CIVITTA

PREPARED FOR

LIVONIA PARTNERS

ASSESSMENT OF THE CARBON FOOTPRINT OF BESTAIR GROUP FOR 2023

ANALYSIS REPORT

28.06.2024

EXECUTIVE SUMMARY

		See further
FOCUS	• The carbon footprint assessment covered Bestair Group based on 2023 available consumption, operational and financial data of the organisations, market and technical assumptions and additional research data related to the supply chain structure. • **Scope 1, 2 and 3 emissions (upstream and downstream)** were calculated; compared to 2022, new data related to purchased office supplies, food, furniture, and business travel was added to the 2023 footprint. • Avoided GHG emissions were estimated and reported to disclose both possible positive and negative GHG impacts of sold products (heat pumps) compared to reference heating scenarios such as natural gas boilers and wood pellet boilers present in the Bestair's sales markets.	*p. 7*
METHODOLOGY	• The carbon footprint is based on the Greenhouse Gas Protocol methodology[1] while the avoided GHG emissions assessment follows guidelines published by the World Resources Institute[2]. • For necessary emission factors, the internationally recognized Ecoinvent and other international databases have been referred to in detail in the analysis file (high level overview of main sources in Annex 2). The electricity emissions factors are based on the residual and production mix factors in European Residual Mixes 2023 developed by the Association of Issuing Bodies. • The assessment covered Scope 1, 2 and 3 downstream and upstream emissions from sources such as purchased products, upstream and downstream transportation, use of sold products etc.	*p. 20*
RESULTS	• The total carbon footprint for Bestair Group in 2023 was **43,860 tCO2eq.** Methodology changes have caused a significant difference between 2023 and 2022 results – see the next slide for an overview. • Most of the carbon footprint (99.98%) is made up of Scope 3 indirect emissions (**43,851 tCO2eq**) with a dominant share (**31,045 tCO2eq**, 70.8%) from the use of sold products. This is followed by a large contribution (**11,667 tCO2eq**; 26.6%) related to the production of the purchased heat pumps. • Avoided GHG emissions were calculated as **212,757 tCO2e**. This value comes from comparing the life-cycle GHG emissions of sold heat pumps with the other market products, assumed to be the natural gas boiler (in all markets except Norway) and direct electric heating in Norway.	*p. 9*

[1] Greenhouse Gas Protocol methodology: Link. [2]World Resources Institute Working Paper: Link

COMPARISON OF CARBON FOOTPRINT BETWEEN 2022 AND 2023

SUMMARY			2022		2023		Comments
Scope		Category	t CO2eq	% of total	t CO2eq	% of total	
Scope 1	Company facilites	Fuel consumption	0.0	0.00%	0.0	0.00%	No methodology changes
		SCOPE 1	**0.0**	**0.00%**	**0.0**	**0.00%**	
Scope 2	Purchased electricity & heating	Residual mix energy and renewable energy (market-based)	0.0	0.00%	0.0	0.00%	No methodology changes
		Grid mix energy (location-based)			23.2	0.05%	Location-based electricity calculation for scope 2 was added as per GHG Protocol requirements
		Heating	5.2	0.00%	9.1	0.02%	No methodology changes
		SCOPE 2 (MARKET-BASED)	**5.2**	**0.00%**	**9.1**	**0.02%**	
Scope 3 - upstream	1 - Purchased goods and services	Heatpumps	15,279.7	11.56%	11,666.9	26.60%	Client provided more detailed specifications of purchased heat pumps with known weight (known specific size, not only type)
		Office supplies		0.00%	0.2	0.00%	This new category was added based on data provided by the client
		Food		0.00%	0.3	0.00%	This new category was added based on data provided by the client
		Furniture		0.00%	0.5	0.00%	This new category was added based on data provided by the client
	3 - Fuel and energy related activities	Fuel and energy-related emissions	1.1	0.00%	3.7	0.01%	The methodology was adjusted to also include 1) electricity T&D losses, 2) electricity WTT and 3) central heating T&D losses
	4 - Upstream transportation and distribution	Upstream Transportation	569.6	0.43%	372.0	0.85%	Adjusted transportation distances using values provided by the client as well as more detailed specifications of purchased heat pumps with known weight (known specific size, not only type)
	5 - Waste generated in operations	Waste	30.8	0.02%	34.0	0.08%	No methodology changes
Scope 3 - downstream	9 - Downstream transportation and distribution	Downstream transportation	72.9	0.06%	113.1	0.26%	Adjusted transportation distances using values provided by the client as well as more detailed specifications of purchased heat pumps with known weight (known specific size, not only type)
	11 - Use of sold products	Use of sold products	115,445.0	87.36%	31,044.9	70.78%	The country-specific electricity emission factors were changed from the residual mix type (2022) to the production mix type (2023). The most significant change is for Norway, where the value changes from 0.50 kgCO2eq/kWh to 0 kgCO2eq/kWh and the share of sales there was larger in 2023 than in 2022. No changes to refrigerant methodology, only a new type of refrigerant R134a was added to the analysis
	12 - End of life	End of life treatment of sold products	750.0	0.57%	615.5	1.40%	No methodology changes
		SCOPE 3	**132,149.2**	**100.00%**	**43,851.3**	**99.98%**	
		TOTAL CARBON FOOTPRINT (t CO2eq /year) Market-based	**132,154**	**100%**	**43,860**	**100%**	
		AVOIDED EMISSIONS	**264,940**		**212,757**		The country-specific electricity EF for direct heating in Norway changed from residual mix (2022) to production mix (2023), going from 0.50 kgCO2eq/kWh to 0 kgCO2eq/kWh.

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INTRODUCTION

As reported by the European Union, the building sector is responsible for approximately 40% of energy consumption and 36% of CO_2 emissions in the EU[1]. Within this context, space conditioning (cooling and heating) is a major contributor to building energy consumption (80%) and global warming. Consequently, it is necessary to act on these systems to reduce energy consumption and the environmental impact that comes with them.

The private equity fund Livonia Partners is tackling the climate impact of its portfolio companies as its Fund II aims to direct at least 10% of the fund size towards reducing the environmental and climate impact of the companies. For this, they needed strong and detailed insights on the current climate impacts of their portfolio companies, one of which is Bestair Group – a leading importer and distributor of HVAC products in the Nordic and Baltic countries.

The analysis aimed to map the climate impact of Bestair Group, calculate the organisation's activities' carbon footprint, and identify potential reduction areas. As a result of the work, a calculation model was created, where Bestair Group can, if desired, update its GHG inventory assessment itself in the future.

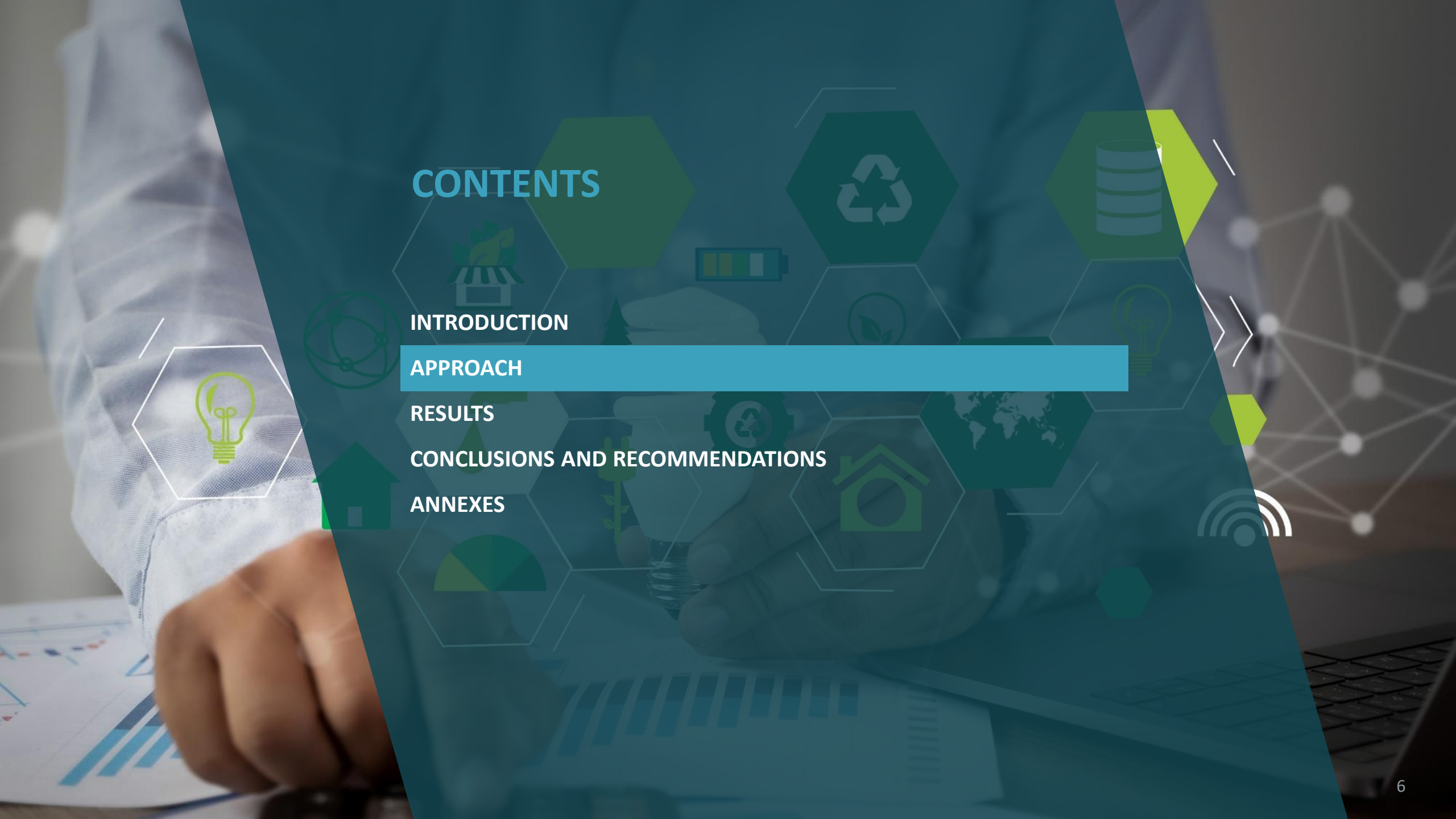
The climate impact of Bestair Group was measured through GHG inventory analysis and emission calculations (please see Annex 1) following these **steps**:

- Mapping operations and supply chain of the company
- Mapping material GHG emission categories that are relevant to disclose
- Assessing GHG emissions (Scope 1, Scope 2 and Scope 3) over the lifecycle
- Assessing avoided GHG emissions over the lifecycle of heat pump products
- Developing recommendations for GHG emission reduction
- Developing recommendations for data collection and reporting process

As a result, the following has been achieved:

1. GHG inventory established, and emissions assessed over the lifecycle for 2023
2. Recommendations for GHG emission reduction developed

[1] Heat Pump Wave Opportunities and Challenges 2023: Link



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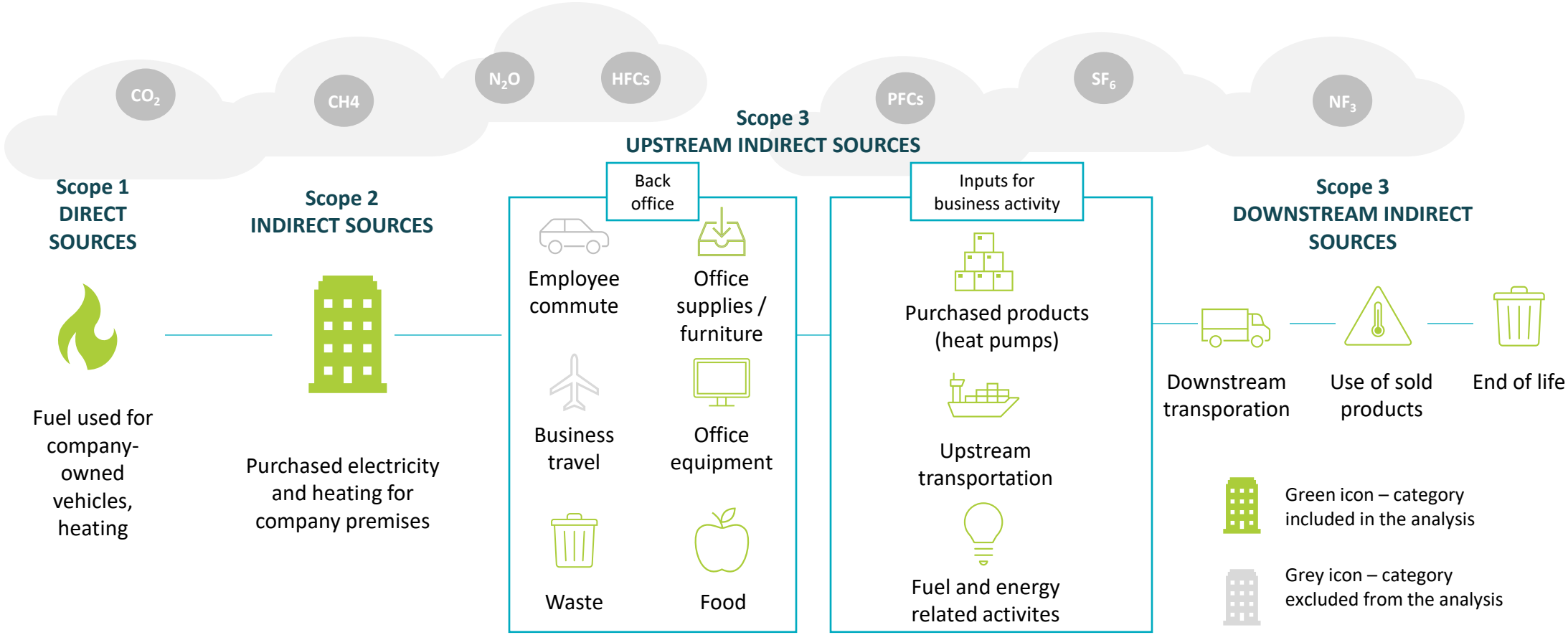
EMISSION CATEGORIES COVERED WITH THE CARBON FOOTPRINT ANALYSIS

According to the GHG Protocol (please see Annex 1), the Bestair Group activities are divided into three scopes, providing a consistent basis for presenting the results and ensuring certain comparability between companies. Because of not available or disclosed data by Bestair Group, some of the emission categories (marked as grey in the diagram below) , such as employee commute, etc., have been excluded from this analysis. More information related to the carbon footprint assessment scope, source of input data and primary modelling (calculation) assumptions is presented in Annex 2.



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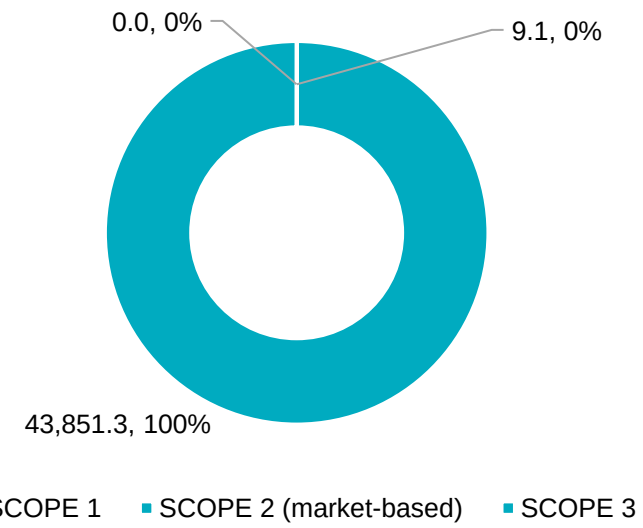
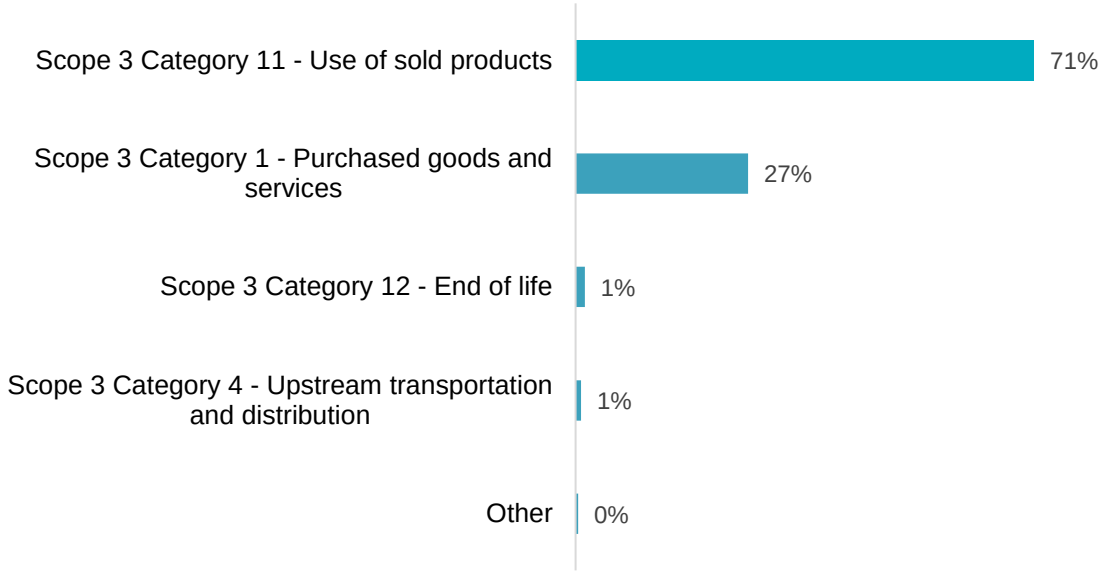
CARBON FOOTPRINT OF BESTAIR GROUP IS 43 860 T CO_2EQ, OF WHICH 99.98% IS RELATED TO SCOPE 3 EMISSIONS

SCOPE 1, 2, 3 MARKET-BASED EMISSIONS AND SHARE OF THE TOTAL (t CO2eq; %)



EMISSIONS BY CATEGORY (%)



43,860 t CO_2eq is the total carbon footprint (market-based) of Bestair Group in 2023, which covers scopes 1, 2, and scope 3 upstream and downstream emissions.

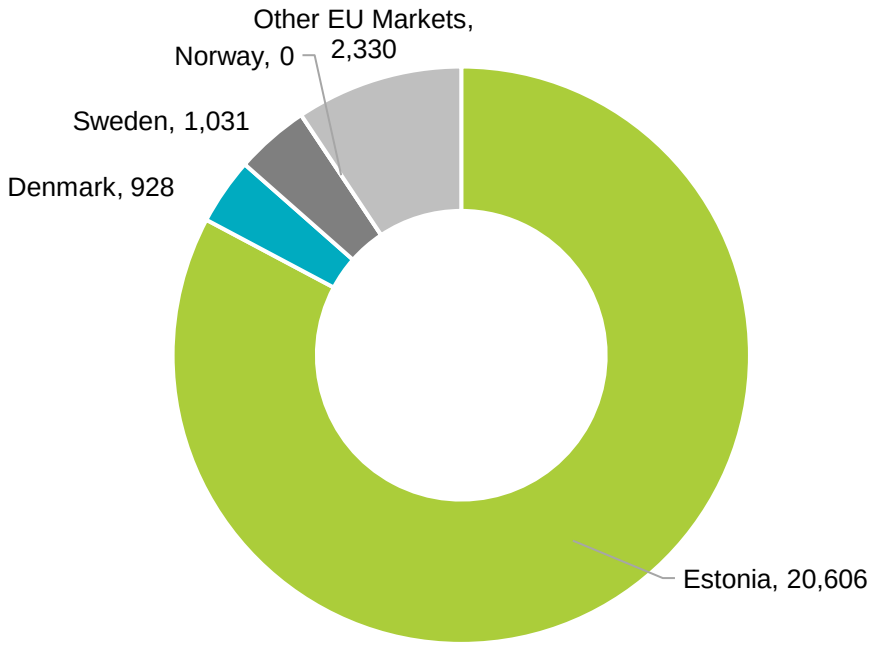
72 % of the total carbon footprint is caused by **Scope 3 downstream** (customers related) **emissions** totalling 31,774 t CO_2eq

28% of the total carbon footprint comes from **Scope 3 upstream** (company suppliers related) **emissions** totalling 12,078 t CO_2eq

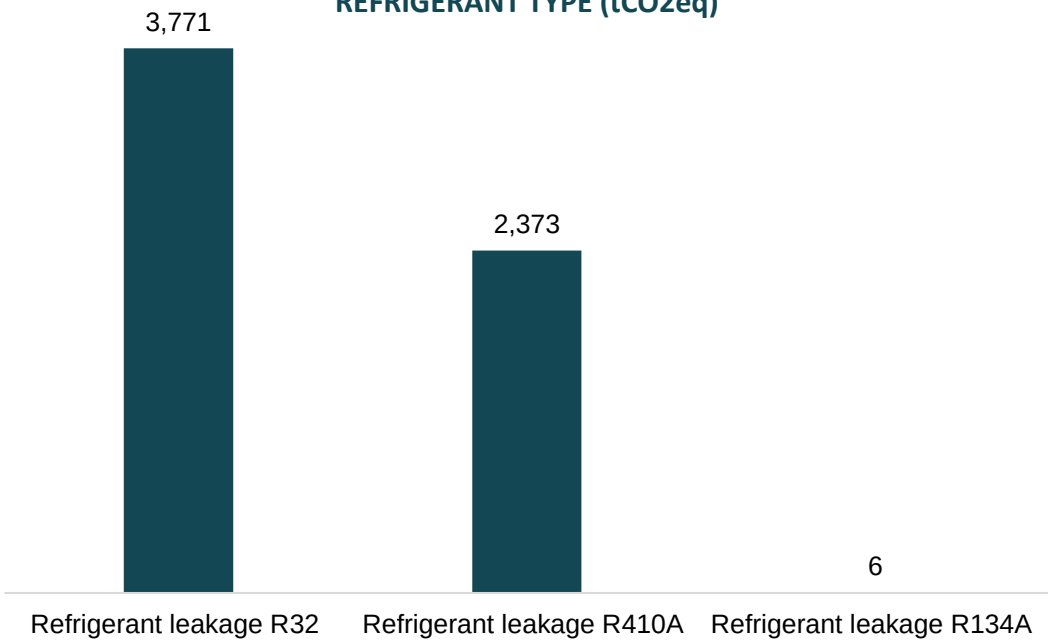
There were no emissions from *fuel consumption* (Scope 1), whilst with *electricity and heat consumed* (Scope 2 market-based), present a minor influence (9.1 t CO_2eq; 0.02%) on the total Bestair Group carbon footprint. The location-based Scope 2 total was 32.2 t CO_2eq.

SCOPE 3 CATEGORY 11: USE OF SOLD PRODUCTS CONTRIBUTES TO 71% OF THE TOTAL BESTAIR GROUP CARBON FOOTPRINT

USE OF SOLD PRODUCTS: ELECTRICITY CONSUMPTION OF HEATPUMPS (t CO2eq)



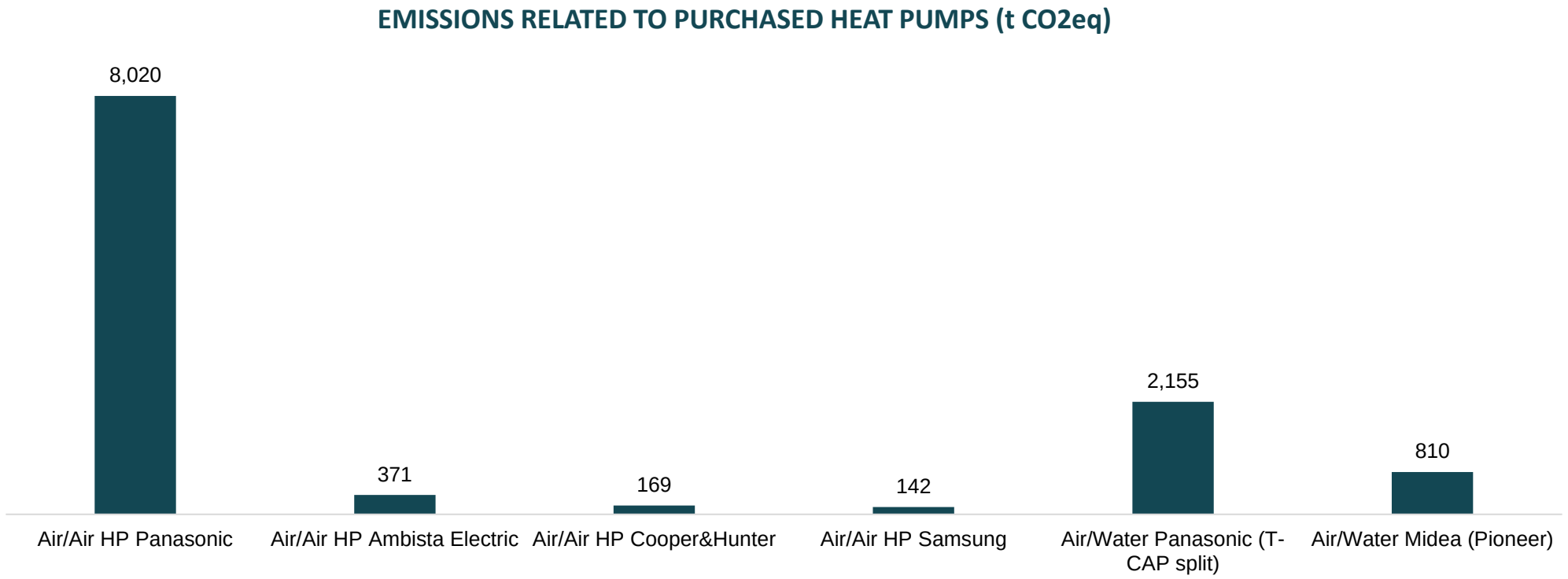
USE OF SOLD PRODUCTS: REFRIGERANT LEAKAGE BY REFRIGERANT TYPE (tCO2eq)



The use of sold products is responsible for the highest share of Bestair Group emissions totalling **31,045 t CO2eq (71%).** Within this category, lifetime (15 years) electricity consumption related to the use of heatpumps generates **24,895 t CO2eq (80%);** despite only accounting for 11% of total sales, Estonia makes up the largest share of emissions due to a relatively high electricity grid emission factor among the sales market countries.

The remaining **20% of emissions in this category are from refrigerant leakage** over the lifetime of the heatpump – **6,150 t CO2eq** was produced by Bestair Group based on a 2%/year leakage assumption.

SCOPE 3 CATEGORY 1: 27% OF THE TOTAL CARBON FOOTPRINT WAS PRODUCED BY PURCHASING HEAT PUMPS



Purchased heatpumps alone produced **27%** of the total carbon footprint (**11,667 t CO2eq**) in 2023.

Considering purchased models, as 84% of purchased heatpumps were Air/Air Panasonic, the total carbon footprint of these models was **8,020 t CO2eq**, followed by Air/Water Panasonic (T-CAP split) which produced **2,155 t CO2eq**.

This year, emissions from purchased heat pumps were modelled more accurately due to more detailed product specifications (HP size) provided by the client.

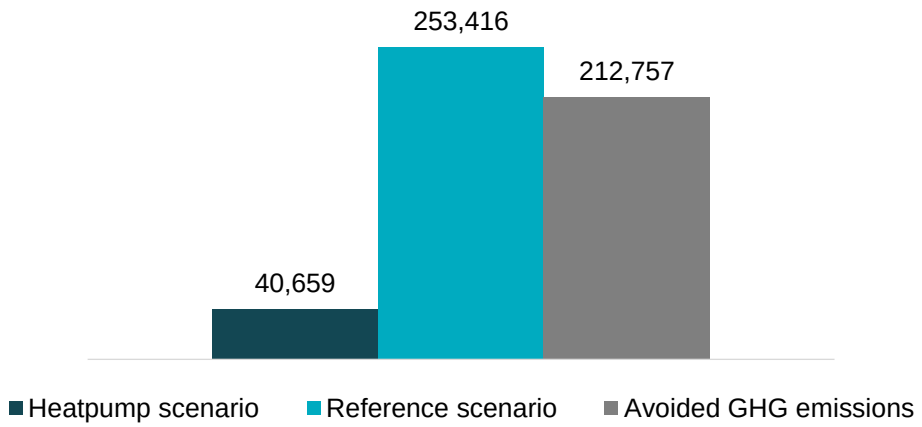
SOLD HEAT PUMPS HAVE A POSITIVE CLIMATE IMPACT WHEN COMPARED TO A FOSSIL FUEL-BASED HEATING SOLUTION

REFERENCE HEATING PRODUCT SCENARIO ANALYSED IN BESTAIR GROUP MARKETS

Country/Market	Reference heating product scenario	Life-cycle emission factor of reference heating scenario [kgCO2eq/kWh]
Estonia	Natural gas boiler	0.28
Denmark	Natural gas boiler	0.28
Sweden	Natural gas boiler	0.28
Norway	Direct electricity heating	0.00*
Other EU Markets	Natural gas boiler	0.28

* The electricity EF only accounts for generation (no WTT)

GHG EMISSIONS BY SCENARIO (t CO2eq)



Bestair Group's avoided GHG emissions for 2023 were **212,757 t CO2eq.** This value was calculated by comparing the GHG emissions of the product scenario based on **sold heat pump** life cycle with the **referential (comparative)** heating scenario based on the **natural gas boiler** (in all markets except Norway) and **direct electric heating** in the Norwegian market.

In order to make the calculation of avoided emissions more conservative and avoid overstating the positive impact, the emission factor of direct electricity heating in Norway this year is based on the production mix factor in European Residual Mixes 2023 (Association of Issuing Bodies, 2023[1]), rather than the residual mix factor used last year (0.50 kgCO2eq/kWh). This aligns with the methodology changes made for use of sold products, which also now use the production mix as the location-based emission factor.

The total positive value of avoided GHG emissions means that the Bestair Group main business related to providing energy-efficient heating and cooling solutions based on heat pump systems has a **positive climate impact** contributing to the significant GHG emission **reduction** in the construction sector when **replacing fossil-based heating products.** In such cases, the value of the avoided GHG emissions achieved mainly depends on the **country's electricity factor** and the **quantity of heat pumps sold** to the specific market. Consequently, with the **lower** electricity emission factor, the avoided GHG emission are **increasing** due to the lower life-cycle GHG emissions related to heat-pump use (electricity consumption). When publishing green claims, the compared solution should always be disclosed to ensure transparent and accurate communication.

[1] AIB European Residual Mix 2023 Link

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CARBON FOOTPRINT OF BESTAIR GROUP IS 43 860 T CO2 EQ

Almost all (99.98%) of Bestair Group's carbon footprint is associated with Scope 3 activities, with most GHG emissions related to the use of the product (downstream) followed by the purchase of heat pump units (upstream).

Despite the relatively high carbon emissions related to the product's use phase, the heat pump products sold by Bestair Group that replace the non-renewable space heating sources (natural gas boiler) positively impact the environment (leading to GHG emission avoidance).

2023 SCOPE 1 CARBON FOOTPRINT OF BESTAIR GROUP

0 T CO_2 EQ

2023 SCOPE 2 CARBON FOOTPRINT OF BESTAIR GROUP

9.1 T CO_2 EQ (market-based)

32.2 T CO_2 EQ (location-based)

2023 TOTAL CARBON FOOTPRINT OF BESTAIR GROUP

43,860 T CO_2 EQ (market-based)

2023 AVOIDED GHG EMISSIONS OF BESTAIR GROUP

212,757 T CO_2 EQ

Avoided emissions refer to the reduction of greenhouse gas (GHG) emissions associated with the production or provision of a specific product or service. This means that by implementing certain measures or using cleaner technologies, the emissions that would have been released during the production or use of the product or service are avoided, resulting in a positive impact on the environment.

CARBON REDUCTION CAN BE ACHIEVED BY SELLING HIGHLY ENERGY EFFICIENT HP'S & PROPOSING LOW-CARBON ELECTRICITY SOLUTIONS TO FINAL CUSTOMERS

USE OF SOLD PRODUCTS, ELECTRICITY USE

Every heat pump unit sold to EU markets needs to be tested and certified per EU 626/2011, the standard which establishes labelling requirements and provides supplementary product information for electric mains-operated air conditioners (heat pumps). The energy efficiency classes for heat pumps vary between A+++ and G. They are based on the heat pump unit's **seasonal energy efficiency** (SCOP), which directly influences the annual electricity use related to heating and cooling.

The energy efficiency class of sold heat pumps by Bestair Group varies, being the **highest A+++, SCOP =5.3** for **Panasonic HZ air/air** heat pumps and the lowest **SCOP=2.75 for Panasonic PAW-DHW100W-1 air/water** heat pumps.

Switching to selling only highly energy efficient heat pumps will have a significant impact on the Bestair Group carbon footprint since Scope 3 Category 11: Use of sold products accounts for 71% of the total footprint.

Since the electricity emission factors are a main driver of emissions in the use of sold products category, providing **low-carbon electricity solutions** to the final customers of sold heat pumps is the **most efficient carbon-reducing strategy**.

Carbon-reducing strategies include installing roof PV panels or encouraging customers to purchase a low-carbon electricity tariff (or fully renewable with guarantee of origin). Such changes would have a large impact on the lifetime electricity use emissions profile of heat pumps sold by Bestair Group.

The presented low-carbon electricity strategies are becoming more popular in the EU markets. By example:

- **Columbus Energy** – The leading PV systems provider in Poland and Central/East Europe is promoting integrated residential HVAC and energy solutions based on: roof PV modules, air-water heat pumps and energy storage.
- **Tauron** – The leading energy provider in Poland offers renewable-based electricity coupled with heat pump solutions.
- **Eesti Energia** – The leading energy provider in Estonia offers renewable-based electricity coupled with heat pump solutions.

CARBON FOOTPRINT COULD BE REDUCED BY PRIORITIZING HEAT PUMP UNITS PURCHASED FROM SUPPLIERS WITH EU-BASED PRODUCTION

The analysis revealed that 27% of Bestair Group's climate impact comes from the emissions related to the purchase of heat pumps from their production process.

PURCHASED GOODS – HEAT PUMPS

The comparison of the available environmental declarations published in the INIES database[1] indicated that the heat pump units produced in **European manufacturing facilities have, on average, 20% lower carbon emissions** (related to their production) than **those made in China or India.** This is mainly related to the more energy and material-efficient and less emissions-intensive production process.

Consequently, prioritizing purchasing of heat pump units from suppliers with EU-based production and available environmental claims of their products in the form of product environmental passports (PEP) or environmental product declarations (EPD) could enable significant reductions of the Scope 3 upstream emissions related to purchased goods (heat pumps).

[1] INIES DATABASE Link

RECOMMENDATIONS TO IMPROVE FUTURE DATA COLLECTION

Recommendations are listed below, in order of importance:

SCOPE 1-2

- **Purchased energy – electricity|** The electricity consumption covered only the main company's offices, excluding the company warehouses. The electricity use in these locations should also be collected and disclosed.
- **Purchased energy - heating|** Based on Bestair Group input, the space heating in the headquarter offices is partly based on the heat pump system. However, only heating consumption data based on district heating was disclosed and included in the analysis. The share and amount of electricity consumption related to heat pump operation should be collected and disclosed in future.

SCOPE 3

- **Use of sold products|** The use phase results are mainly driven by the choice of electricity emission factor in a selected market. Currently, only publicly available factors are being considered for the analysis, which do not necessarily accurately represent the emissions intensity of the grid used by customers. Bestair should consider purchasing access to paid databases (e.g. IEA) to get a sense of the range of factors that are available and decide which ones to use consistently based on the most appropriate methodology. Another possible solution is to engage HP customers with a survey asking about their specific electricity tariff or on-site generation to understand if they are using renewable energy.
- **Upstream transportation|** The current analysis is based on the generic assumption that all purchased heat pump units are transported by road from the main product suppliers located in Germany. For the data to be more precise, it would be recommended to provide more detailed data related to the location of the heat pump suppliers and the mode of transport.
- **Employee commuting|** This category was excluded due to the lack of data in this analysis. The employee commuting survey has been prepared in multiple languages and should be carried out in companies to study their influence on carbon footprint results.

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ANNEX 1 – GHG PROTOCOL METHODOLOGY

In assessing the organization's carbon footprint, we relied on *The Greenhouse Gas Protocol standards* (in particular the *Corporate Reporting and Accounting Standard* and *Corporate Value Chain (Scope 3) Standard*), which take into account all the significant greenhouse gases (GHGs) listed in the Kyoto Protocol.

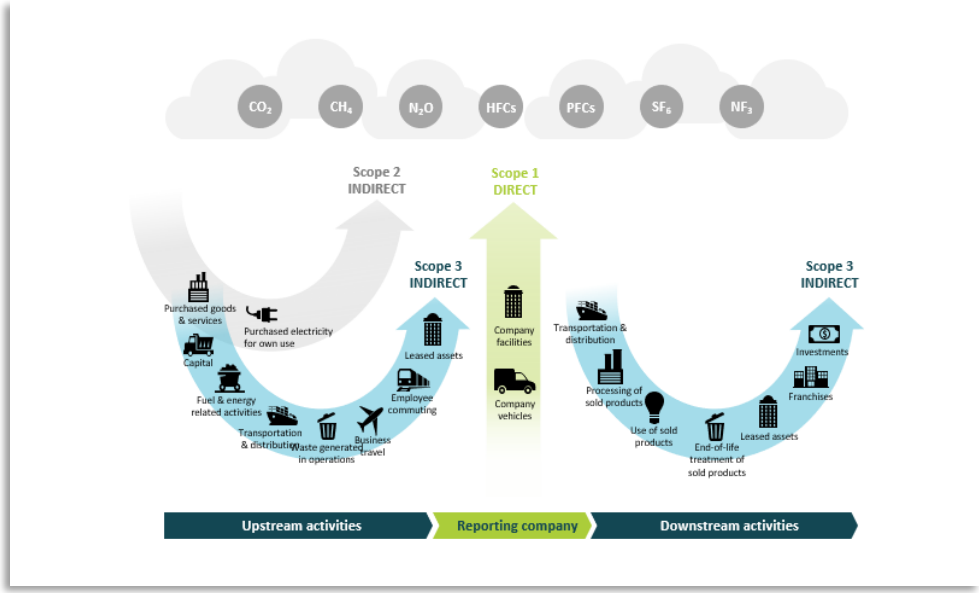
The Science Based Targets initiative has also mandated the assessment to be conducted according to the GHG Protocol methodology. The same goes for sustainability related disclosures under EU regulations (e.g., SFDR, CSRD).

According to this methodology, the effects of the organization's activities are divided into three scopes:

- **SCOPE 1** includes direct GHG emissions from sources under the company's control (e.g., use of fuels, combustion of fuels in one's own boiler house)
- **SCOPE 2** GHG emissions from the production of purchased electricity and heat
- **SCOPE 3** includes the remaining indirect GHG emissions that occur along the organization's value chain.

We evaluated all scope 1 and 2 emissions, upstream scope 3 emissions, as well as downstream scope 3 emissions based on 2023 data.

FIGURE 1. DISTRIBUTION OF EMISSION SOURCES BETWEEN THREE SCOPES ACCORDING TO GHG PROTOCOL METHODOLOGY



- **Standard:** The GHG Protocol standard
- **Software:** SimaPro, One-click LCA
- **Data sources:** Ecoinvent database, INIES database, AIB Residual Mixes 2023, scientific articles and relevant professional reports
- **Emissions:** all important greenhouse gases (GHG) mentioned in the Kyoto Protocol – carbon dioxide (CO2), methane (CH4), nitrogen oxide (N2O), hydrofluorocarbon compounds (HFCs), perfluorocarbon compounds (PCFs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3)

ANNEX 2 – CIVITTA METHODOLOGY PROCESS

1. PROCESS FOR ESTABLISHING EMISSION CATEGORIES

CIVITTA conducts organization's carbon footprint analysis based on GHG Protocol Standards - *Corporate Accounting and Reporting Standard*, as well as the *Corporate Value Chain (Scope 3) Accounting & Reporting Standard*.

In order to determine carbon footprint for an organization, one of the first steps is to set its operational boundaries. This includes identifying emissions that are associated with the organization's operations, determining the scope – direct or indirect, and setting the scope of accounting and reporting of indirect emissions. According to the GHG Protocol, the activities and impacts of a company are divided into three stages, which provide common grounds for presenting the results and thereby ensure a certain level of comparability between companies:

- **Scope 1** – all direct emissions arising from the sources controlled by organization
- **Scope 2** – indirect emissions from purchased electricity and thermal energy production
- **Scope 3** – all other indirect emissions (not covered by Scope 2), which arise throughout the organization´s value chain.

Scope	Category	Activities	Explanation
Scope 1: Direct GHG emissions		Generation of electricity, heat, or steam	Excluded from the analysis as the company does not generate electricity in its office space or outside of it.
		Physical or chemical processing	Excluded from the analysis as the company operates in the HVAC/retail sector and main operations are based on product distribution and retail rather than, manufacturing or processing of chemicals and materials, e.g., cement, aluminum, adipic acid, ammonia manufacture, and waste processing.
		Transportation of materials, products, waste, and employees	Included in the analysis to account for any vehicle emissions that are under company's operational control
		Fugitive emissions	Excluded from the analysis as the company operates in the HVAC/retail sector and after initial impact screening, f-gas leakage was listed as a minor risk in the office space. This Scope 1 activity only applies to manufacturing, extractives and mining sector.
Scope 2: Energy indirect GHG emissions		Purchased electricity and thermal energy	Included in the analysis as the company's main operations are office based and electricity as well as heating energy are purchased by each premise manager separately.

ANNEX 2 – CIVITTA METHODOLOGY PROCESS

Scope	Category[1]	Activities	Explanation
Scope 3: Other indirect GHG emissions (upstream)	1	Purchased goods and services	Included in the analysis as the company has indicated and provided information on purchased goods (heat pumps) as well as other purchases such as food and office supplies. Water consumption data was not disclosed.
	2	Capital goods	Excluded from the analysis as Bestair Group has not disclosed capital goods purchases.
	3	Fuel- and energy-related activities (not included in Scope 1 or Scope 2)	Included in the analysis as upstream emissions of purchased fuels, electricity and heating energy (extraction, production, and transportation of fuels consumed by the reporting company) as well as T&D losses for electricity and heating.
	4	Upstream transportation and distribution	Included in the analysis and based on Bestair Group estimates of travel distance for heat pumps transported from Germany by road.
	5	Waste generated in operations	Included in the analysis as the company's main operations are office and waste management is managed by each premise manager separately.
	6	Business travel	No business travel data was provided for Bestair Group.
	7	Employee commuting	Excluded from analysis – employee commuting survey was not carried out.
	8	Upstream leased assets	Excluded from the analysis as it was determined this is not a relevant category for Bestair Group business operations.

[1] Technical Guidance for Calculating Scope 3 Emissions. Link

ANNEX 2 – CIVITTA METHODOLOGY PROCESS

Scope	Category	Activities	Explanation
Scope 3: Other indirect GHG emissions (downstream)	9	Downstream transportation and distribution	Included in the analysis and based on travel distances provided by Bestair Group for transport from company warehouses to end-user (customer) location.
	10	Processing of sold products	Excluded from the analysis as it was determined this is not a relevant category for Bestair Group business operations.
	11	Use of sold products	Included in the analysis and considering both direct (electricity use) and indirect impacts (refrigerant leakage)
	12	End-of-life treatment of sold products	Included in the analysis as assumptions available based on research papers and EPDs with the assumption that heat pump product end-of-life is split between landfill, incineration, and mechanical recycling.
	13	Downstream leased assets	Excluded from the analysis as it was determined this is not a relevant category for Bestair Group business operations.
	14	Franchises	Excluded from the analysis as it was determined this is not a relevant category for Bestair Group business operations.
	15	Investments	Excluded from the analysis as it was determined this is not a relevant category for Bestair Group business operations.

ANNEX 2 – CIVITTA METHODOLOGY PROCESS

2. CONSUMPTION DATA COLLECTION PRINCIPLES

In order to conduct the most precise analysis, qualitative and quantitative data on the organization's operations must be collected. CIVITTA takes into consideration:

- Information about the organization's main activities, geographic locations and structure
- Organization's manufacturing, operational processes
- Organization's information on other assurance processes, incl. audit, reviews and certifications
- Organization's invoices on purchased products, services and materials
- Organization's invoices on resource consumption, i.e., energy, water, waste
- Technical performance of sold heat pumps based on the technical documentation from suppliers

Data collection principles	Scope 1: Direct GHG emissions	Scope 2: Electricity indirect GHG emissions	Scope 3: Other indirect GHG emissions (upstream)	Scope 3: Other indirect GHG emissions (downstream)
Information about the organization's main activities, geographic locations and structure	Applicable	Applicable	Applicable	Applicable
Organization's manufacturing, operational processes	Applicable	Applicable	Applicable	Applicable
Organization's information on other assurance processes, incl. audit, reviews and certifications	Applicable	Applicable	Applicable	Applicable
Organization's invoices on purchased products, services and materials	Applicable	Applicable	Applicable	Applicable
Organization's invoices on resource consumption, i.e., energy, water, waste	Applicable	Applicable	Applicable	
Technical performance of sold products			Applicable	Applicable

ANNEX 2 – CIVITTA METHODOLOGY PROCESS

3. SOURCES OF EMISSION FACTORS

Professional databases such as Ecoinvent v3.8, reports and scientific literature were used to identify the impact of processes taking place outside the companies (i.e. production of inputs).

ECOINVENT| Database contains more than 18'000 reliable life cycle inventory datasets, covering a range of sectors and geographic locations. For each dataset in the Ecoinvent Database, Life Cycle Impact Assessment (LCIA) scores for several impact assessment methods (such as "IPCC 2021", "EF v3.1", or "ReCiPe") and corresponding impact categories (such as "climate change", "human toxicity", "water use", or "land use") are available. The database allows to determine the impacts of organization's products and processes throughout its value chain.

INIES DATABASE| INIES is the French national reference database for environmental and health data on construction products and equipment. INIES offers Environmental and Health Declaration Sheets (FDES) for construction products and Product Environmental Profiles (PEP) for building equipment, provided by manufacturers and trade associations in the format set out in European standard NF EN 15804 and its national supplement NF EN 15804/CN for construction products and standard NF XP C08-100-1 and PCR version 3 for equipment.

RESIDUAL MIXES 2023 | The Residual Mix is the energy source mix excluding tracked energy generation attributes from the generation mix. A residual mix is a logical consequence of implementing energy attribute tracking as it ensures that the attributes represented by GOs are not double disclosed to other consumers through an implicit mix. In other words, without a residual mix, renewable electricity sold with GOs would be double counted because the same electricity would be disclosed to consumers buying "regular" electricity. The use of uncorrected generation statistics for purposes of disclosure should thus be avoided. The AIB European Residual mixes are calculated using the so-called issuance-based method. For more information refer to methodology material on: https://www.aib-net.org/facts/european-residual-mix. AIB calculated national residual mixes are official when adopted by national disclosure authorities. A number of disclosure authorities calculate national residual mixes themselves. Most of those are calculated with the same issuing-based method utilizing EAM from this report, but some countries use different methodologies.

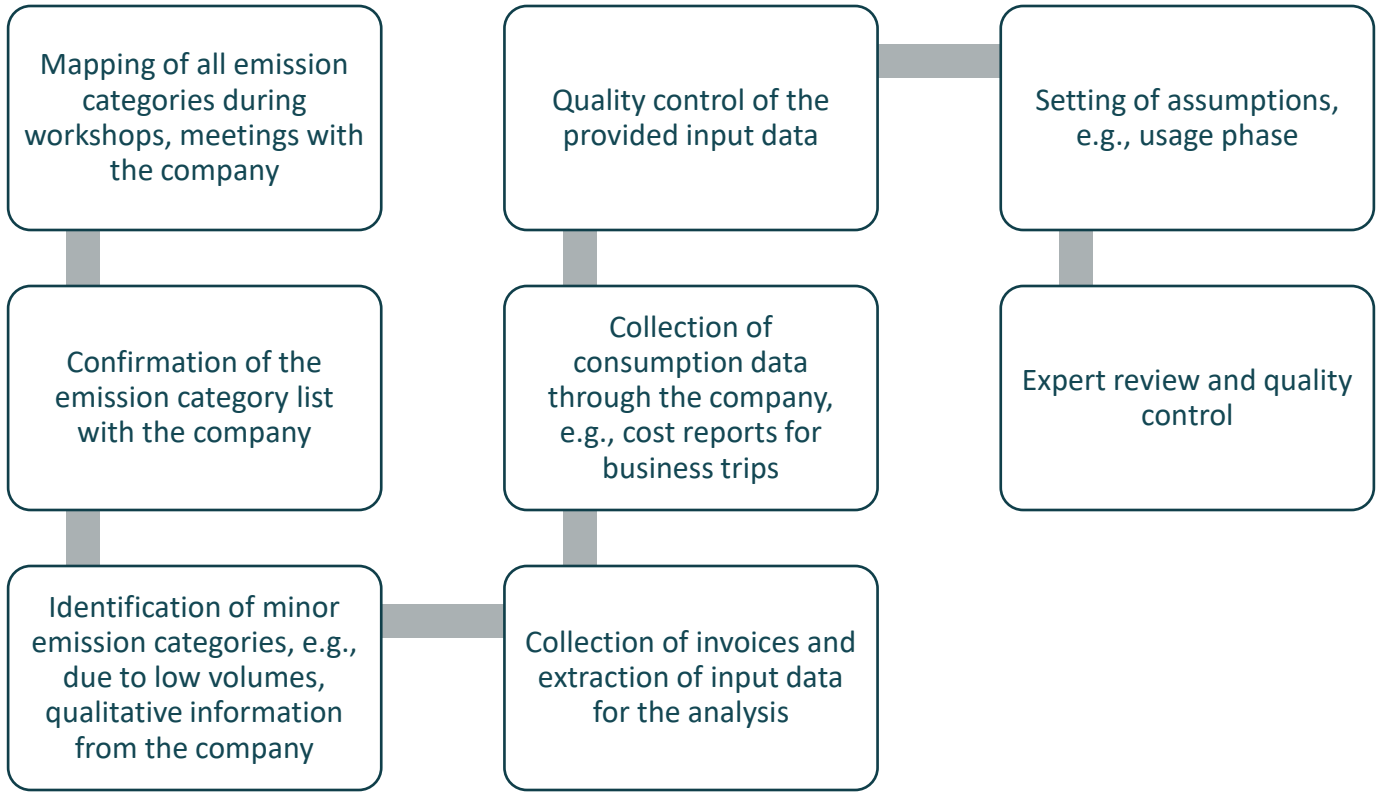
REPORTS | Reports on national data and local emission factors where available are used in the analysis to ensure as precise impact analysis as possible. Sector-specific standard information on Scope 1, 2 and 3 emissions, best practice examples, process descriptions are used to ensure sector-tailored approach throughout the analysis. References for all information used for country and service-, product-specific emission factors, purchased product and service characteristics and any other information for the company to consider in the future are listed in the analysis file provided as an additional reference by CIVITTA.

SCIENTIFIC LITERATURE | Scientific literature is used throughout the analysis process to ensure precise and recent quantitative and qualitative data use that is tailored to the organization's sector and products, materials used and produced by the organization.

ANNEX 2 – CIVITTA METHODOLOGY PROCESS

4. MEANS OF VERIFICATION DATA ACCURACY AND AVOIDANCE OF MATERIAL DISCREPANCIES

Process for quantitative and qualitative data collection, ensuring data quality and avoidance of discrepancies in the analysis.



ANNEX 2 – CIVITTA METHODOLOGY PROCESS

5. RISK IDENTIFICATION AND MANAGEMENT

Identification of an organization's GHG emissions and development of a monitoring and data collection processes internally is an important tool for understanding its emissions profile as well as potential liabilities. With international and regional regulations and standards, which aim to reduce GHG emissions and move towards climate neutrality, and increasing shareholder and other stakeholder pressure to identify and minimize organizational sustainability impacts, an organization's GHG exposure is becoming a management issue. Therefore, when considering one's GHG inventory, it is important to understand and manage potential GHG risks.

Risks	Explanation
Errors in data accuracy	To report a corporation's total GHG emissions, companies will usually need to gather and summarize data from multiple facilities, possibly in different countries and business divisions. It is important to plan this process carefully to minimize the reporting burden, reduce the risk of errors that might occur while compiling data, and ensure that all facilities are collecting information on an approved, consistent basis. For internal reporting up to the corporate level, it is recommended that standardized reporting formats be used to ensure that data received from different business units and facilities is comparable, and that internal reporting rules are observed. Standardized formats can significantly reduce the risk of errors.
Excluding material emission categories	Significant GHG emissions in a company's value chain may result in increased costs (upstream) or reduced sales (downstream), even if the company itself is not directly subject to regulations. Thus investors may view significant indirect emissions upstream or downstream of a company's operations as potential liabilities that need to be managed and reduced. A limited focus on direct emissions from a company's own operations may miss major GHG risks and opportunities, while leading to a misinterpretation of the company's actual GHG exposure. Conducting a rigorous GHG inventory is also a prerequisite for setting an internal or public GHG target and for subsequently measuring and reporting progress.

Source: GHG Protocol, *Corporate Accounting and Reporting Standard*

ANNEX 2 – CIVITTA METHODOLOGY PROCESS

Risks	Explanation
Concept of materiality	The concept of "materiality" is essential to understanding the process of verification. Information is considered to be material if, by its inclusion or exclusion, it can be seen to influence any decisions or actions taken by users of it. A material discrepancy is an error (for example, from an oversight, omission or miscalculation) that results in a reported quantity or statement being significantly different to the true value or meaning. In order to express an opinion on data or information, a verifier would need to form a view on the materiality of all identified errors or uncertainties. While the concept of materiality involves a value judgment, the point at which a discrepancy becomes material (materiality threshold) is usually pre-defined. As a rule of thumb, an error is considered to be materially misleading if its value exceeds 5% of the total inventory for the part of the organization being verified.
Inventory uncertainty	The standard practice for most scientific studies of GHG and other emissions is to report quantitative data with estimated error bounds (i.e., uncertainty). Just like financial figures in a profit and loss or bank account statement, point estimates in a corporate emission inventory have obvious uses.
Double counting	Companies should take care to identify and exclude from reporting any scope 2 or scope 3 emissions that are also reported as scope 1 emissions by other facilities, business units, or companies included in the emissions inventory consolidation.

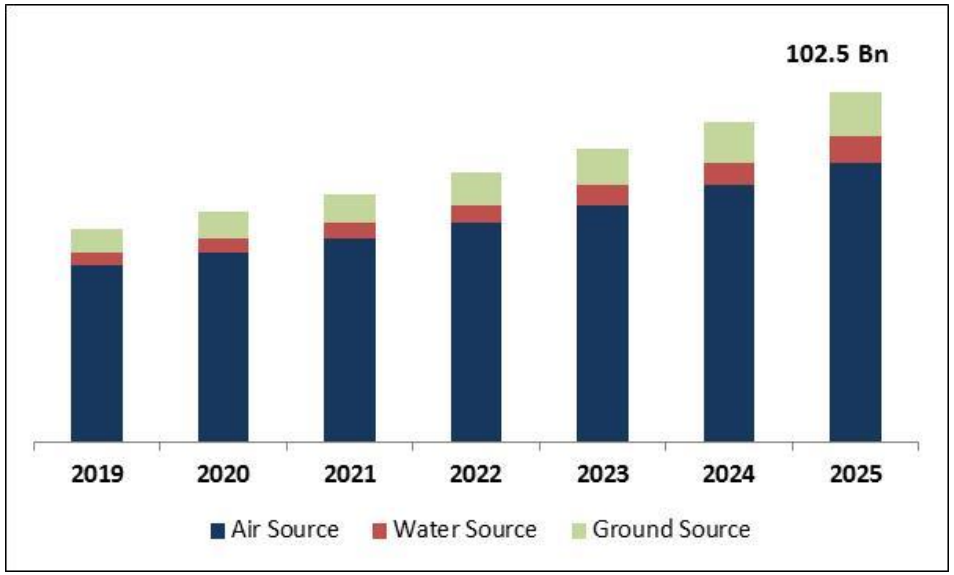
ANNEX 3 – GOAL SETTING GUIDED BY SCIENCE BASED TARGETS INITIATIVE

The driving force behind Science-Based Targets (SBT)[1] is the Science-Based Targets Initiative (SBTi), a joint initiative of CDP, the United Nations Global Compact (UNGC), World Resources Institute (WRI), and the World Wide Fund for Nature (WWF) that develops methods and criteria for effective corporate climate action and validates corporate targets. Such targets must take into account scopes 1 and 2 according to the Greenhouse Gas Protocol Standard. If a company's scope 3 emissions account for more than 40 per cent of its total scope 1, scope 2 and scope 3 emissions, the targets must also cover scope 3, which is the case for Bestair Group, as the company's scope 3 emissions account for 99.98% of total emissions.

For the period 2020 – 2030, the main strategy to decarbonise the HVAC and building sector at the speed necessary to align with 1.5°C trajectories set in the Paris Agreement, includes the implementation of actions in the following fields[2]:

- Implementing resource and energy efficiency plans by applying circular economy principles into the production process
- Switching to renewable / low carbon energy sources
- Optimization of best available technologies
- Educating end-users to be more energy efficient and carbon conscious

FIGURE 1. GLOBAL HEAT PUMP MARKET SIZE (EUROPEAN HEAT PUMP ASSOCIATION, 2020)



[1] Guidance for companies setting science based targets: Link [2] Decarbonizing strategies of the retail sector following the Paris Agreement: Link

ANNEX 4 – DETAILED CARBON FOOTPRINT RESULTS – BESTAIR GROUP

SUMMARY				
Scope		**Category**	**t CO2eq/year**	**% of total**
Scope 1	**Company facilites**	Fuel consumption	0.0	0.00%
		SCOPE 1	**0.0**	0.00%
Scope 2	**Purchased electricity&heating**	Residual mix energy and renewable energy (market-based)	0.0	0.00%
		Grid mix energy (location-based)	23.2	0.05%
		Heating	9.1	0.02%
		SCOPE 2 (MARKET-BASED)	**9.1**	0.02%
Scope 3 - upstream	**1 - Purchased goods and services**	Heatpumps	11,666.9	26.60%
		Office supplies	0.2	0.00%
		Food	0.3	0.00%
		Furniture	0.5	0.00%
	3 - Fuel and energy related activities (Market-based)	Fuel and energy-related emissions	3.7	0.01%
	4 - Upstream transportation and distribution	Upstream Transportation	372.0	0.85%
	5 - Waste generated in operations	Waste	34.0	0.08%
Scope 3 - downstream	**9 - Downstream transportation and distribution**	Downstream transportation	113.1	0.26%
	11 - Use of sold products	Use of sold products	31,044.9	70.78%
	12 - End of life	End of life treatment of sold products	615.5	1.40%
		SCOPE 3	**43,851.3**	99.98%
		TOTAL CARBON FOOTPRINT (t CO2eq/year) Market-based	**43,860**	**100%**

ANNEX 5 – SFDR REPORTING DATA FOR BESTAIR GROUP, 2023

Data Point	Amount	Unit	% Share Electricity Consumption
Renewable energy consumption	49,853	kWh	100%
Non-renewable energy consumption	0	kWh	0%
Wasted generated (non-hazardous):			
• Packaging paper	93	tonnes	N/A
• Wood	4.7	tonnes	N/A
• Plastic	20.8	tonnes	N/A
• Electric and electronic equipment	3.4	tonnes	N/A
Water consumption	N/A – no data on water consumption collected for the footprint		

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