YEAR 15, NR. 1

7TH NOVEMBER 2024 REF.NR.: 24.R.1002

# **Carbon Footprint Analysis First half year 2024**

# PIPELIFE ()

#### **Contents**

Management statement

Organization

Reporting organization

Responsible person

Organizational boundaries

ISO 14064 statement

Verification statement

Carbon Footprint Analysis

Basis of analysis

Measurement results and explanation

Reported period

Scope 1: Direct CO<sub>2</sub> -emissions

Statement of CO<sub>2</sub> sources and sinks omitted

CO<sub>2</sub> emissions from burning biomass

Scope 2: Indirect CO<sub>2</sub>-emissions

Indirect CO<sub>2</sub> emissions from purchased energy

Influence measurement inaccuracies and uncertainties

Scope 3: Other indirect CO<sub>2</sub>-emissions

CO<sub>2</sub> compensation

Progress against reference year

Historical base year

Adjustments to historical base year

Normalization measurements

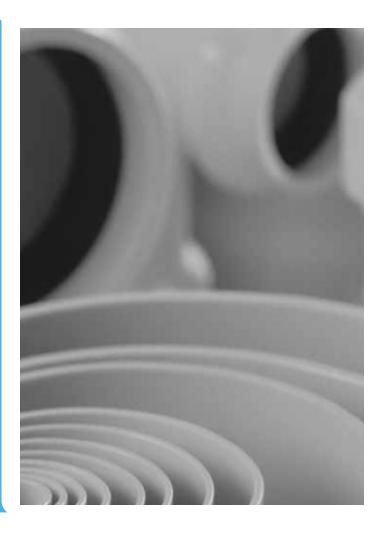
Calculation Models

**Quantification Methods** 

Explanation for changes in the quantification methods

Reduction targets

Annex 1 CO<sub>2</sub>-emissions 2024 H1 scope 1, 2 and 3





Aart Jan van der Meijden
Managing Director Pipelife Nederland B.V.





#### Carbon Footprint

# **Management statement**

Pipelife manufactures and supplies a complete range of plastic piping systems, fittings and intelligent customized solutions. Together we develop safe, sustainable and intelligent solutions for water and energy distribution.

In the last years it has become clear that energy resources are not inexhaustible and that the usage affects our environment. We see it as our duty to deal with our environment in a sustainable way. In addition to creating good and sustainable products, we also take into account our environment and our employees, while a motivated organization is the key to sustainable success.

We are convinced that we find the right balance between People, Planet and Profit with a good CSR policy. Therefore we are working for many years according to this policy. For example, we have established our Carbon Footprint and we are busy to realize our reduction targets in the area of energy consumption and CO<sub>2</sub> emissions. We are also very active in recycling and reducing the material consumption in our products. Also by an active Health, Safety, Environmental and Energy policy we are improving our work environment.

Sustainability is a joint effort of our employees, customers, business partners, suppliers and other stakeholders. Together with these partners, we are convinced that we can shape our policy in the future and continuing to play a leading role within our industry.

Aart Jan van der Meijden

Managing Director
Pipelife Nederland B.V.



#### ISO 14064 statement

With this, Pipelife Nederland B.V. states that this report for the "CO<sub>2</sub>-bewust" certificate is prepared in accordance with the guidelines of NEN-ISO 14064, version May 2018.

#### Verification statement

With this, Pipelife Nederland B.V. states that this report has not yet been verified but at request of interested parties can be verified by approved bodies and further states:

- the inventory had been designed according to the needs and requirements from the ISO 14064-1, the GHG Protocol, the CO<sub>2</sub>-prestatieladder Manual 3.1
- said CO<sub>2</sub> inventory has no material misstatements, derogatory to the materiality requirement of 5%.

#### Carbon Footprint

## **Organization**

#### Reporting organization

Pipelife Nederland B.V. is located in Enkhuizen. Pipelife Nederland B.V. is part of Pipelife International GmbH, an international manufacturer of plastic piping systems and fittings and one of the market leaders in Europe. Pipelife was established in 1947, today one of the oldest plastic pipe producers worldwide. Products include sewage, inhouse: electro, water, gas, drainage, cable pipes and eco systems.

Pipelife Nederland has approximately 255 employees spread over seven locations: headquarters, production sites and wharehouses.

Pipelife International GmbH was taken over by Wienerberger in 2012 (ceramic industry) and is now a 100% company of the Wienerberger Group. Pipelife International GmbH is located in 24 countries, with headquarters in Vienna, Austria. 3,592 employees worldwide are working on 25 production sites.

Summary of the activities:

Development, production and sales of plastic pipe systems.

#### Responsible person

The person statutorily responsible for the reporting organization is mr. A.J. van der Meijden, Managing Director Pipelife Nederland B.V.

#### **Organizational boundaries**

The organizational boundaries of Pipelife Nederland B.V. are determined in the context of CO<sub>2</sub> (carbon dioxide)-consciousness in accordance with the principle of the operational sphere of influence of the certifying company.

Within the GHG protocol, this is described as the 'operational boundary'. In practice, this means that when activities are executed under the auspices of Pipelife Nederland B.V., the accountability for the  $CO_2$ -production is taken: the own organization has control of this.

Based on the lateral purchase analysis of the CO<sub>2</sub> -performance ladder, it is determined that Pipelife Deutschland GmbH & CO. KG and Preflexibel NV are added within the organizational boundary of Pipelife Nederland B.V.

The organizational boundaries for this inventory includes:

- Pipelife Nederland B.V.;
- Pipelife Deutschland GmbH & CO. KG.
- Preflexibel NV

The rationale for this boundary is listed in the boundary report (doc. nr 18.R.0304-9).



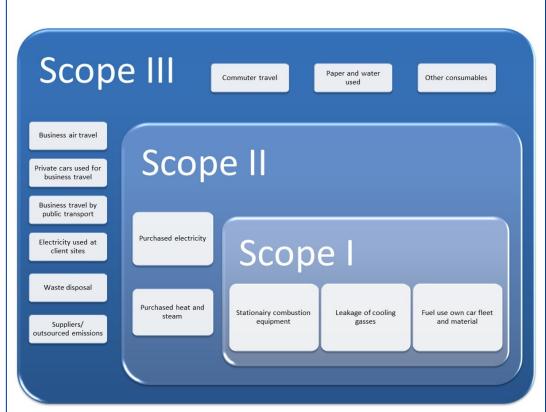
# **Carbon Footprint Analysis**

#### **Basis of analysis**

CO<sub>2</sub>-emissions and absorptions by activities of the organization have been identified based on the established operational limits. At the identification of emissions a distinction has been made between three sources of emission (known as scopes) into two categories: direct emissions and indirect emissions. This is in line with the Greenhouse Gas (GHG) Protocol.

- Scope 1 covers direct emissions under control, and controlled by, the organization. Examples include the combustion of fuels in machinery, business transport with vehicles owned by the reporting organization and emissions of refrigeration and air conditioning systems;
- Scope 2 includes indirect emissions from purchased electricity, steam or heat;
- Scope 3 includes other indirect emissions from sources such as business travel with privately owned vehicles or public transport and business travel by plane, commuter travel, production of purchased materials and outsourced activities such as freight.

This carbon footprint analysis includes the  $CO_2$ -emissions (one of the six greenhouse gases) of Pipelife Nederland BV, in scope 1, 2 and 3 of the first half the year 2024. The  $CO_2$  emission is analyzed in accordance with the " $CO_2$  performance ladder", manual 3.1 22 June 2020.



# Measurement results and explanation

#### Reported period

Pipelife Nederland B.V. has synchronized its carbon footprint reporting period with its fiscal year. The fiscal year for Pipelife Nederland B.V. runs from January 1 to December 31. The reported period is the first half of the year 2024.







#### Scope 1: Direct CO<sub>2</sub>-emissions

#### THE DIRECT CO2 EMISSION IS MEASURED AND CALCULATED AS 531.7 TONNES CO2

#### Stationairy combustion equipment

In the first half of 2024 121,999  $\rm m^3$  were used of natural gas. The consumption caused 260.3 tonnes of CO<sub>2</sub> emission (49% of the total direct emission). The natural gas is used for heating of the locations. 90,445  $\rm m^3$  was used in stationary combustion equipment in Enkhuizen (about 74% of the total consumption).

#### Gasses

In the first half of 2024 25.2 tonnes of  $CO_2$  emission is caused by the usage of the gasses and  $CO_2$  gasses for the production processes in the Netherlands, Belgium and Germany.

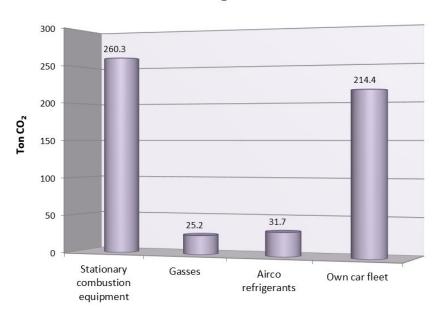
#### **Usage of refrigerant**

In the first half of 2024 there was consumption of refrigerants in the production processes and climate installations in Belgium. In Germany and the Netherlands ther was no consumption. The systems for storage and transportable air conditioning-units are regarded as a closed system. Therefore only  $CO_2$ -causing emissions of consumption are calculated, in this period the consumption of refrigerants was 31.7 tonnes of  $CO_2$  emission.

#### Fuel use own car fleet (business car travel)

In the first half of 2024 214.4 tonnes of the  $CO_2$  emissions is assigned to the fuel consumption of the fleet with leased cars. In the first half of 2024 the leasing company has reported an usage of 39,971 litres diesel, 8,005 litres diesel fossile and 20,028 litres of petrol.

#### Direct CO<sub>2</sub> emission



Scope 1 sources

#### Statement of CO<sub>2</sub> sources and sinks omitted

All identified sources and sinks of  $CO_2$  are included in the report. Storage of  $CO_2$  does not occur; there are no sinks.

#### CO<sub>2</sub>-emissions from burning biomass

The combustion of biomass did not occur at Pipelife Nederland B.V., Pipelife Germany GmbH or Preflexibel NV in Belgium.







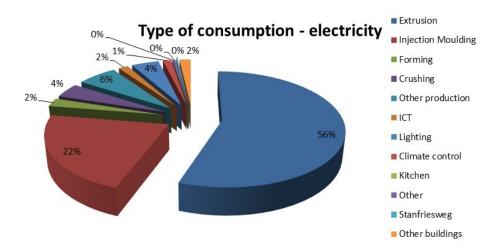
#### Scope 2: Indirect CO<sub>2</sub>-emissions

#### INDIRECT CO<sub>2</sub>-EMISSIONS MEASURED AND CALCULATED ARE 1,291.9 TONNES CO<sub>2</sub>

#### **Electricity purchased**

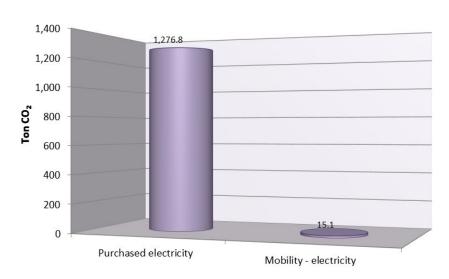
100,0% of the indirect  $CO_2$  emission is caused by consumption of the repurchased electricity. In the reported period, the electricity consumption for buildings and production was in total 11,258,937 kWh. 216.1 MWh was generated by solar panels at our own locations. The repurchased electricity consumption caused 1,276.8 ton  $CO_2$  emission. For mobility 76,370 kWh was consumed by electric cars, which caused 15.1 ton  $CO_2$  emission.

For the first in 2023 Pipelife purchased 16,697 MWh green power with Netherland wind and solar power as its source in the Netherlands. Under the terms of the  $CO_2$ –performance ladder, all the purchased electricity in the Netherlands is registered and calculated with a green label performance, see information Influence of measurement inaccuracies and uncertainties on page 8.



Based on the latest information of the energy managementsystem of Pipelife Nederland the extrusion processes caused 56% of the consumption of electricity, second Injection Molding caused 22% and the other production processes 6% of the usage.

#### Indirect CO<sub>2</sub> emission











#### Scope 3: Other Indirect CO<sub>2</sub>-emissions

#### OTHER CO2-EMISSIONS MEASURED AND CALCULATED ARE 635.3 TONNES CO2

#### Other indirect CO<sub>2</sub>-emissions

The most important other indirect CO<sub>2</sub> emissions are measured and calculated in this report. Due to the requirements in CO<sub>2</sub> performance ladder manual version 3.1, the Carbon Footprint report is calculated according to the Green House Gas Protocol and the ISO 14064:2018. The energy sources for business transport are also examined every six months.

Business transport consists of the following three energy sources:

- Business traffic with private cars
- · Air travel for business purposes
- Business public transport

The other emission categories Purchase of goods and services, end of treatment life products and Transport and distribution are yearly published in the overall report Analysis Scope 3  $CO_2$  emissions Pipelife Netherlands B.V. -  $CO_2$  Performance Ladder due to the lack of reliable data on a half-year basis.



#### Personal cars for business travel

In the first half of 2024 several employees used their private car for business purposes and declared the mileage. The total mileage declarations by private car were 20,929 km in the reported period. This leaded to 4.0 ton  $CO_2$ , 0.3% of the other indirectly  $CO_2$  emissions.

#### **Business air travel**

In the first half of 2024 employees made 333,876 flight kilometres for business purposes. 8% of the flights concerned flight distances between 0-700 km, 41% of the flights concerned flight distances between 700-2500 km and 52% of the flights concerned flight distances more than 2500 km. The air travel caused 55.8 ton  $CO_2$ , 4.3% of the other indirectly  $CO_2$  emissions.

#### Business travel by public transport

In the first half of 2024 some employees used public transport for business purposes and declared the travel expenses. The total mileage declarations by public transport were 25,856 km in the reported period. This leaded to 0.5 ton CO<sub>2</sub>.

#### **Commuter travel**

Commuter travel with transportation is not owned by the company. In the first half of 2024 employees in the Netherlands, Belgium and Germany travelled with own transportation to our factories and declared the mileage. The total mileage declarations for commuter travel were 1,532,615 km in the reported period. This leaded to 192.1 ton  $CO_2$ , 30% of the other indirectly  $CO_2$  emissions.

#### Waste disposal

As a result of the Pipelife activities in the Netherlands, Belgium and Germany, a total of 734.5 tonnes of waste was transported to the waste processors in the first half of 2024. Analysis shows that 10% of the waste streams are paper and cardboard, 40% is plastics waste, 19% is wood, 26% is unsorted waste, 4% is hazardous waste streams en 1% is other waste streams. The unsorted and hazardous waste is incinerated with electricity generation, the other waste streams consisting of paper, plastics, construction and wood were recycled. The recycling percentage is therefore approximately 69% of the total waste stream. The  $CO_2$  emission as a result of the waste disposal caused 382.9 tonnes of  $CO_2$  (60%) of the other indirectly emissions.



# Influence of measurement inaccuracies and uncertainties in scope 1- 2- 3

The foregoing information shows that the vast majority of  $CO_2$  emission is caused by use of fuel in the stationary equipments (260.3 ton of  $CO_2$ , scope 1), the electricity consumption (1,291.9 ton of  $CO_2$ , scope 2) and waste disposal (382.9 ton of  $CO_2$ , scope 3). Therefore, it is important to accurately capture these emissions.

#### SCOPE 1:

The fuel data of stationary combustion equipment for heating is provided by the energy suppliers of the locations and controlled with the internal measurements. For the location Flevolaan Pipelife has a joint natural gas grid connection with the neighbour company Renolit. Renolit has specified the information for natural gas on the location Flevolaan. The data of gasses are provided by the suppliers. The location in Belgium has no natural gas consumption. These information is best practice and deemed as sufficiently reliable.

The fleet management data is provided by the fuel suppliers of the leasing companies who manage the fuel passes linked to the vehicles and by declarations of the fuel in fleet cars by employees. Because the mileage registration is less accurate, since not every employee carefully keeps track of the mileage by registering the mileage at the gas station, the  $CO_2$  emission is based on the fuel data if present.

#### SCOPE 2:

The consumption data of the electricity is registered from billing information received from the energy suppliers of the different locations and the consumption data of electricity supplied by the leasing companies. Renolit has specified the information for electricity on the location Flevolaan. This information is considered as sufficiently reliable. It should be noted that most of the energy is used in the production processes. Since 2023 Pipelife purchased an extra energy contract green power for all Dutch Pipelife companies. Also in the first half of 2024 could additionality of green power by the supplier be demonstrated for electricity, therefore Pipelife can calculate in the Netherlands with Netherlands solar and wind power according to the conditions of the  $CO_2$  performance ladder and for electricity produced on its own roof. The  $CO_2$  emission for electricity is calculated with the conversion factor of green and grey electricity will be reported on yearly basis in the next report.

#### SCOPE 3:

The registration for declared kilometres has been improved since the last report due to law rules. The exact division between private cars or public transport for business purpose and commuter travel by private cars is changed and supplied by the administration.

The emission data of travel by private cars for business purpose is collected by employee declarations. The fuel type and engine classification of the applicable private cars are not registered. The data for public transport for business purpose is collected by information by employee declarations and calculated to distance according to fixed price per kilometre (source MKB Servicedesk and http://www.dieeinsparinfos.de/guenstige-mobilitaet/bahn/kosten/.

The emission data of commuter travel by private cars for business purpose were collected on the basis of the kilometre calculation for the place of residence - business location, based on calculations par employee and in Germany by an average kilometre calculation par employee. The fuel type and engine classification of the applicable private cars are not registered. The method used is considered sufficiently reliable. The data for public transport is collected by information by employee declarations and calculated to distance according to fixed price per kilometre (source NS and http://www.dieeinsparinfos.de/guenstige-mobilitaet/bahn/kosten).

The emission data of waste disposal were collected on the basis of the invoices from waste processors that are used by Pipelife in the Netherlands, Germany and Belgium. The type of waste is registered according to national law. The method used is considered sufficiently reliable.

#### CO<sub>2</sub>-compensation

Most resources are used to make improvements within the production processes in the framework of the  $CO_2$ -emission. The emissions of green gas are partly compensated but not calculated in the report.







# Progress against reference year

#### Historical base year

The initial measurements in the context of the ISO 14064 standard have been done by Pipelife Nederland B.V. for the calendar year 2010. This year therefore serves as base year against which an increase or decrease in  $CO_2$  emissions is established.

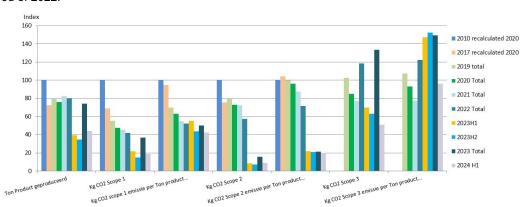
#### Adjustments to historical year

Since the report of the 2020 there were adjustments to the base year. Because of the publication of the version 3.1 of the  $CO_2$  performance ladder manual in 2020 the scope classification has been changed and the  $CO_2$  emission factors are changed again in January 2020-2024. The emission factor for grey electricity was changed significantly and is changing every year. Therefore, the publication of base year 2010 is updated in 2016, 2017 H2 and 2021 and the reference year to 2016 and 2022 because of the latest reduction goals period 2023-2025.

#### Normalization measurements

The size of the CO<sub>2</sub> emissions has a clear correlation with the scale of the activities carried out by the organization. For the comparison of the emissions in the reference year and future reported periods, standards are determined to normalize measurement results. For Pipelife, Kg product produced is the standard to scale the business activities. Based on the kg product produced the reported measurement results will be normalized.

Note: because of the publication of changed  $\mathrm{CO}_2$  emission factors in 2015, December 2017 and January 2020 the base year 2010 and reference year 2016 and 2017 are recalculated and the information in the graph before 2015 is visible in the previous reports. The scope 3 emissions are published since 2018. Preflexible NV in Belgium was included for the 1st time in the period 2022. The trend data before 2022 are therefore not fully comparable with the results since the 1st period of 2022.



In scope 1 the  $CO_2$  emissions par kg product produced decreased about 23% in the first half of 2024 compared to the same period in 2023, despite the inclusion of the location in Belgium. Compared to the period 2017 the  $CO_2$  emissions for scope 1 in 2023 were almost 55% lower.

The usage of stationary combustion equipment showed again a 26% decrease in the first half of 2024 compared to the same period in 2023 because of measures taken, after correction of degree days the total usage compared to the same period in 2017 is almost 18% reduced. The usage of refrigerant in the first half of 2024 caused an emission of 31,7 ton  $\rm CO^2$ . The usage of  $\rm CO_2$  gasses increased due to changes in the productmix, the consumption is significantly higher than 2017 and 2023.

The litres of fuel for the own car fleet increased in the first half of 2024, particularly decreased for the diesel cars and increased for petrol and electric due to more electric cars. Compared to the samen period in 2023 the fuel consumption the first half of 2024 increased about 6.800 litres. Together with increased emission factors for fossil fuels and addition of Preflexibel NV to the boundary the total  $CO_2$  emissions for own car fleet increased compared to the same period in 2023 with more dan 20%.







The absolute  $CO_2$  emissions for scope 2 in the first half of 2024 compared to the 2012 period were reduced by 88% despite the addition of Preflexibel NV. Energy reduction measures, own energy generation, e.g. solar panels at the Enkhuize site and 100% purchasing of green electricity in the Netherlands reduced emissions significant relative to the total electricity consumption.

The scope 3 emissions par ton product produced were about the same level in the first half of 2024 compared to the baseyear 2018, despite to the addition of Preflexibel NV. Despite increase in activities of Soluforce, business air travel and the waste streams decreased significant and caused the biggest reduction. The total kilometers of commuting increased by 20%. For the calculation of all the scope 3 emissions see our Pipelife Netherlands - Scope 3 inventory  $CO_2$  emissions which is updated yearly.

In the first half of 2024 the actions continues as described in our Energy Efficiency plan (EEP) plan. Pipelife has implementing the Energy Efficiency plan and reduction targets for the period 2022-2025, the measures are implemented as planned in this EEP.

Our reduction goals par ton product in scope 1-2 in the first half of 2024 are on schedule, our scope 3 objectives made a significant progress.



# Projects with award advantage

# Project Supply of plastic pipes and fittings for drinking water pipes

At the end of 2017 Pipelife Nederland B.V. won his second tender with  $CO_2$  performance ladder advantage. This tender concerns the supply of pipe and fittings for drinking water to a few drinking water companies.

The project is still in execution. The project-specific reductions within the project are based on the reduction targets and measures that are part of the EEP of the former MJA3. Pipelife's  $CO_2$  reduction plan also applies to this project; the same measures are applied in the implementation.

This project represents about 0.5% of its yearly production volume for Pipelife in the Netherlands. Indexed to the total  $CO_2$  emission, the project therefore causes an emission of approx. 193 tonnes  $CO_2$  during the current contracted period. The expected reductions for this project are therefore estimated at 7 tonnes of  $CO_2$ .

## Calculation models

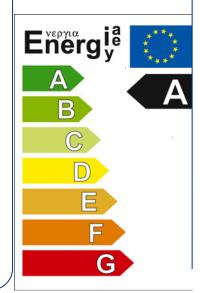
#### **Quantification methods**

The quantification of raw materials to  $CO_2$  emissions is always calculated by registered volume units of the fuels used if present. The conversion of volume to emission values is straightforward and provides the most reliable comparison. In those situations where no volume units of fuel were available, the most reliable information available was used.

Electricity consumption is either taken based on calibrated meters and/or based on the invoices of the energy company. By applicable law, this is the most reliable source of information that is available.

#### Explanation for changes in the quantification methods

The measurement over the the first half of 2024 is the twenty-seven measurement in the framework of the ISO 14064 standard. No adjustments in the quantitative methods are made against to the historical year.



#### Reduction targets

Based on this Carbon Footprint and the Energy Management System Pipelife defined measures to reduce its  $CO_2$  emissions for the period 2022-2025 for scope 1, 2 and 3.

The first target is to reduce the direct emissions per Kg product produced by improvements in Enkhuizen. Next to these reduction targets several investigations in the Netherlands and Germany are in progress to gain knowledge for better understanding of the current energy consumption. Examples of investigations are isolation improvements in production, improvement of heating in the Netherlands and lighting in buildings. These investigations are an ongoing process

Reduction of the indirect emissions (scope 2) will be carried out by reducing the Electricity usage in the production and reducing energy losses and energy recovery, replacement of lighting to LED, replacements of production infrastructure and implementation of an energy management system for the production facilities.

Reductions of the other indirect emissions (scope 3) are also planned in the Energy Efficiency plan for the period 2022-2025.

Based on the current results and the quantitative information Pipelife wants to reduce its  $CO_2$ -emissions for the period 2022 till 2025 with 5.2% per Kg product produced. The Kg product produced, by equal productmix, is the standardization factor to make comparison possible between the reference period and the progress reports. The reduction objectives for this period are subdivided per scope; scope 1: 15.0%, scope 2: 2.8% and scope 3: 0.7%.

Nr.	Reduction target CO <sub>2</sub>	Total reduction 2022-2025	CO <sub>2</sub> -emission 2025		
		(%)	Reduction (Tonnes CO <sub>2</sub> )	(par ton product produced)	
	Implementation Energy Efficiency Plan scope 1 measures	15.06%	152.8	0.0	
Total	CO <sub>2</sub> -emission scope 1	15%	152.8	0.0	
Index	CO <sub>2</sub> -emission scope 1 Implementation Energy Efficiency Plan scope 2 measures	<b>15.1%</b>	<b>152.8</b>	0.1	
	2 measures	2.070	194.7	0.2	
Total	CO <sub>2</sub> -emission scope 2	2.8%	194.7	0.2	
Index	( CO <sub>2</sub> -emission scope 2  Implementation Energy Efficiency Plan scope 3 measures	<b>2.8%</b>	194.7 935.0	<b>97.2</b> 3.6	
	o model ee	0.1.70	000.0	0.0	
Total	CO <sub>2</sub> -emission scope 3	0.7%	935.0	3.6	
Index	c CO <sub>2</sub> -emission scope 3	0.7%	935.0	99.3	
Total	CO <sub>2</sub> -emission scope 1 and 2	4.4%	347.5	0.2	
Total	CO <sub>2</sub> -emission scope 1,2,3	1.0%	1,282.5	3.8	







# PIPELIFE O





### Annex 1 CO<sub>2</sub>-emissions first half 2024 scope 1 and 2

	CO <sub>2</sub> -	emission factor <sup>1</sup>		2024-H1	
	emission factor	Unit	Quantity	Unit	CO <sub>2</sub> -emission [metric ton]
Scope 1: Direct emissions					531.7
Stationary combustion equipment		000/N 0	404.000	N 3	285.5
- Natural gas		g CO2 / Nm3	121,999	Nm <sup>3</sup>	260.3
- Butane <sup>2</sup>		g CO2 / kg	=	kg	-
- Propane	<del> </del>	g CO2 / litre	=	litre	-
- CO2 gasses <sup>2</sup>	<del></del>	g CO2 / kg	25,186	kg	25.2
- Acetylene <sup>2</sup>		g CO2 / kg	-	kg	-
- Protegon20 <sup>12</sup>	217	g CO2 / Nm3	24	m3	0.0
Airco refrigerants					31.7
- Refrigerant - R22	1,760	kg CO2 / kg	-	kg	-
- Refrigerant - R404a	3,943	kg CO2 / kg	-	kg	-
- Refrigerant - R407c	1,624	kg CO2 / kg	-	kg	-
- R-449A <sup>3</sup>	1,282	gwp	=	gwp	-
- Refrigerant - R410a	1,924	kg CO2 / kg	16.5	kg	31.7
Own car fleet, fuel use					214.4
- Petrol	2,821	g CO2 / litre	20,028	liter	56.5
- Diesel	3,256	g CO2 / litre	39,971	liter	130.1
- Diesel (fossile)	3,468	g CO2 / litre	8,005	liter	27.8
- LPG	1,802	g CO2 / litre	=	liter	-
- CNG (natural gas) (NL)	2,608	g CO2 / kg	-	kg	-
	CO <sub>2</sub> -	emission factor <sup>1</sup>		2024-H1	
	emission	Unit	Quantity	Unit	CO <sub>2</sub> -emission
	factor				[metric ton]
Scope 2: Indirect emissions					1,291.9
Purchased electricity			10,070,037.0		1,291.9
Total used electricity building and					
production			11,258,937		
own generated solar electricity			216,124		-
- Grey electricity: 2010 and later		g CO2 / kWh	2,382,072	kWh	1,276.8
- Solar energy	0	g CO2 / kWh	8,660,741	kWh	-
- Mobility -Grey electricity: 2010 and later	536	g CO2 / kWh	28,144	kWh	15.1
- Mobility - Solar energy	0	g CO2 / kWh	48,226	kWh	_

#### References

- 1: Source: website CO2emissiefactoren.nl
- 2: Source: StenVi conversion calculations 2010 and 2023

Scope 1		Ton CO <sub>2</sub>	%	
Stationary combustion equi	260.3	49	0.0%	
Gasses		25.2	4	1.7%
Airco refrigerants		31.7	6	6.0%
Own car fleet		214.4	40	0.3%
Tot		531.7		

Scope 2	Ion CO <sub>2</sub>	%
Purchased electricity	1276.8	98.8%
Mobility - electricity	15.1	1.2%
Tot	1291.9	

# PIPELIFE O



# Annex 1 CO<sub>2</sub>-emissions first half 2024 scope 3

	CO <sub>2</sub> -emission factor <sup>1</sup>				
	emission factor	Unit	Quantity	Unit	CO <sub>2</sub> -emission [metric ton]
Scope 3: Other indirect emissions					635.3
Business travel					60.4
Personal cars for business travel					4.0
- Passenger car, unknown fuel type and weight	193	g CO2 / vehicle km	20,929	km	4.0
Business air travel			888,076.4		55.8
- Distance < 700 km	234	g CO2 /travellers km	18,559	travellers km	4.3
- Distance 700 - 2.500 km	172	g CO2 /travellers km	132,178	travellers km	22.7
- Distance > 2.500 km	157	g CO2 /travellers km	183,139	travellers km	28.8
Business travel by public transport			25,055.0		0.5
- Public transport unknown category	20	g CO2 /travellers km	25,856	travellers km	0.5
Commuter travel with transportation	on not ow	ned by the company			192.1
private cars					190.5
- Passenger car, unknown fuel type and weight	193	g CO2 / vehicle km	986,865	vehicle km	190.5
Commuter travel with public transport					1.6
- Train unknown category	3	g CO2 /travellers km	545,750	travellers km	1.6
- High speed train	26	g CO2 /travellers km	0	travellers km	0.0
Bicycle or walking					0.0
- Bicycle, walking	0	g CO2 /travellers km	0	travellers km	0.0
Waste disposal <sup>2</sup>			784.508		382.9
- Paper and paperboard	676	g CO <sub>2</sub> / kg	76,332	kg	51.6
- Plastic	120	g CO <sub>2</sub> / kg	294,147	kg	35.3
- Wood	-	g CO <sub>2</sub> / kg	136,060	kg	-
- Metal	1,060	g CO <sub>2</sub> / kg	8,980	kg	9.5
- Hazardous substances	1,308	g CO <sub>2</sub> / kg	25,923	kg	33.9
- Unsorted waste	1,308	g CO <sub>2</sub> / kg	193,064	kg	252.5
- Construction and demolition waste	434	g CO <sub>2</sub> / kg	0	kg	-
- PMD	1,308	g CO2 / kg	0	kg	-
- Other Waste	1,308	g CO <sub>2</sub> / kg	0	kg	-

#### References

- 1: Source: website CO2emissiefactoren.nl
- 2: Source: Chain analyses Pipelife and Siemens Netherland / CE Delft/ KEMA



Scope 3		Ton CO <sub>2</sub>	%	
Personal cars for business	s travel	4.0	)	0.3%
Business air travel		55.8	}	4.3%
Personal cars for business	s travel	0.5	5	0.0%
Commuter travel with				
transportation not owned				
by the company		192.1		14.9%
Waste disposal		382.9	) ;	29.6%
Tot		635.3	}	