Future Processing

2022

Greenhouse Gas Emission Report

Future Processing

www.future-processing.com

Organisation's Carbon Footprint

This is the **total amount of greenhouse gases (GHG) emitted** directly or indirectly **as a result of the organization's activities**. Knowing an organization's carbon footprint is the starting point for taking effective pro-environmental measures.

Why?

Environmental awareness among an organization's stakeholders provides an incentive for companies to take steps to reduce their negative impact on the environment. To comply with regulation and remain competitive, companies are estimating their carbon footprint.

How?

The carbon footprint is captured in three scopes according to international standards and standards, such as the Carbon Footprint Protocol (GHG Protocol).

Methodology

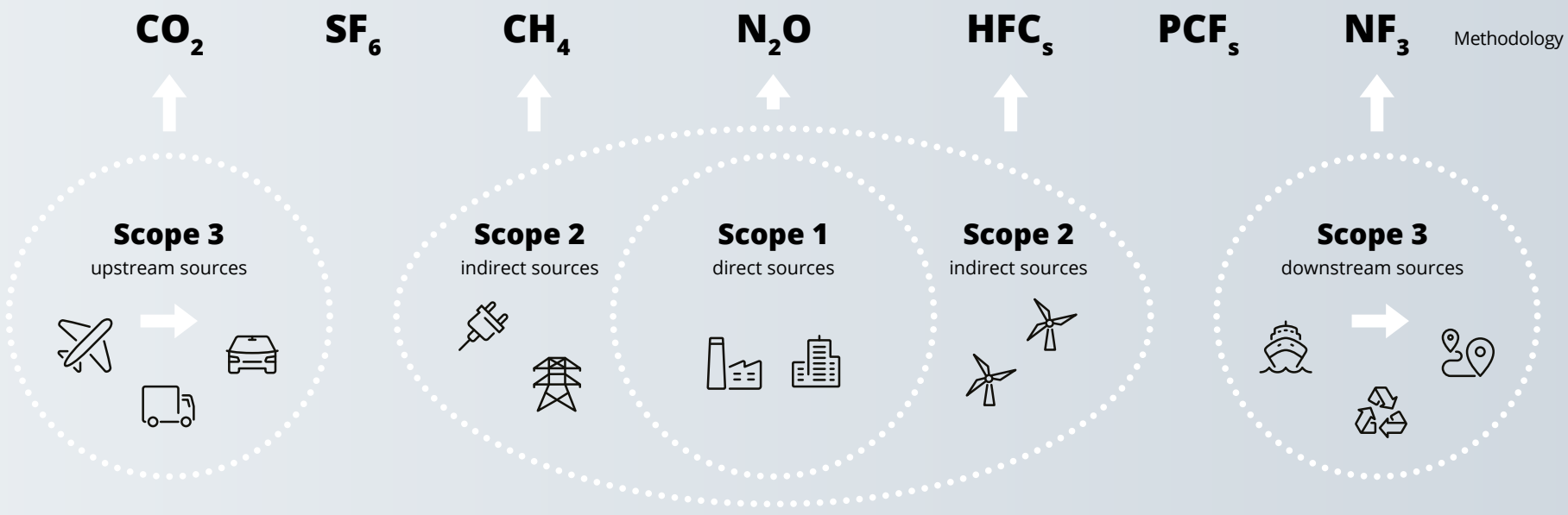
Greenhouse Gas Protocol

(GHG PROTOCOL)

The GHG Protocol is currently the most widely used for estimating and tracking greenhouse gas emissions. The carbon footprint has been calculated according to the GHG Protocol into three scopes:

Scope 1	(DIRECT EMISSIONS)
Scope 2	(INDIRECT ELECTRICITY-RELATED EMISSIONS)
Scope 3	(VALUE CHAIN-RELATED EMISSIONS)

You can read more about the **methodology** at the end of this ebook.



Scope 1 **(DIRECT EMISSIONS)**

These are direct greenhouse gas emissions resulting from the combustion of fuels from machines and processes controlled or supervised by the company. Scope 1 covers emissions from stationary (e.g. boilers), mobile combustions, (e.g. car fleet), fugitives, and emissions via certain processes (e.g. in industry).

Scope 2 **(INDIRECT ELECTRICITY-RELATED EMISSIONS)**

These are indirect GHG emissions, which are generated mainly from purchased electricity, steam, heat and cooling within the organizational boundaries of a company.

Scope 3 **(VALUE CHAIN-RELATED EMISSIONS)**

These are indirect emissions covering the environmental of the reporting organization, which are not directly controlled by the organization. Scope 3 includes, emissions from the supply chain, the purchase of goods, employees commuting and business trips, or waste management.

Future Processings' Greenhouse Gas Emission

Scope 1 (DIRECT EMISSIONS)

Mobile Combustion	✓
Stationary Combustion	✓
Fugitive emissions	✗
Process Emissions	✗

Scope 2 (INDIRECT ELECTRICITY-RELATED EMISSIONS)

Electricity	✓
Steam	✗
Heat	✓
Cooling	✗
Electric Vehicles	✓

Scope 3 (VALUE CHAIN-RELATED EMISSIONS)

Purchased Goods and Services	✓
Capital Goods	✓
Transport and Distribution (upstream)	✗
Transport and Distribution (downstream)	✗
Business Travel	✓
Commuting to Work	✓
Waste	✓
Leased Assets	✓
Franchises	✗
Investments	✗
Other fuel and energy related activities	✗

Main Metrics

Total emission
5,368 t CO_2eq

Emission per employee*
5.494 t CO_2eq

Emission per income**
<0.001 t CO_2eq

Energy consumption***
1,287 MWh

Scope 1
26.48 t CO_2eq

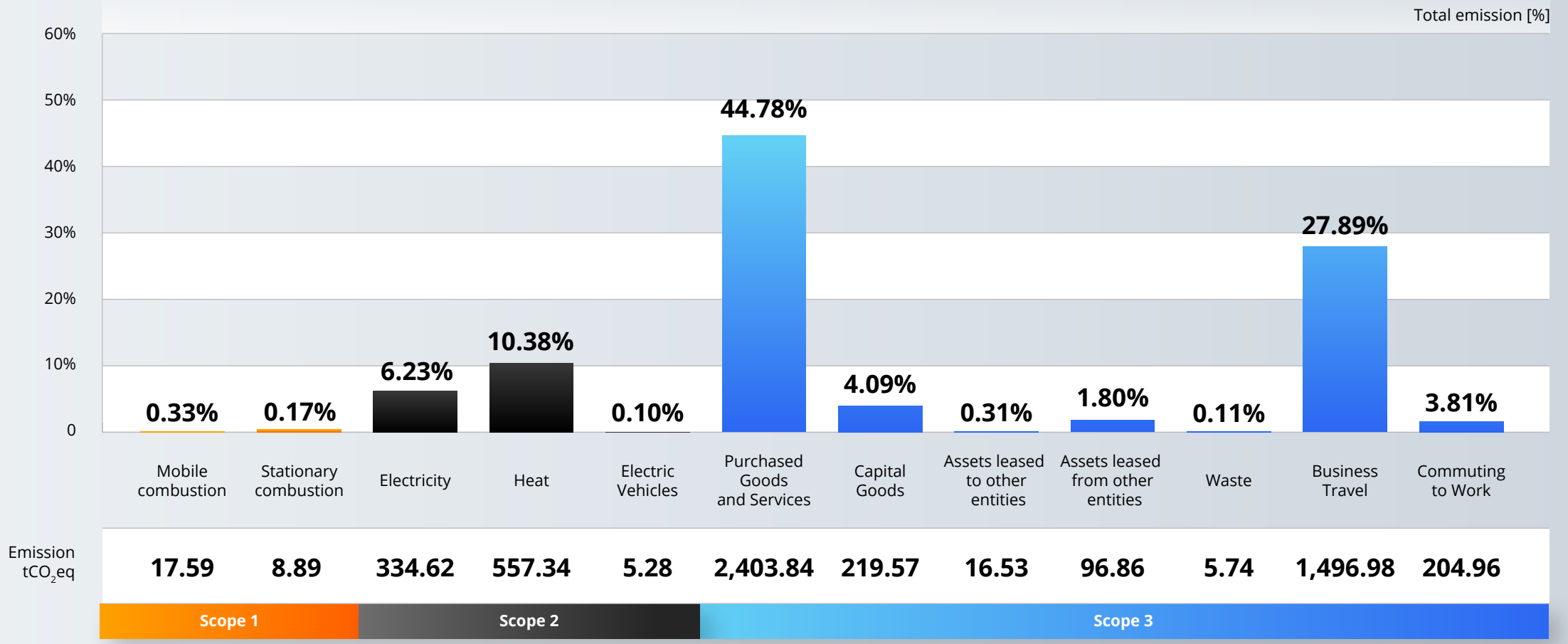
Scope 2
Market-based Method
897 t CO_2eq

Scope 2
Location-based Method
1,000 t CO_2eq

Scope 3
4,444 t CO_2eq

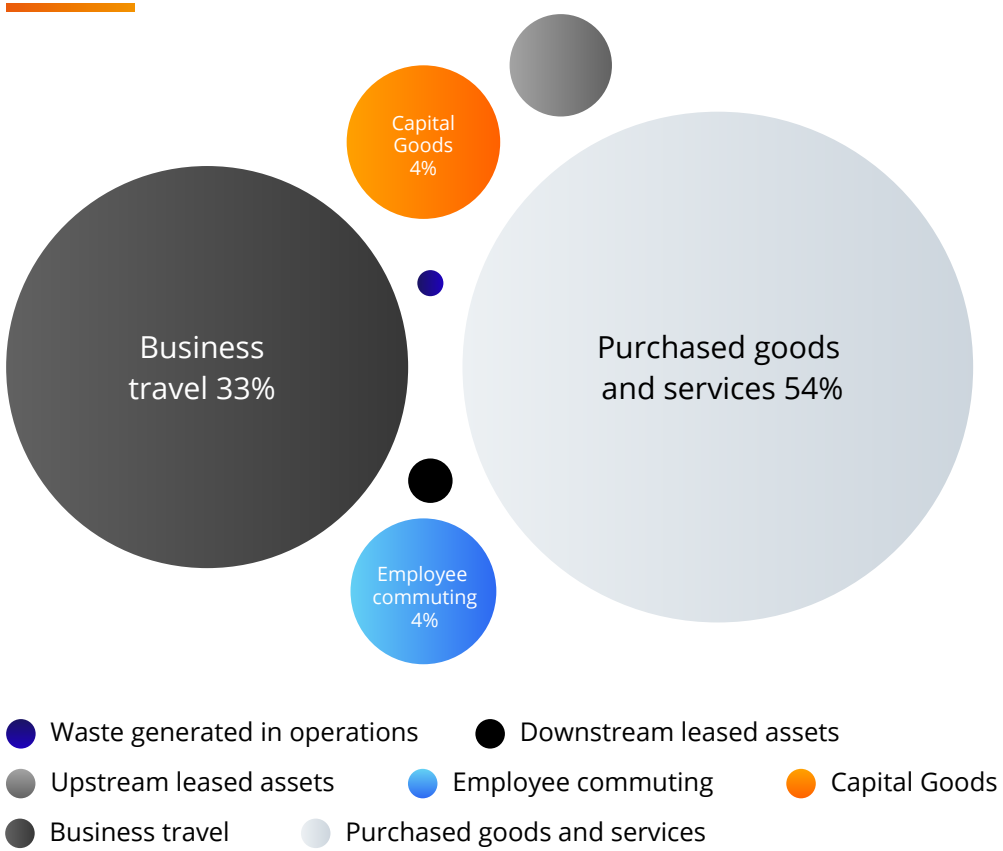
* Metrics available once the number of employees in the company has been entered
** Metrics available by providing information on the company's incoming
*** Includes values for electricity and electric vehicles [MWh] and recalculated heat value [GJ to MWh]

Total Emission By Scope



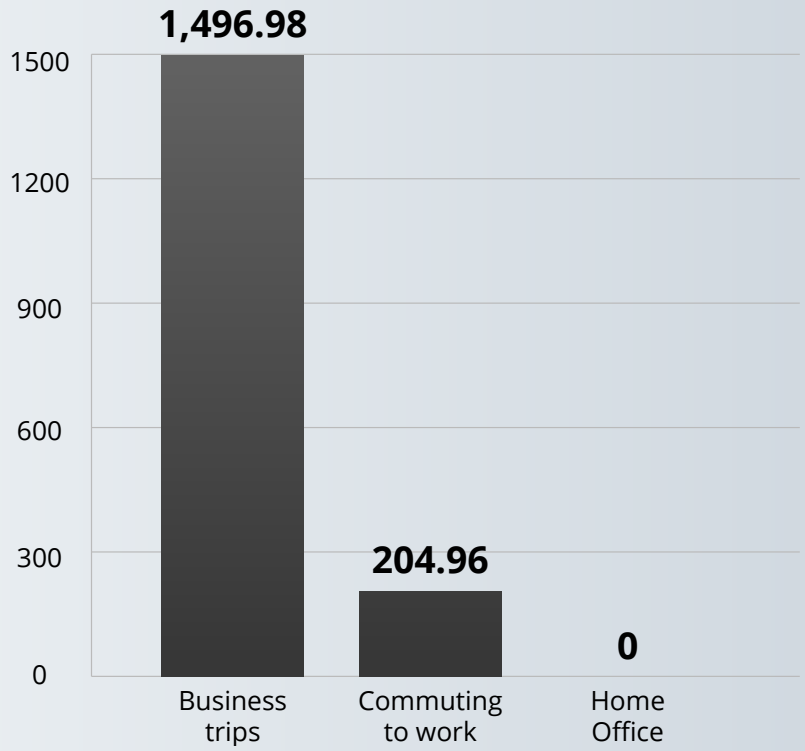
Scope 3

Emissions ranking [%]



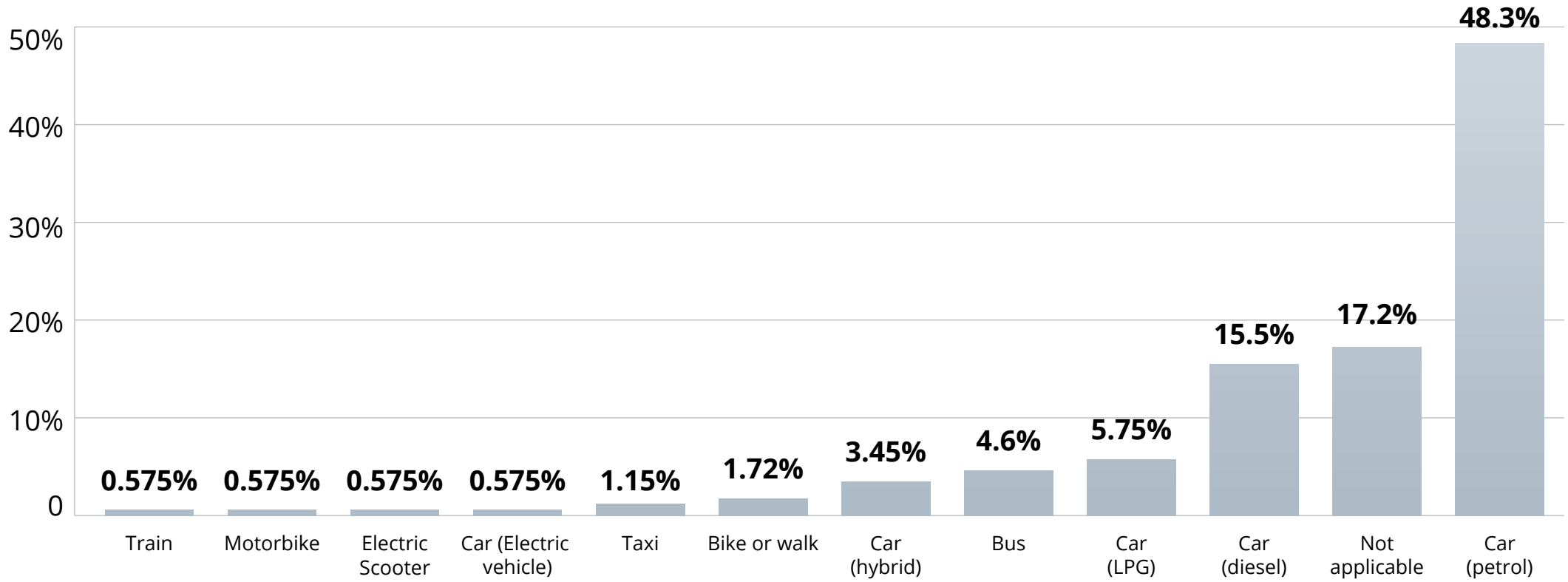
Scope 3

Employees' Emissions [t CO_2eq]



Scope 3

Commuting to work [%]



Future Processing's certificate

Scan the QR code and check the validity of the certificate

envirly

About the author

Envirly helps you harness the value of your business and develop a sustainability strategy through a comprehensive solution

Envirly's platform

The Envirly platform supports data collection, emission calculations and the setting and tracking of greenhouse gas reduction targets in accordance with the international GHG Protocol standards. Calculation are compliant with GHG Protocol and ISO 14064-1

Envirly's Mission

Envirly's mission is to empower companies to reduce their carbon footprint through digital transformation. Envirly's innovative approach is based on 3 fundamentals: smart data analytics, establishing company's "Emission twin", facilitating processes optimisation to reduce the level of CO_2 emissions. Intelligent data aggregation to calculate regulatory compliant emission scopes allowing to input different data types in line with needs of the company. Emission twin and dashboards to detect „hot spots" – processes that contribute to the highest CO_2 emissions. AI-based smart recommendations to reduce the level of emissions.

Methodology based on GHG Protocol

Scope 1 **(VALUE CHAIN-RELATED EMISSIONS)**

Scope 1 emissions consist of all direct greenhouse gas emissions from sources that the organization owns or controls.

Data sources:

- **stationary combustion, fuel:** butane restaurant equipment (ovens) and diesel fuel used for power generators.
- **mobile combustion, fuel:** petrol – aggregated data on fuel consumption in liters for the organization's car fleet and diesel fuel used to operate the lawn mower.

Description:

Defra emission factors utilized within the report: *diesel (average biofuel blend), petrol (average biofuel blend) i butane*. Emission factors are derived from data available for 2022. Emission factors were expressed in the following units: *kg CO_2eq/liter i kg CO_2eq/m3.*

Emission factors source:

Defra 2022, Greenhouse gas reporting: conversion factors 2022, Published: 22 Jun 2022, **Link**

Scope 2 (INDIRECT ELECTRICITY-RELATED EMISSIONS)

Scope 2 emissions consist of indirect greenhouse gas emissions resulting from the consumption of purchased electricity, heat or steam used by the organization. There are two different methods for calculating Scope 2 emissions – the market -based method and the location-based method.

Market-based method reporting uses contractual instruments such as renewable energy certificates to demonstrate that the electricity consumed by an organization comes from renewable sources. Location-based method reporting uses emission factors for the grid

where electricity is generated. The organization uses electricity from renewable sources, which is why this report utilizes the location-based and market-based methods.

Data sources:

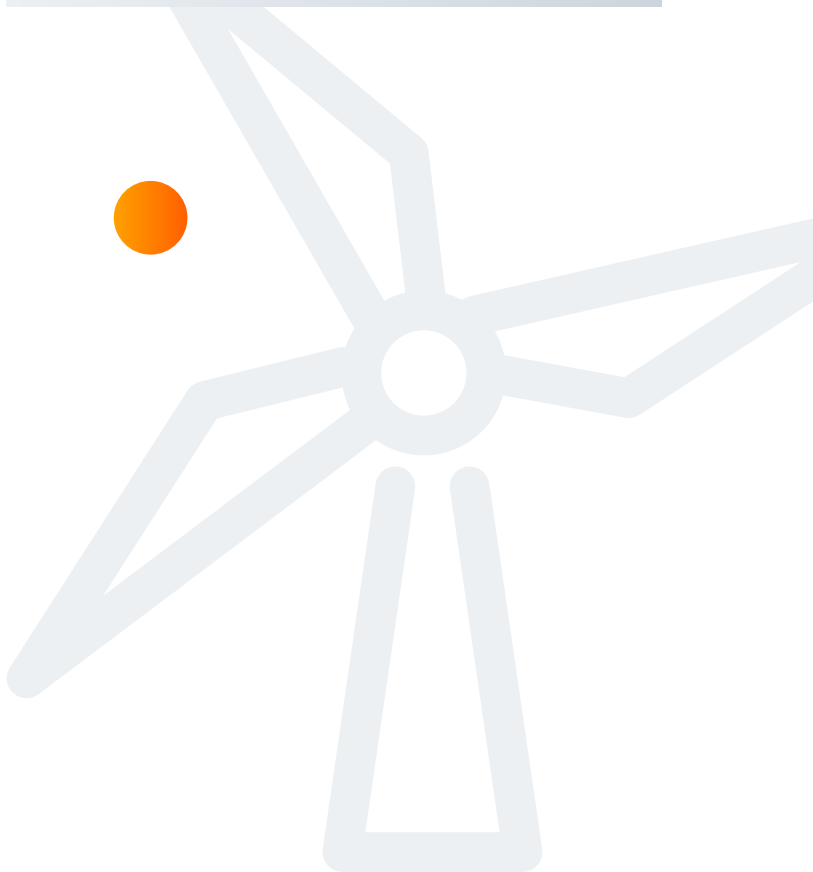
- **heat** – annual data on heat consumption expressed in GJ.
- **electricity:**
  - annual data on electricity consumption from renewable sources expressed in kWh.
  - annual data on electricity consumption from the grid expressed in kWh.
- **electric vehicles, EVs** – annual data on electricity consumption for the purpose of the organization's electric vehicles expressed in kWh.

Description:

Emission factors for electricity (kWh) are derived from data available for 2022 published by the Association of Issuing Bodies (AIB) for production mix for Poland.

Emission factors source:

European Residual Mixes 2021 (2022), Association of Issuing Bodies (AIB) Version 1.0, 2022-05-31 **Link**



Scope 3 (VALUE CHAIN-RELATED EMISSIONS)

These are indirect emissions covering the environment of the reporting organization, which are not directly controlled by the organization. Scope 3 includes emissions from the supply chain, the purchase of goods, employees commuting and business trips, or waste management.

Data sources:

- **purchased goods and services, capital goods** – total annual spendings on the purchase of goods and services and capital goods expressed in PLN. Categories for goods and services have been assigned to categories available in the database.
- **assets leased from other entities, assets leased to other entities** – area of rented office and warehouse space expressed in square meters and the year of construction of the building.
- **waste** – the mass of residual waste, plastic, waste electrical and electronic equipment (WEEE) and paper and cardboard expressed in kilograms.
- **business trips** – distance in kilometers covered by various means of transport (car, long-haul flight, short-haul flight, taxi, train) and the number of hotel stays in Poland and abroad.
- **employee surveys:**
  - **commuting to work** – the distance in kilometers covered by various means of transport (passenger car taking into account various types of fuel, bus/autohop, scooter, bicycle or on foot, motorcycle, taxi, train) on the way to and back from work. If the employee provided different types of transport that he or she uses to get to work, the most conservative scenario was adopted.
  - **remote work** – the number of days a week in which the employee uses remote work.
  - **18% of the organization's employees** participated in the survey, and the results were expanded on the entire company.

Description:

Emission factors are derived from data available for 2022.

Emission factors source:

- Defra 2022, Greenhouse gas reporting: conversion factors 2022 Published: 22 Jun 2022, **Link**
- Lufthansa Innovation Hub Analyst Published: 2021, **Link**
- Eco MS, Exergy
- WIOD, World Input-Output Database, University of Groningen, Published: 2016, **Link**