: Company vehicle fuel consumption and emissions

Although fleet emissions represent a relatively small proportion of the Company's overall carbon footprint, opportunities exist to further reduce emissions through fleet optimization, fuel-efficiency improvements, and the future adoption of lower-emission vehicle technologies.

6.4 Scope 1 Performance Analysis

Scope 1 emissions increased by **215.5 tCO₂e** compared with the previous year, primarily reflecting higher production activity and associated energy requirements. Despite this increase, Scope 1 emissions remain a relatively small contributor to NPC's overall GHG inventory when compared with Scope 3 value-chain emissions.

Year-on-Year Comparison

Indicator	2024	2025	Change
Scope 1 Emissions (tCO ₂ e)	2,131.6	2,347.1	+10.1%
Share of Total Emissions	10.0%	11.0%	+1.0 pp

Table 6.4: Scope 1 emissions comparison

Reducing direct emissions remains an important component of NPC's climate strategy. Future focus areas include improving process efficiency, optimizing natural gas consumption, maintaining efficient equipment, and identifying opportunities to transition toward lower-carbon energy solutions where technically and economically feasible.



7. Scope 2 Emissions

7.1 Scope 2 Emissions Overview

Scope 2 emissions represent indirect greenhouse gas (GHG) emissions associated with the generation of purchased electricity consumed by Nipro PharmaPackaging Croatia. Electricity is a key energy source supporting manufacturing operations, production equipment, utilities, and facility infrastructure.

During 2025, Scope 2 emissions amounted to **2,318.1 tCO₂e**, representing an increase of **10.8%** compared with **2,092.3 tCO₂e** reported in 2024. Scope 2 emissions accounted for approximately **10.9%** of the Company's total greenhouse gas footprint during the reporting year.

Scope 2 Emissions Summary

Indicator	2024	2025	Change
Electricity Consumption (kWh)	7,659,558	8,105,079	+5.8%
Scope 2 Emissions (tCO ₂ e)	2,092.3	2,318.1	+10.8%
Share of Total Emissions	9.8%	10.9%	+1.1 pp

Table 7.1: Scope 2 emissions overview

7.2 Electricity Consumption

Electricity consumption is primarily driven by the operation of production equipment, compressed air systems, utilities, lighting, quality control laboratories, and other supporting infrastructure required for pharmaceutical glass packaging manufacturing.

Total electricity consumption during 2025 was **8,105,079 kWh**, reflecting increased operational activity and higher production volumes compared with the previous year. The increase in electricity demand is consistent with the approximately **7.1% increase in total production output** recorded during the reporting year.



Electricity Consumption and Emissions

Indicator	2025
Electricity Consumption	8,105,079 kWh
Scope 2 Emissions	2,318.1 tCO ₂ e
Emission Factor	0.286 kg CO ₂ e/kWh

Table 7.2: Electricity consumption and associated emissions

Electricity remains one of the Company's most significant operational emission sources and therefore represents an important area for future decarbonization initiatives.

7.3 Location-Based and Market-Based Reporting

In accordance with GHG Protocol recommendations, Scope 2 emissions may be reported using both the **location-based** and **market-based** methods.

Location-Based Method

The location-based method reflects the average emissions intensity of the electricity grid from which power is consumed.

For 2025, location-based Scope 2 emissions were calculated at approximately:

Method	Emissions (tCO ₂ e)
Location-Based	1,791.2

Table 7.3: Location-based Scope 2 emissions

Market-Based Method

The market-based method reflects electricity purchasing arrangements and contractual instruments associated with renewable electricity procurement.



Based on the residual mix methodology applied within the inventory, market-based emissions were estimated at:

Method	Emissions (tCO ₂ e)
Market-Based (Residual Mix)	3,799.7

Table 7.4: Market-based Scope 2 emissions

The Company currently reports Scope 2 emissions using the approach applied within its corporate GHG inventory while continuing to assess opportunities to increase the share of renewable electricity and reduce electricity-related emissions over time.

7.4 Scope 2 Performance Analysis

Scope 2 emissions increased by approximately **225.8 tCO₂e** compared with 2024, primarily due to increased electricity consumption associated with higher manufacturing output. Despite the increase in absolute emissions, production growth exceeded emissions growth, contributing to improved product-level carbon intensity indicators throughout the reporting period.

Year-on-Year Comparison

Indicator	2024	2025	Change
Scope 2 Emissions (tCO ₂ e)	2,092.3	2,318.1	+10.8%
Share of Total Emissions	9.8%	10.9%	+1.1 pp
Total Emissions (tCO₂e)	21,413.0	21,312.3	-0.5%

Table 7.5: Scope 2 emissions performance

Reducing electricity-related emissions remains an important component of NPC's climate strategy. Future initiatives may include further energy-efficiency improvements, optimization of electricity consumption within production processes, investment in energy-saving technologies, and evaluation of renewable electricity sourcing opportunities. By focusing on both operational efficiency and lower-carbon electricity solutions, NPC aims to reduce its Scope 2 emissions



intensity while supporting continued business growth and long-term sustainability objectives.

8. Scope 3 Emissions

8.1 Scope 3 Overview

Scope 3 emissions represent indirect greenhouse gas (GHG) emissions occurring throughout Nipro PharmaPackaging Croatia's value chain that are not included within Scope 1 or Scope 2 reporting. For a pharmaceutical packaging manufacturer, Scope 3 emissions primarily arise from the procurement of raw materials, capital investments, energy-related activities, transportation services, waste management, business travel, employee commuting, and downstream product distribution.

In 2025, total Scope 3 emissions amounted to **16,647.2 tCO₂e**, representing a **3.2% reduction** compared with **17,189.2 tCO₂e** reported in 2024. Despite increased production volumes during the reporting year, Scope 3 emissions decreased, reflecting improvements in several key emission categories and continued efforts to improve operational and value-chain efficiency.

Scope 3 remains the largest component of NPC's carbon footprint and accounts for approximately **78.1% of total Company emissions**. This highlights the importance of supplier engagement, sustainable procurement practices, and value-chain collaboration in achieving future emissions reductions.



Scope 3 Summary

Category	2024 (tCO ₂ e)	2025 (tCO ₂ e)	Change
Purchased Goods & Services	12,269.8	12,608.1	+2.8%
Capital Goods	2,336.0	1,238.0	-47.0%
Fuel & Energy Related Activities	1,926.4	1,979.0	+2.7%
Upstream Transportation	60.4	65.3	+8.1%
Waste Generated in Operations	27.4	30.3	+10.5%
Business Travel	46.6	24.5	-47.4%
Employee Commuting	232.5	208.0	-10.5%
Downstream Transportation	236.2	430.1	+82.1%
End-of-Life Treatment	53.7	63.9	+18.8%
Total Scope 3	17,189.2	16,647.2	-3.2%

Table 8.1: Scope 3 emissions by category

8.2 Material Scope 3 Categories

The materiality assessment identified nine relevant Scope 3 categories. Three categories account for more than 95% of total Scope 3 emissions and therefore represent the Company's primary decarbonization opportunities.

Upstream activities

8.2.1 Purchased Goods and Services (Category 1)

Purchased Goods and Services is the largest source of Scope 3 emissions, contributing **12,608.1 tCO₂e** in 2025, equivalent to approximately **75.7% of total Scope 3 emissions**.



The category primarily includes:

- Glass tubes
- Packaging materials
- Pallets
- Liquid oxygen
- Cardboard products
- Chemicals and enamels
- Purchased services

The increase of 2.8% compared with 2024 reflects higher procurement volumes associated with increased production output. Despite this increase, the category remains the Company's largest opportunity for future emissions reductions through supplier engagement and sustainable sourcing initiatives.

8.2.2 Capital Goods (Category 2)

Capital Goods emissions totalled **1,238.0 tCO₂e** in 2025, representing a substantial reduction of **47.0%** compared with 2024.

This category includes emissions associated with:

- Production equipment
- Machinery
- Electrical systems
- Building-related investments
- Industrial infrastructure

The reduction reflects lower investment activity during the reporting year compared with the previous period.



8.2.3 Fuel and Energy Related Activities (Category 3)

Emissions from fuel and energy-related activities amounted to **1,979.0 tCO₂e**, representing approximately **11.9% of Scope 3 emissions**.

The category includes upstream emissions associated with:

- Electricity generation
- Natural gas extraction and transportation
- Fuel production and distribution
- Liquid oxygen supply

Emissions increased slightly compared with 2024 due to higher energy demand from production activities.

8.2.4 Upstream Transportation and Distribution (Category 4)

Upstream transportation emissions amounted to **65.3 tCO₂e** in 2025. These emissions arise from transportation services used for inbound logistics and the movement of purchased materials and packaging components to NPC facilities.

While representing less than 1% of total Scope 3 emissions, logistics optimization remains an opportunity for future improvements.

8.2.5 Waste Generated in Operations (Category 5)

Waste management activities generated **30.3 tCO₂e** during 2025. Emissions are associated with the treatment, recycling, recovery, and disposal of waste streams generated by manufacturing operations.

The largest contributors include:

- Glass waste
- Plastic waste
- Cardboard waste
- Hazardous waste management



8.2.6 Business Travel (Category 6)

Business travel emissions decreased significantly from **46.6 tCO₂e** to **24.5 tCO₂e**, representing a reduction of **47.4%**.

Emissions originated primarily from:

- Air travel
- Vehicle travel
- Hotel accommodation

The reduction reflects improved travel management and a greater use of virtual meetings and remote collaboration tools.

8.2.7 Employee Commuting (Category 7)

Employee commuting emissions totaled **208.0 tCO₂e** during 2025, a decrease of **10.5%** compared with the previous year.

Commuting emissions were calculated based on:

- Employee commuting distances
- Transportation modes
- Working days
- Employee commuting surveys

Private vehicle usage remains the dominant contributor within this category.



Downstream activities

8.2.8 Downstream Transportation and Distribution (Category 9)

Emissions associated with distribution of finished products to customers amounted to **430.1 tCO₂e**, making this the largest downstream category.

Compared with 2024, emissions increased by **82.1%**. During 2025, the calculation methodology for Scope 3 Category Downstream Transportation and Distribution was enhanced by transitioning from a spend-based estimation approach to an activity-based methodology.

The revised approach uses actual transportation distances, shipment weights, transport modes, and emission factors, providing a more accurate representation of emissions associated with the distribution of finished products. As a result, year-on-year comparisons should be interpreted with consideration of this methodological improvement

8.2.9 End-of-Life Treatment of Sold Products (Category 12)

End-of-life emissions totalled **63.9 tCO₂e** in 2025 and represent emissions associated with the disposal, recycling, or treatment of pharmaceutical packaging products after customer use.

The increase compared with 2024 is linked to higher product sales volumes and corresponding increases in packaging entering waste management systems.

8.3 Scope 3 Performance Analysis

Scope 3 emissions decreased by **542.0 tCO₂e** compared with 2024, mainly due to reductions in Capital Goods, Business Travel, and Employee Commuting emissions. These reductions more than offset increases in Purchased Goods and Services, Fuel and Energy Related Activities, and Downstream Transportation.

The emissions profile confirms that value-chain activities remain the dominant source of NPC's carbon footprint. Purchased Goods and Services, Capital Goods, and Fuel & Energy Related Activities together account for approximately **95% of total Scope 3 emissions**, making them the most important focus areas for future decarbonization initiatives.



Future Scope 3 reduction efforts will focus on:

- Increasing supplier-specific emissions data collection
- Engaging strategic suppliers on emissions reduction initiatives
- Improving energy efficiency throughout the supply chain
- Optimizing inbound and outbound logistics
- Promoting sustainable procurement practices
- Enhancing circular economy and recycling initiatives

By addressing these priority areas, NPC aims to further reduce its value-chain emissions while supporting the sustainability objectives of both the Company and the broader Nipro Group.



9. Emissions Performance and Trends

9.1 Emissions by Scope

During 2025, Nipro PharmaPackaging Croatia recorded total greenhouse gas emissions of **21,312.3 tCO₂e**, representing a slight decrease of **0.5%** compared with **21,413.0 tCO₂e** reported in 2024. Despite increased production activity during the year, the Company successfully maintained stable overall emissions levels, demonstrating continued progress in improving carbon efficiency.

Emissions by Scope

Scope	2024 (tCO ₂ e)	2025 (tCO ₂ e)	Change
Scope 1	2,131.6	2,347.1	+10.1%
Scope 2	2,092.3	2,318.1	+10.8%
Scope 3	17,189.2	16,647.2	-3.2%
Total	21,413.0	21,312.3	-0.5%

Table 9.1: Year-on-year emissions by scope

Scope 3 emissions continued to dominate the Company's carbon footprint, accounting for approximately **78.1%** of total emissions in 2025, while Scope 1 and Scope 2 emissions represented **11.0%** and **10.9%**, respectively.

9.2 Emissions by Category

The Scope 3 inventory highlights that the majority of emissions originate from a small number of categories associated with purchased materials, capital investments, and energy supply chains.



Scope 3 Emissions by Category

Category	2025 (tCO ₂ e)	Share of Scope 3
Purchased Goods & Services	12,608.1	75.7%
Fuel & Energy Related Activities	1,979.0	11.9%
Capital Goods	1,238.0	7.4%
Downstream Transportation	430.1	2.6%
Employee Commuting	208.0	1.2%
Upstream Transportation	65.3	0.4%
End-of-Life Treatment	63.9	0.4%
Waste Generated in Operations	30.3	0.2%
Business Travel	24.5	0.1%
Total Scope 3	16,647.2	100%

Table 9.2: Scope 3 emissions profile

Purchased Goods and Services remained by far the largest emission source, reflecting the carbon-intensive nature of glass production, packaging materials, and other purchased inputs required for pharmaceutical packaging manufacturing.

9.3 Emissions Contribution Analysis

The Company's carbon footprint remains highly concentrated within a limited number of emission sources. The three largest Scope 3 categories contributed approximately **95% of total Scope 3 emissions** and more than **74% of total Company emissions** in 2025.

Largest Emission Sources

1. Purchased Goods and Services – 12,608.1 tCO₂e
2. Fuel and Energy Related Activities – 1,979.0 tCO₂e
3. Capital Goods – 1,238.0 tCO₂e

Together, these categories represent the most significant opportunities for long-term emissions reductions through supplier engagement, procurement optimization, energy efficiency improvements, and capital investment planning.



9.4 Key Emission Drivers

Several factors influenced emissions performance during 2025.

Production Growth

Total production increased from approximately **729 million pieces** in 2024 to **781 million pieces** in 2025, representing an increase of **7.1%**. Similarly, total glass processed increased from approximately **3.64 million kg** to **3.99 million kg**.

Energy Consumption

Higher production volumes resulted in increased consumption of natural gas and electricity, contributing to increases in both Scope 1 and Scope 2 emissions.

Capital Investment Activity

The most significant reduction occurred in Category 3.2 (Capital Goods), where emissions decreased by approximately **47%** compared with 2024 due to lower investment activity during the reporting year.

Business Travel Reduction

Business travel emissions decreased by approximately **47%**, reflecting increased use of remote meetings and more efficient travel planning.

Improved Transportation Methodology

In 2025, NPC improved the calculation methodology for **Category Downstream Transportation and Distribution** by replacing the previous spend-based approach with an activity-based methodology using actual shipment weights, transport distances, transport modes, and logistics data. This methodological enhancement improves reporting accuracy and partially contributes to the observed increase in downstream transportation emissions. As a result, direct comparison with prior-year values should be interpreted with consideration of this improvement in data quality and calculation methodology.



9.5 Environmental Performance Indicators

Despite increased production and business activity, several environmental intensity indicators improved significantly during 2025.

Emissions Intensity Performance

Indicator	2024	2025	Change
Emissions per Piece (gCO ₂ e/piece)	29.37	27.30	-7.0%
Cradle-to-Gate Emissions (gCO ₂ e/piece)	28.97	26.67	-7.9%
Emissions per kg of Glass (kgCO ₂ e/kg)	5.81	5.22	-10.2%
Emissions per Employee (tCO ₂ e/employee)	90.4	89.9	-0.5%

Table 9.3: Environmental performance indicators

The reduction in emissions intensity demonstrates that operational efficiency improvements have partially decoupled greenhouse gas emissions from production growth. Although production volumes increased substantially during the reporting year, total emissions remained stable and environmental performance indicators continued to improve.

Overall Trend Assessment

The 2025 reporting year demonstrates positive progress in NPC's climate performance. While operational emissions increased due to higher production activity, improvements in Scope 3 management, reduced capital goods emissions, reduced business travel, and enhanced operational efficiency resulted in an overall reduction in absolute emissions. These results provide a strong foundation for future decarbonization initiatives and support the Company's long-term commitment to sustainable growth and climate-related performance improvement.



10. Conclusions and Outlook

10.1 Conclusion

The 2025 greenhouse gas inventory demonstrates that Nipro PharmaPackaging Croatia continued to improve its environmental performance while supporting business growth and increasing production output. Total GHG emissions amounted to **21,312.3 tCO₂e**, representing a **0.5% decrease compared with 2024**, despite a **7.1% increase in production volume**. These results indicate continued progress in decoupling emissions from operational growth and improving the carbon efficiency of manufacturing activities.

Scope 3 emissions remained the dominant contributor to the Company's carbon footprint, accounting for approximately **78% of total emissions**, with Purchased Goods and Services continuing to represent the most significant source of value-chain emissions. At the same time, notable reductions were achieved in Capital Goods, Business Travel, and Employee Commuting emissions, contributing to an overall reduction in Scope 3 emissions of **3.2%** compared with the previous year.

The reporting year also delivered meaningful improvements in key environmental performance indicators. Emissions per produced piece decreased by **7.0%**, cradle-to-gate emissions intensity improved by **7.9%**, and emissions per kilogram of glass processed improved by **10.2%**, demonstrating enhanced resource efficiency and operational effectiveness across the business.

In addition to emissions reductions, NPC further strengthened the quality of its greenhouse gas reporting through continuous improvements in data collection and methodology. A notable enhancement was implemented in Scope 3 Category - Downstream Transportation and Distribution, where an activity-based calculation approach was introduced to replace the previous spend-based estimation method, resulting in more accurate and representative emissions reporting.



10.2 Outlook

Looking ahead, NPC will continue to focus on the areas with the greatest potential for emissions reduction. Based on the 2025 emissions inventory, Nipro PharmaPackaging Croatia has identified the following priority areas to support future greenhouse gas reductions:

- Improve energy efficiency across manufacturing processes and utility systems
- Optimize natural gas and electricity consumption through operational improvements and equipment modernization
- Increase the procurement and use of lower-carbon and renewable electricity sources
- Strengthen engagement with strategic suppliers to reduce emissions associated with purchased goods and services
- Expand the collection and use of supplier-specific emissions data to improve Scope 3 reporting accuracy
- Enhance logistics efficiency through transport optimization and collaboration with lower-carbon transportation providers
- Promote waste reduction, recycling, and circular economy initiatives across operations and the value chain

NPC remains committed to transparent climate-related reporting and the continuous improvement of its environmental performance. Through ongoing investment in operational excellence, sustainability initiatives, and value-chain collaboration, the Company aims to further reduce its greenhouse gas emissions, support the sustainability objectives of the Nipro Group, and contribute to the transition toward a more sustainable and low-carbon future.

Sincerely,



Igor Feljak, Member of the
Management Board



Marija Crnjak, Member of the
Management Board



Appendix A – Acronyms and Definitions

This appendix provides explanations of key terms, abbreviations, and greenhouse gas accounting concepts used throughout this report.

Acronym / Term	Definition
ADEME	French Agency for Ecological Transition database used as a source of environmental and greenhouse gas emission factors.
Activity-Based Method	Emissions calculation method based on actual operational data such as fuel consumption, electricity use, transport distance, or material quantities.
Business Travel	Scope 3 emissions arising from employee travel undertaken for business purposes using transport not owned or controlled by the Company.
Carbon Footprint	Total greenhouse gas emissions associated with an organization, product, activity, or value chain, expressed as carbon dioxide equivalent (CO ₂ e).
CO₂	Carbon dioxide, the most common greenhouse gas emitted through human activities.
CO₂e	Carbon dioxide equivalent, a metric used to express the climate impact of different greenhouse gases using a common unit.
Corporate Sustainability Reporting Directive (CSRD)	European Union directive establishing sustainability reporting requirements for companies operating within the EU.
Cradle-to-Gate	Assessment boundary covering emissions from raw material extraction through the manufacturing process up to the point a product leaves the production facility.
Decarbonization	The process of reducing greenhouse gas emissions associated with business activities, products, and value chains.
DEFRA	UK Department for Environment, Food and Rural Affairs, a recognized source of greenhouse gas conversion factors.
EEIO	Environmentally Extended Input-Output methodology used to estimate emissions based on financial expenditure data.



Emission Factor	A coefficient used to convert activity data into greenhouse gas emissions.
ESG	Environmental, Social and Governance considerations used to assess sustainability performance.
ESRS	European Sustainability Reporting Standards adopted under the Corporate Sustainability Reporting Directive.
ESRS E1	European Sustainability Reporting Standard covering Climate Change disclosures.
GHG	Greenhouse Gas. Gases that contribute to global warming by trapping heat in the atmosphere.
GHG Protocol	Internationally recognized greenhouse gas accounting framework developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).
Intensity Indicator	A metric expressing emissions relative to a business activity, such as production volume, revenue, or number of employees.
LCA	Life Cycle Assessment, a methodology used to evaluate environmental impacts throughout a product's life cycle.
Location-Based Method	Scope 2 accounting approach using average emissions factors from the electricity grid where consumption occurs.
Market-Based Method	Scope 2 accounting approach reflecting emissions associated with contractual electricity purchasing arrangements, renewable electricity certificates, or residual mix factors.
Materiality	Assessment process used to determine which emission sources, topics, or impacts are significant enough to be included in reporting.
NPC	Nipro PharmaPackaging Croatia.
Operational Control Approach	Greenhouse gas consolidation approach in which an organization reports emissions from operations over which it exercises operational control.



Scope 1 Emissions	Direct greenhouse gas emissions from sources owned or controlled by the Company, such as fuel combustion in equipment and vehicles.
Scope 2 Emissions	Indirect greenhouse gas emissions associated with purchased electricity, steam, heating, or cooling consumed by the Company.
Scope 3 Emissions	All other indirect emissions occurring in the upstream and downstream value chain that are not included in Scope 1 or Scope 2.
Spend-Based Method	Emissions estimation methodology that uses financial expenditure multiplied by industry-average emission factors.
Stationary Combustion	Emissions resulting from fuel combustion in fixed equipment such as boilers, furnaces, and industrial processes.
Supply Chain	Network of suppliers, service providers, logistics partners, and other organizations involved in delivering products and services.
tCO₂e	Metric tonnes of carbon dioxide equivalent. The standard unit used for reporting greenhouse gas emissions.
Value Chain	Upstream and downstream activities associated with the Company's products and services, including suppliers, logistics, customers, and end-of-life treatment.

Note: Definitions are based on terminology used by the GHG Protocol, CSRD, ESRS E1, and internationally recognized greenhouse gas reporting practices.

