Climate Report 2023

AHRÉNS ÅKERI AB

EXECUTIVE SUMMARY

This report covers the carbon footprint of **AHRÉNS ÅKERI AB** for 2023. During this period, greenhouse gas emissions from the company's reported operations amounted to **5094.8** tonnes CO2e.

This corresponds to a reduction of **14.2%** compared to the same activities during 2022.

FUEL	**72.0%**	COMMUTING	**1.3%**
VEHICLES	**26.4%**	FACILITIES	**0.2%**

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Content

1. Introduction

Future-proofing the business requires knowing where to start. With a heating planet & increasing demands, companies need to double down on climate action. Measuring the carbon footprint is essential in doing so.

AHRÉNS ÅKERI AB is a Swedish transport and logistics company delivering goods on roads all across Europe. Its business offer includes the full distribution chain from storage to freight.

Being part of the carbon-intensive transport sector, the company has both a huge responsibility - and a great opportunity - to contribute to the international climate goals set out by the Paris Agreement. That is, keeping global warming below 1.5 degrees.

This report tells the story about how Ahréns Åkeri AB impacted the climate during 2023, and what can be done to lower the emissions.

2. Purpose

A climate report is intended to summarize a company's impact. It maps out where emissions come from, analyzes how they have changed over time, and identifies strategic actions to take.

AHRÉNS ÅKERI AB has calculated emissions of greenhouse gases (GHGs) since 2006. This is the second report created in collaboration with GoClimate. It follows a year of advancements in the company's ongoing decarbonization efforts.

The aim of this report is twofold:

1. To track and trace the climate impact of all reported operations of Ahréns Åkeri AB during 2023.
2. To serve as a basis for external reporting and facilitate smart decision-making on how to lower emissions.

3. Carbon footprint

Understanding how company activities are impacting the climate is key to identifying hotspots and prioritized areas. This chapter deals with the operations of Ahréns Åkeri AB and its associated GHG emissions.

ALL CALCULATIONS in this report are carried out following the Greenhouse Gas Protocol. This is the most widely used standard for companies accounting and reporting their carbon footprint.

Emissions are here quantified as tonnes of **CO2e** (carbon dioxide equivalents). This unit merges different greenhouse gases while taking into account their specific global warming effects.

In the following pages, the climate impact of Ahréns Åkeri AB is outlined in relation to the company's activities. This makes it clear where emissions occur and highlights effective focus areas for further mitigation efforts.

Standardized external reporting is available in its entirety at the final section of the report.

3.1 OVERVIEW

Ahréns Åkeri AB has reported emissions associated with the following business activities for 2023:

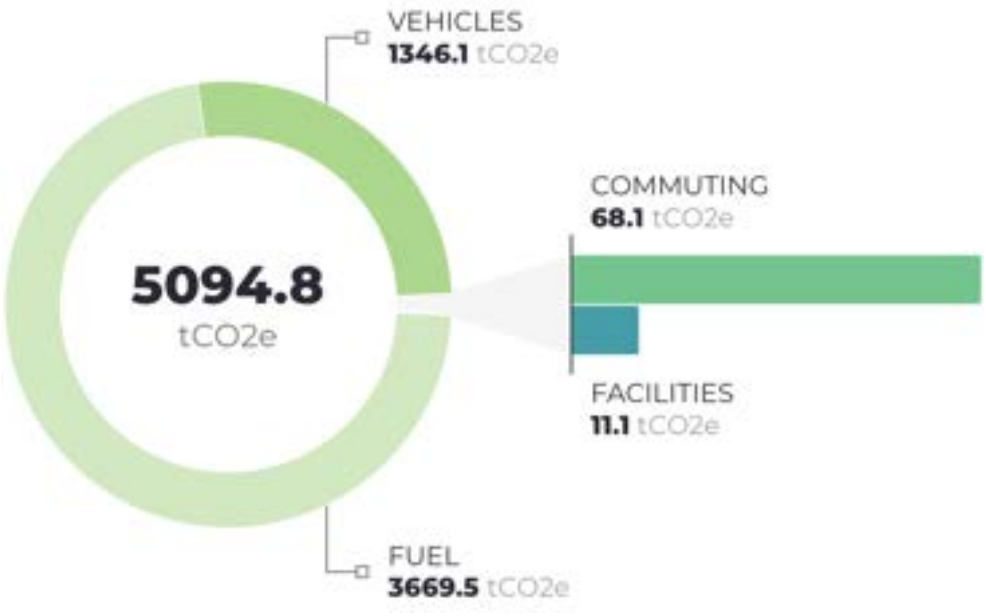
Fuel
Production and combustion of fuels used in the truck fleet.

Vehicles NEW FOR 2023
Manufacturing of purchased vehicles and cargo containers.

Commuting
Daily employee trips back and forth to work.

Facilities PARTIALLY NEW FOR 2023
Purchased electricity used in the company's warehouse. Now also including waste generated in operations.

Total emissions from reported activities are distributed as follows:



Given the carbon footprint dispersion outlined above, Ahréns Åkeri AB has a clear trajectory in terms of mitigating impact:

Prioritize effectively

It is important that efforts are targeting areas with the highest reduction potential. This includes focusing on the largest sources and identifying key actions. Activities related to fuel and vehicles are pivotal in the decarbonization strategy of Ahréns Åkeri AB.

All-inclusive reporting

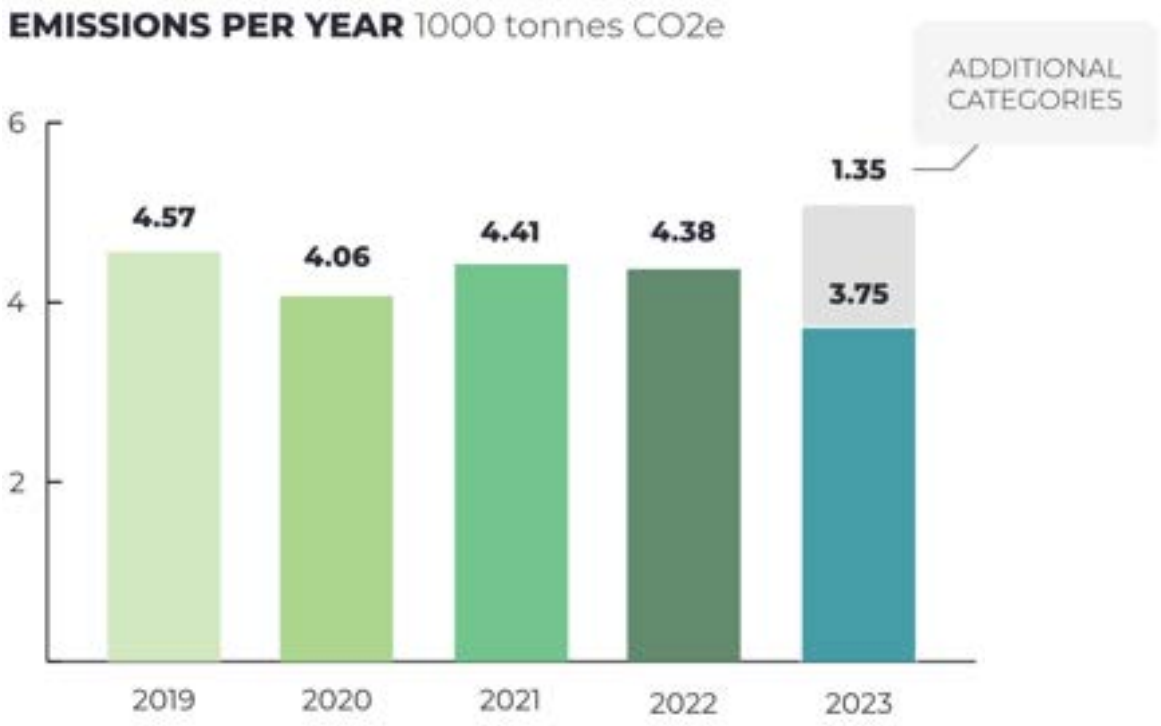
Including more categories, most notably manufacturing of purchased vehicles, is a major step forward. Other activities are likely applicable for comprehensive reporting. During 2024 the company should seek to cover all relevant emission sources.

3.2 PERFORMANCE

Tracking how the carbon footprint changes over time is integral to making informed decisions. Knowing the past trend means awareness about where things are headed. This section compares emissions across years.

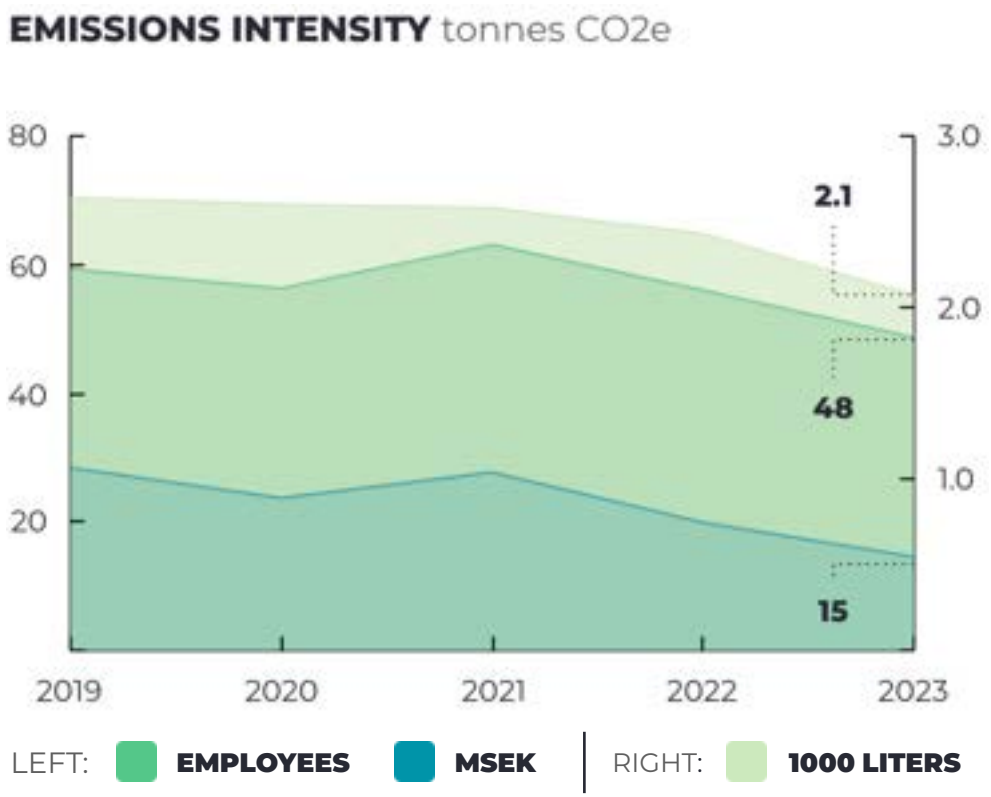
During 2023, Ahréns Åkeri AB lowered its climate impact by about 14.2% (-618.8 tonnes CO2e). This compared to the same emission sources reported for previous years.

Emissions from manufacturing of purchased vehicles and waste generated in operations make up an additional 1347 tonnes CO2e.



Cutting down on overall climate impact is crucial. But following up yearly performance in relation to relevant intensities can often be insightful. It links the company's carbon footprint to its growth.

Emissions per employee (FTEs), per MSEK revenue and per 1000 liters of fuel lends a more nuanced picture. It connects the carbon footprint to the organic growth of the company. As such, it becomes more relatable to the operations of Ahréns Åkeri AB.



As can be seen, all three indicators show a clear downward trend over the years, albeit a modest spike in 2021. Notably, emissions per 1000 liters show a somewhat steeper decline.

Taken together, the consistent reduction indicates a positive signal, illustrating a lower climate impact for Ahréns Åkeri AB.

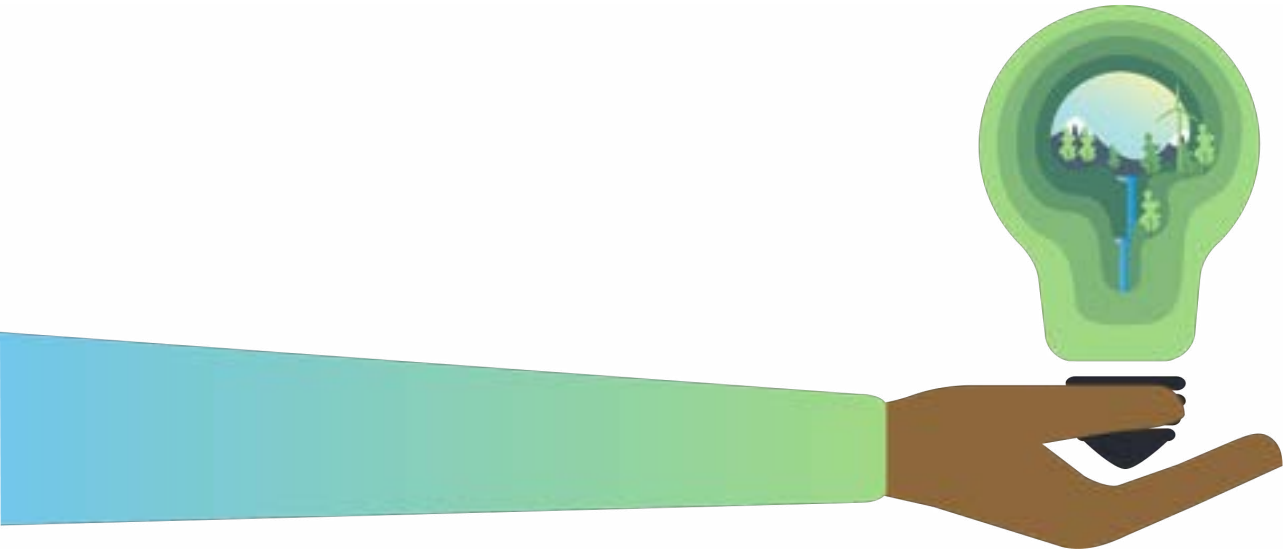
Climate performance indicators are based on the following input:

Intensity	2019	2020	2021	2022	2023
FTEs	77	72	70	78	77
MSEK	160.8	171.0	159.5	219.6	257,6
1000 liters	1709.3	1539.7	1676.7	1765.1	1771.7

Based on the overall performance result, along with the indicators, the following conclusions can be made:

Continued reductions
Greenhouse gas emissions have undoubtedly decreased in both absolute and relative terms. This only pertains to the same activities reported for previous years, but shows that Ahréns Åkeri AB is on a successful decarbonization journey.

Business growth
The fact that the three climate performance indicators are declining or even starting to level off suggests a stabilization between emissions and growth. As such, more business does not necessarily equal a higher carbon footprint.



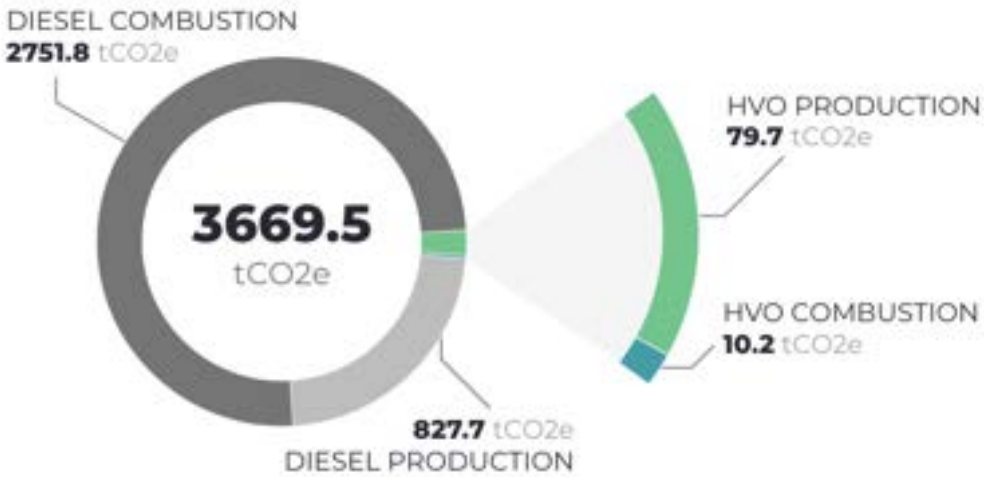
3.3 FUEL

Fuel used in company vehicles covers **72.0%** (**3669.5** tonnes CO2e) of the total carbon footprint of Ahréns Åkeri AB. Most reduction efforts should target this category.

Greenhouse gas emissions from fuel arise both indirectly in the upstream production phase and directly during combustion.

For 2023, the fuel-related climate impact of Ahréns Åkeri AB amounts to 3669.5 tonnes CO2e. This is a decrease of 14.6% compared to the previous year, which corresponds to a reduction of 628.4 tonnes CO2e.

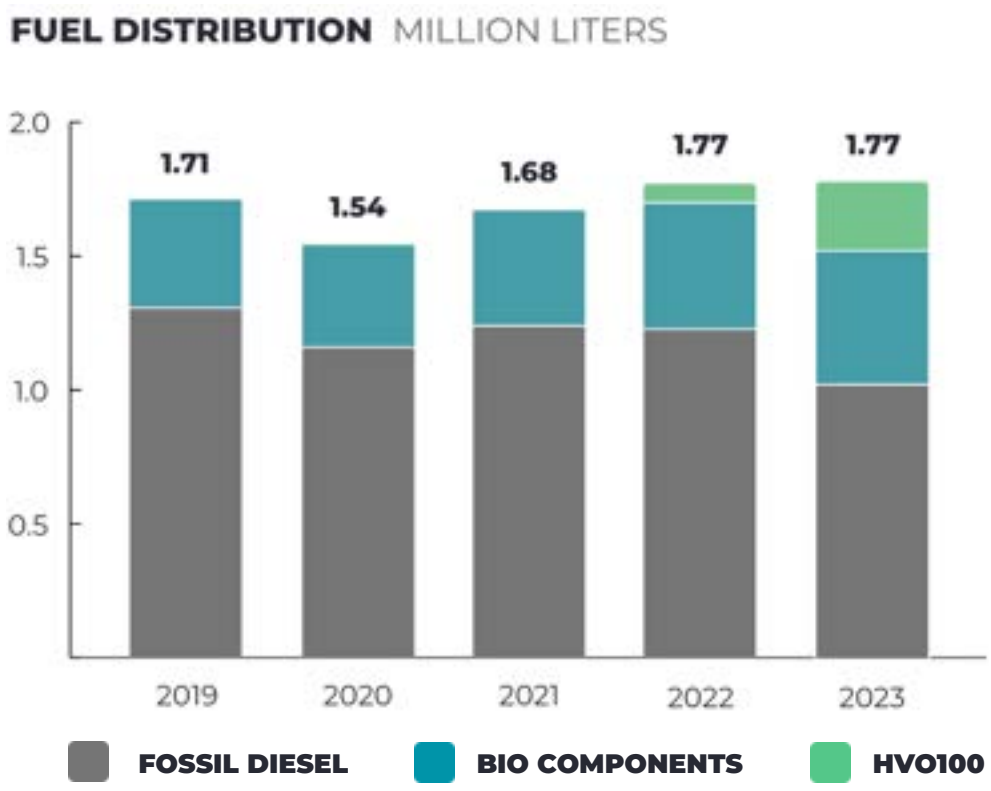
Two types of fuel have been reported - diesel and HVO100. Their respective carbon footprint is here broken down per phase:



It is apparent that diesel covers the bulk of fuel-related emissions. However, the share of HVO has increased nearly threefold since 2022 and now makes up 14.2% of total liter consumption.

While this marks a large step in the right direction, it is clear that more needs to be done throughout 2024. Particularly so since the mix-in of bio components, as part of the Swedish fuel reduction mandate, is set to decrease from 30.5% in 2023 to 6% in 2024.

In other words, much of the teal part in the bar chart below will be replaced by the dark gray (representing 100% mineral diesel). This will heavily increase the fuel-related climate impact. Mitigating efforts during 2024 should therefore aim to counter this setback.



Given the result presented above for fuel-related emissions, the following analysis points can be highlighted:

Switching to biofuel

Sustaining the positive trend with a higher proportion of HVO out of total fuel consumption is key to reducing fuel emissions in the near term. If all standard diesel had been replaced with HVO, total fuel emissions would shrink by **3037** tonnes CO2e (-83%). It should be noted that while biofuels don't emit fossil CO2, they still give rise to so-called biogenic emissions. This is not included in the total result, but still has a negative climate impact.

Widening the offer

One way of dealing with the higher share of mineral diesel in the Swedish mix is to offer an intermediate alternative between diesel and HVO. Most suppliers offer diesel blends with a higher share of bio components, often 50% or more. If the reduction mandate had been 6% for 2023, and all standard diesel had been replaced with this alternative, emissions linked to diesel would decrease by an estimated **1415** tonnes CO2e.

Alternatives to combustion

While biofuels like HVO are part of the solution, they still contribute to a high climate impact. Especially so if one considers short-term effects of biogenic CO2-emissions. In the long run, a gradual electrification of the truck fleet is essential. A ballpark estimation is that fuel emissions could be up to **3548** tonnes CO2e lower (assuming 100% renewable electricity).

3.4 VEHICLES

Emissions from manufacturing of purchased vehicles amounts to **1346.1** tonnes CO2e, which corresponds to **26.4%** of the total climate impact.

From extraction of raw materials to assembly of finished products, vehicle manufacturing is associated with high emissions. Starting in 2023, Ahréns Åkeri AB has incorporated the impact from all procured vehicles into the greenhouse gas inventory.

This category includes various types of vehicles, divided as follows:

TRUCKS	35.9%
TRAILERS	35.2%
DIESEL VANS	8.3%
ELECTRIC VANS	6.4%
SWAP BODIES	5.3%
FORKLIFTS	4.5%
DOLLIES	2.0%
PALLET STACKERS	1.7%
DRY BOXES	0.7%

It is commendable that Ahréns Åkeri AB has opted to include emissions from vehicle manufacturing. This leads to a more comprehensive carbon footprint and increases transparency.

To lower the climate impact from this category, the following recommendations may offer contributions:

Promoting recycled materials
Incorporating the climate aspect in the vehicle procurement process is key. This can come in the form of demands on recycled materials and actively choosing suppliers that can offer this. Depending on material composition and vehicle type, this can lower the impact by roughly **15-75%**.

Supplier engagement
Requesting environmental product declarations for specific vehicles from suppliers promotes more precise calculations. This is another key initiative for Ahréns Åkeri AB that engages suppliers to offer vehicles with a lower carbon footprint.

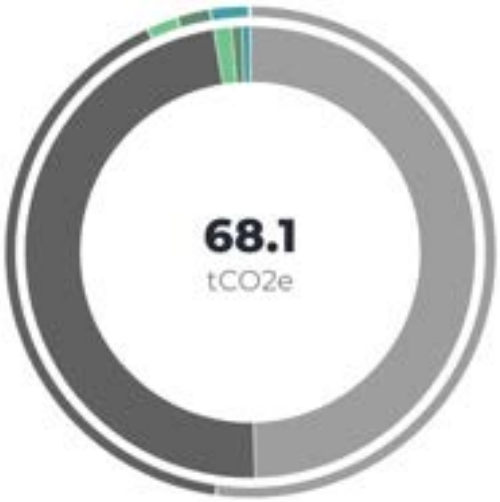
Long-term synergies
Focusing on reducing vehicle manufacturing emissions is crucial. However, in some cases, high initial impacts can result in reduced emissions in other categories. One notable example is electric vehicles, with initially higher emissions due to battery production, but leading to a significantly decreased fuel use.

3.5 COMMUTING

Daily employee trips between work and home results in **68.1** tonnes CO2e. This is equal to about **1.3%** of the total GHG emissions associated with Ahréns Åkeri AB.

Employees are part of the value chain for Ahréns Åkeri AB. They need to reach the company's facilities to keep operations going. That's why emissions stemming from their commuting are included in the GHG inventory.

Since 2022, emissions from this category have increased by 7.4 tonnes CO2e. For 2023, distance traveled (thin circle) and climate impact (thicker circle) for each transport mode are distributed as:



CATEGORY	tCO2e
DIESEL CAR	49.7%
GASOLINE CAR	47.8%
MOTORCYCLE	1.3%
HYBRID VEHICLES	0.7%
BUS	0.6%
ELECTRIC VEHICLES	<0.1%

Analyzing the two charts on the previous page together confirms that diesel and gasoline cars make up the vast majority of both emissions and distance traveled. This shows largely the same pattern as for 2022.

Diesel is somewhat more effective than gasoline, and is associated with lower climate impact. However, due to the reduced mix-in of biofuel during 2024, this suggests that the diesel-related emissions from employee commuting is likely to increase.

Personal vehicles remain the favored mode of transportation, regardless of fuel type. Although commuting by bus ranks third in terms of total distance traveled.

To make it easier for employees to go for commuting options with a lower climate impact, the following actions may be suitable:

Promoting non-transportation

As a baseline, Ahréns Åkeri AB should make sure that the company facility hosts bicycle storage with a service station, along with showers and locker rooms. If only 5% of the staff (about 4 employees) used bikes instead of any other vehicle type, emissions would drop with roughly **3** tonnes CO2e.

Fast charging for EVs

To encourage the adoption of electric vehicles, the company could install charging stations available to the workforce. This would allow employees to conveniently charge their electric vehicles. Each fossil car user that starts using an electric vehicle instead will lower emissions by nearly **99%**.

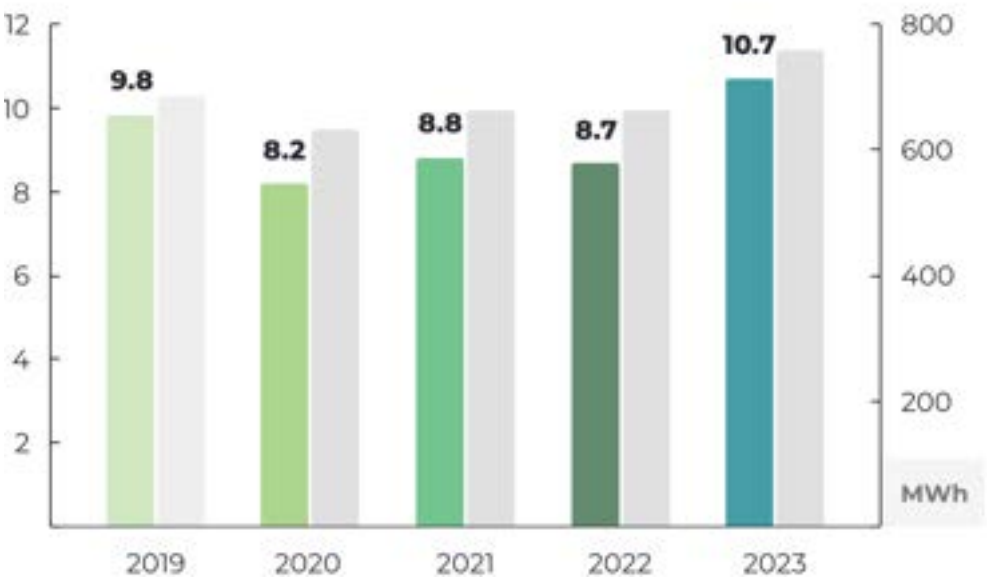
3.6 FACILITIES

Emissions related to company facilities amount to **11.1** tonnes CO2e. This is barely **0.2%** of the total carbon footprint during 2023.

Facilities mainly cover the climate impact of purchased electricity used in the company's warehouse. For 2023, Ahréns Åkeri AB is also reporting emissions related to waste disposal.

During 2023, energy-related emissions increased by 2 tonnes CO2e. As the graph below shows, this is tied to a higher electricity consumption. Including the impact of waste treatment led to an additional 0.4 tonnes CO2e.

PURCHASED ELECTRICITY tonnes CO2e



The additional energy consumption for 2023 is largely explained by colder temperatures, which made it necessary to increase heating in the company's facilities.

Since Ahréns Åkeri AB purchases electricity from 100% renewable sources, the total energy-related climate impact is still very low in comparison to other activities. Emissions arise only from an upstream life cycle perspective. Moreover, some energy is lost during transmission over the grid, which is also accounted for.

As for waste, the activities covered are for transportation of the waste to recycling facilities, while a miniscule amount is for landfill.

The following remarks are applicable to all emissions from facilities:

100% renewable electricity
Keeping the current electricity contract is essential to maintain a low impact from facilities. If no renewables had been used, emissions would increase to **440** tonnes CO2e. Compared to the average energy mix on the Nordic grid, emissions are nearly **50** tonnes CO2e lower.

Expanding the scope
While the addition of waste is insignificant in relation to the overall emissions, it is important to keep adding more activities. Transparent reporting and making sure to cover the full climate impact of the company is key to reducing emissions.

4. Climate strategy

Having outlined the carbon footprint, it is now time to do something about it. This chapter follows up the climate targets of Ahréns Åkeri AB and provides strategic recommendations.

AHRÉNS ÅKERI AB has lowered comparable emissions between 2022 and 2023, most notably that of fuel. The small increase attributed to electricity is largely negligible.

Having added emissions from vehicle manufacturing makes the overall footprint more comprehensive. It will be important to include this impact in the climate strategy moving forward.

This part of the report will start out with a follow up on the climate target set between 2022-2030 and consider a prognosis for 2024.

After that, the action points identified for each emission-causing activity in the carbon footprint will be summed up to reveal reduction potentials.

Taken together, this maps out the basis for the ongoing climate journey of Ahréns Åkeri AB.

4.1 TARGETS

Ahréns Åkeri AB has committed to reducing all direct emissions from purchased fuel by **42%** between 2022 and 2030.

During 2023, the company applied to Science Based Targets (SBTi) with the commitment to lower the direct fuel-related emissions. That is, moving from 3334.8 to 1934.2 tonnes CO2e in 8 years.

The substantial decrease in fuel emissions in 2023 surpassed the target by 398 tonnes CO2e (-17.2% instead of -5.3%) as demonstrated below:

THE REDUCTION TARGET encompasses emissions from combustion reported under Fuel. Under the Greenhouse Gas Protocol classification, this corresponds to Scope 1.

Since Ahréns Åkeri AB follows the market-based approach, and already has 100% renewable energy, the Scope 2 emissions are reported as zero and exempt from the target. All energy-related emissions within Facilities are instead part of Scope 3.

Reaching a 42% lower carbon footprint by the end of 2030 equals an annual linear reduction rate of about 5.3%. This is in line with the 1.5 degrees pathway of the Paris Agreement.

Meanwhile, Ahréns Åkeri AB is committed to calculating and reporting other relevant Scope 3 categories in the GHG inventory. This is also evident with the inclusion of vehicle manufacturing (capital goods) and waste.

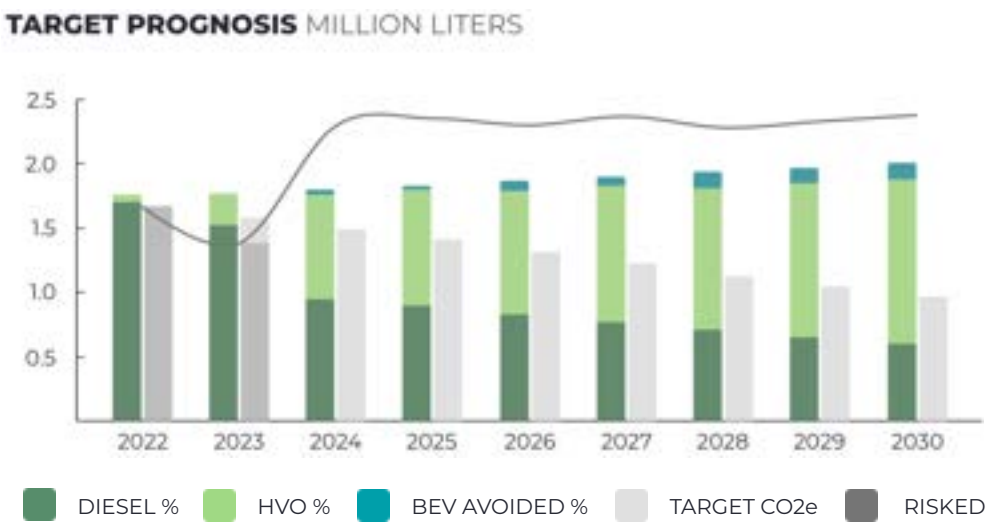
4.2 ACTION PLAN

Achieving the target requires effective management. It revolves around strategic shifts that enable the business to continue while continuously lowering its impact.

Decarbonization of the truck fleet is the long-term transition strategy of Ahréns Åkeri AB. At least until 2030, this mainly relies on significantly switching from diesel to HVO.

Meanwhile, electric vehicles (BEVs) will gradually be introduced to cover freight routes where they have capacity. This leads to avoided fuel consumption which consequently reduces emissions.

The forecast outlines the required distribution of diesel, HVO, and avoided fuel consumption from BEVs to meet the target. The line represents potential emissions without altering fuel distribution:



As the prognosis reveals, the share of HVO100 out of the total fuel consumption has to increase to about 46% during 2024 to remain in line with the target. This is a direct consequence of reduced biofuel components in the diesel mix from 2024 onwards.

This highlights the urgent need to address the issue, for example by introducing an midway alternative between standard diesel and HVO. Even though BEVs are introduced, it will not be enough as a near-term solution.

By 2030, the share of HVO will need to reach nearly 70% based on the current decided plan for the diesel reduction mandate.

About the forecast

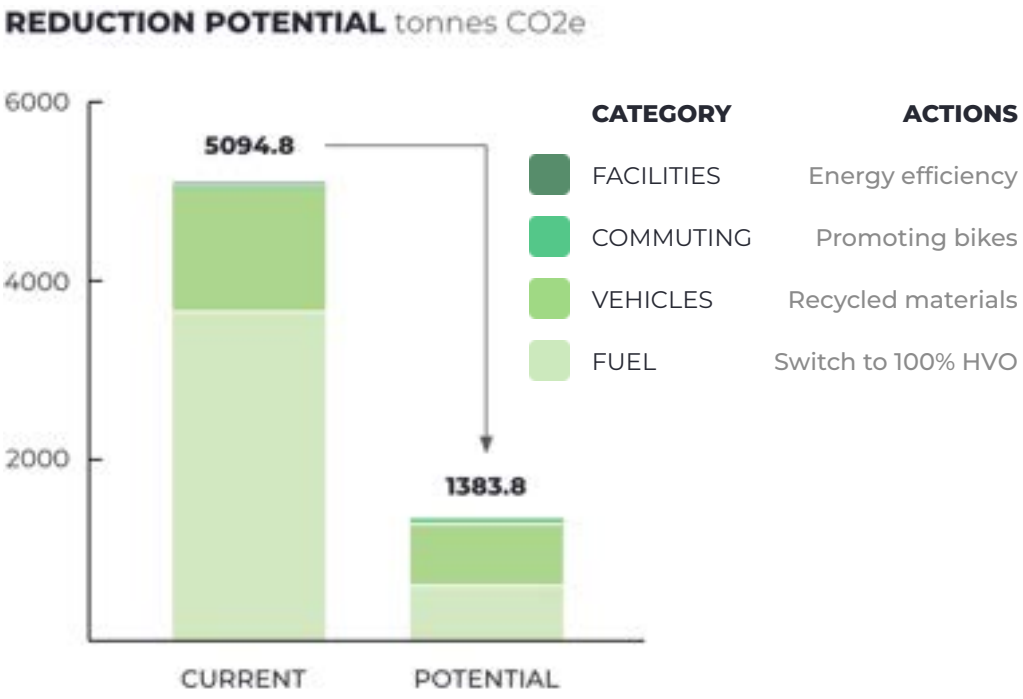
Fuel consumption is expected to increase based on a trend analysis over the last 5 years. The projected emissions are derived from the latest available data and extrapolated to account for reduced mix-in of biofuel components.

4.3 RECOMMENDATIONS

Alongside the current climate strategy and action plan, it is important to strive for continuous improvements. This section highlights meaningful efforts to take.

Based on some of the key actions identified in this report, it is possible to illustrate a potential state of where 2023 emission could have been if these actions were already implemented.

While all the actions may not be feasible at this point, it lends a clear indication of how much lower the climate impact could be.



5. Climate projects

Reducing emissions should always be the main focus. However, companies can also take responsibility for historical emissions - which can not be undone. One effective way of doing this is to finance climate projects.

CLIMATE PROJECTS contribute by reducing emissions outside the company's value chain. Supporting high quality projects that are third-party verified can therefore make a difference.

Currently, Ahréns Åkeri AB doesn't finance any projects. While it may not be feasible to cover 100% of the carbon footprint, it is suggested the company help finance at least a portion of the total.

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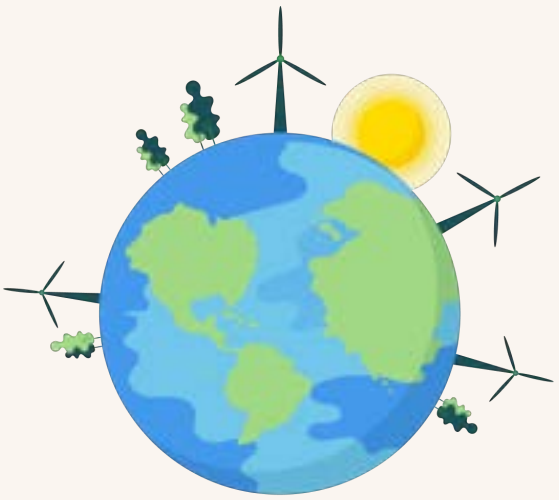

6. Calculations

Understanding and managing the climate impact is obviously the most important part. But being transparent about how calculations were made (and in what ways they can improve) is essential to credible reporting.

THE GREENHOUSE GAS PROTOCOL is the world-leading standard for companies disclosing their GHG emissions. It establishes a framework for how to consistently measure and categorize the carbon footprint of companies

This chapter delves into how the guidelines have been applied to measure the carbon footprint of Ahréns Åkeri AB in this report.

A note on precision

It is worth noting that the accuracy of calculations relies on the data quality provided by the reporting company. More detailed and specific information enhances precision. Beyond this, the availability of emission factors can serve as a limitation.

Taken together, this means that the calculations are as precise as the underlying data permits. As such, the result is primarily intended as an estimated overview of the company's climate impact, rather than an exact measurement.

6.1 PRINCIPLES

The Greenhouse Gas Protocol puts forward five core principles that have guided the work behind this report. Together they safeguard credible, factual and objective climate impact measurements.

Relevance
To allow for smart decision-making, included emission sources have to mirror relevant parts of the company's operations. This is ensured by in-depth communication with the responsible staff. These are the ones with the best insight into company activities.

Completeness
All applicable emission sources must be accounted for, and any exclusions need to be justified. To aid in this, continuous dialogue and standardized forms are used to identify relevant activities.

Consistency
Following up the calculations over time requires systematically applied and carefully documented methods. This report details all the work behind it to facilitate continuity and comparability.

Transparency
Credible reporting warrants clear descriptions of how the calculations have been carried out. This report explicitly lists any assumptions or limitations, and provides appropriate references.

Accuracy
To fulfill its function as a basis for decision-making, calculations must be precise enough to be credible. This means consciously avoiding under- or overestimations and using the latest available data. Thereby uncertainty is minimized to the extent possible.

6.2 BOUNDARY

In line with the Greenhouse Gas Protocol, companies need to define system boundaries. These are needed to determine what should be included in the GHG inventory.

Setting an organizational boundary is about establishing the company's extent of responsibility for emissions. In other words, it draws a line for where the carbon footprint of Ahréns Åkeri AB ends, and where others begin.

Different so-called 'consolidation approaches' can be used. Put simply, the choice depends on whether the company is a majority owner in another organization or not.

Considering that Ahréns Åkeri AB is a wholly owned company with no subsidiaries of its own, the latter (an '**operational control approach**') was deemed applicable.

This means that the company can take full ownership of all emissions that they can directly influence and reduce.

6.3 SCOPES

Within the Greenhouse Gas Protocol, emissions are divided into three different scopes. These demarcate what is the company's direct and indirect climate impact. This section summarizes included emission-causing activities.

So far the report has categorized the carbon footprint of Ahréns Åkeri AB based on its actual activities. But for external reporting it is important to use the classification of the GHG Protocol:

Scope 1
Direct emissions from mobile or stationary assets used by the company are reported in Scope 1. For Ahréns Åkeri AB, it revolves around emissions from fuel combustion in the truck fleet.

Scope 2
Energy purchased by the company indirectly causes emissions while being generated, which is disclosed in Scope 2. Ahréns Åkeri AB reports emissions from purchased electricity.

Scope 3
All other types of indirect emissions arising throughout the company's value chain are attributed to Scope 3. Up to 15 different categories can be reported here.

The following table presents all Scope 3 categories and a screening of their relevance to the activities of Ahréns Åkeri AB:

CATEGORY	ASSESSMENT
PURCHASED GOODS & SERVICES	Not included, probably applicable.
CAPITAL GOODS	Not included, probably applicable.
FUEL- & ENERGY PRODUCTION	Included.
UPSTREAM FREIGHT	Not included, may be applicable.
WASTE TREATMENT	Not included, probably applicable..
BUSINESS TRAVEL	Not included, may be applicable..
COMMUTING	Included.
UPSTREAM LEASED ASSETS	Not included, may be applicable..
DOWNSTREAM FREIGHT	Not applicable.
PROCESSING OF SOLD PRODUCTS	Not applicable.
USE OF SOLD PRODUCTS	Not applicable.
DISPOSAL OF SOLD PRODUCTS	Not applicable.
DOWNSTREAM LEASED ASSETS	Not applicable.
FRANCHISES	Not applicable.
INVESTMENTS	Not included, likely not applicable.

6.4 METHOD

It is important to strive for continuous improvement in the calculations. This section outlines the course of action for calculating the carbon footprint of Ahréns Åkeri AB.

In what follows, the approaches used for data collection and calculations are described in detail for each reported activity. Every category includes information about:

- Activity data
- Emission factors
- Changes or updates in method
- Assumptions and exclusions
- Improvement suggestions

This information is first and foremost intended for accuracy and to show the validity of the presented results. For the reporting company, recommendations on how to improve data quality is always important to review.

FUEL covers the emissions from fuel combustion (Scope 1) and production (Scope 3, category 3).

Activity data
Calculations follow the fuel-based method. Ahréns Åkeri AB gathered activity data from its supplier for fuel purchased throughout the year.

Emission factors
Two fuels were reported: diesel and HVO. Average emission factors for the Swedish market were used for each fuel type.

Updates
The HVO from the supplier had up to 5% mix-in of diesel during 2022, but has since been increased to HVO100.

Transparency
The supplier provides total fuel (well-to-wheel) emissions from their specific fuel products, which are reported as slightly lower than the Swedish average. No distinction could however be made between combustion and production. Therefore, the average was deemed as a better option.

Improvements
Asking the fuel supplier to provide a breakdown for well-to-tank and tank-to-wheel emissions for the specific fuel products could improve the accuracy of calculations.

VEHICLES is related to all upstream (cradle-to-gate) emissions associated with manufacturing of purchased vehicles. They are categorized as capital goods (Scope 3, category 2).

Activity data
Calculations adhere to the average-product method. Ahréns Åkeri AB provided specifications for each included vehicle. Where applicable, an allocation of specific material weights were determined, derived from industry average data.

Emission factors
All material weights were computed based on secondary data representative of average emissions per unit of mass.

Updates
New category, not reported in previous years.

Transparency
Approximating distribution of material weight adds uncertainty to the calculations. Likewise, employing average emission factors may also contribute to over- or underestimation.

Improvements
Wherever possible, Ahréns Åkeri AB should request product-specific life-cycle assessments from suppliers. Otherwise, obtaining more precise technical data from suppliers would help reduce uncertainty for weight allocation.

COMMUTING concerns daily employee trips back and forth to the workplace and is reported under Scope 3, category 7.

Activity data
Calculations follow the distance-based method. GoClimate provided Ahréns Åkeri AB with an online survey where data on commuting patterns were collected. From the answers the total distance (passenger-kilometers) per mode of transport was derived. To account for non-respondents, an extrapolation was carried out (45 answers, 77 employees).

Emission factors
National or regional average emission factors were applied for each type of vehicle or fuel. Electric vehicles rely on the location-based method (average energy mix on the Nordic grid). All emission factors encompass the full well-to-wheel lifecycle.

Updates
No updates in methodology.

Transparency
Extrapolating adds the assumption that non-respondents follow the same commuting patterns as the respondents. This maintains uncertainty, but is likely closer to the truth than the alternative of not extrapolating.

Improvements
Increasing the number of respondents would reduce the margin of error from extrapolating.

FACILITIES are connected to production of purchased energy (Scope 2 and Scope 3, category 3) and waste generated by the company (Scope 3, category 5).

Activity data
Ahréns Åkeri AB reports total electricity consumption. For waste, total weight and distance to recycling facilities were reported.

Emission factors
Electricity has a dual reporting. Under the market-based approach a supplier-specific emission factor was used. The location-based method is based on climate impact from the average energy mix on the Nordic grid and takes into account transmission and distribution losses. Waste covering collection and transportation follows the distance-based method. For landfill, the average-data method was employed.

Updates
A supplier-specific emission factor was introduced for 2023. This does not differ significantly from the average emission factor previously utilized. Waste is new for 2023.

Transparency
No reports on fuel type from waste disposal companies. Average diesel mix was therefore assumed. Waste-related emissions are therefore likely slightly overestimated.

Improvements
Ahréns Åkeri AB should seek to report electricity consumption from BEVs separately once they are introduced to the truck fleet. For waste, it is advisable to request more specific data on fuel type to better estimate transport-related emissions.

6.5 METRICS

Climate impact is measured using the unit of carbon dioxide equivalents (CO2e). Different greenhouse gases are combined in one single metric based on their global warming potential (GWP).

The Intergovernmental Panel on Climate Change (IPCC) continuously puts forward updated GWPs based on new research. These are reported in every new Assessment Report (AR).

The table below summarizes the GWP according to three most common GHGs (and the only ones relevant for this report):

GREENHOUSE GAS	AR5	AR4
Carbon dioxide (CO2)	1	1
Methane (CO4)	28	25
Nitrous oxide (N2O)	265	298

All emissions in this report are based on AR5 (2014).

6.6 REFERENCES

All sources used in calculations are provided below:

CATEGORY	SOURCE
FUEL	Energimyndigheten 2023, DEFRA 2023[1], Naturvårdsverket 2023
VEHICLES	ICCT 2023[2], DEFRA 2023, Boverket 2023, Green NCAP 2024
COMMUTING	Energimyndigheten 2023, Trafikverket 2023, Naturvårdsverket 2023
FACILITIES	Telge Energi 2023, DEFRA 2023

[1] UK Department for Environment, Food & Rural Affairs
[2] The International Council on Clean Transportation

7. Disclosure

For external reporting purposes, this final chapter presents the division of emissions according to included standards.

AHRÉNS ÅKERI AB currently discloses its climate-related impact according to the standards: (1) the Greenhouse Gas Protocol; and (2) the Global Reporting Initiative (GRI).

As such, the reporting is also compatible with the new European Sustainability Reporting Standards (ESRS).

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7.1 GREENHOUSE GAS PROTOCOL

Ahréns Åkeri AB reports emissions according to the GHG Protocol as follows:

Emission source (tCO2e)	**2023**	**2022**	**2021**
Scope 1			
Direct emissions from own operations	2 762.0	3 334.8	3 397.3
Scope 2			
Indirect emissions from purchased energy	0	0	0
Scope 3			
Övriga indirekta utsläpp i värdekedjan[3]	2 332.8	1 032.4	1 016.6
Total (market-based)	**5 094.8**	**4 367.2**	**4 414.1**
Total (location-based)[4]	5 111.2	4 390.5	5 400.5
Total (biogenic emissions)[5]	1 817.7	1 504.5	1 329.8

[3] Addition of Capital goods and Waste generated in operations for 2023.
[4] Average Nordic grid mix accounting for import and export.
[5] Biogenic CO2 emissions from Scope 1 and 2 activities.

Emissions for 2023 are here broken down per activity. Numbers may not add up exactly due to round-off errors.

Scope 1	Consumption	Unit	tCO2e	Share
Mobile combustion			**2 762.0**	**54.2%**
Diesel	1 519 740	liter	2 751.8	54.0%
HVO100	251 913	liter	10,2	0.2%

Scope 2	Consumption	Unit	tCO2e	Share
Electricity			**0.0**	**0.0%**
Renewable electricity	760	MWh	0.0	0.0%

Scope 3	Consumption	Unit	tCO2e	Share
2. Capital goods			**1 346.1**	**26.4%**
Vehicles	33	vehicles	1 346.1	26.4%
3. Fuel & energy production			**9 18.1**	**18.0%**
Diesel	1 519 740	liter	8 27.7	16.3%
HVO100	251 913	liter	79.7	1.6%
Renewable electricity	769	MWh	10.7	0.2%
5. Waste			**0.4**	**<0,1 %**
Waste collection	3 564	tonne-km	0.4	<0,1%
Landfill	0.1	tonnes	<0.1	<0.0%
7. Commuting			**68.1**	**1.3%**
Public transport	10 666	passenger-km	0.4	<0.1%
Private vehicles	411 193	passenger-km	67.7	1.3%
TOTAL				100 %

7.2 GLOBAL REPORTING INITIATIVE

The table below shows emission-related items according to the sustainability guidelines of the Global Reporting Initiative (GRI).

GRI 302-1	Value	Unit
Direct energy consumption	**62 181**	**GJ**
a. Diesel	53 616	GJ
b. HVO	8 565	GJ
Indirect energy consumption	**2 736**	**GJ**
c. Renewable electricity	2 736	GJ

GRI 305	Value	Unit
Direct GHG emissions	**2 762.0**	**tCO2e**
GRI 305-1 (Scope 1)	2 762	tCO2e
Energy indirect GHG emissions	**0.0**	**tCO2e**
GRI 305-2 (Scope 2)	0.0	tCO2e
Other indirect GHG emissions	**2 332.8**	**tCO2e**
GRI 305-3 (Scope 3)	2 332.8	tCO2e
GHG emissions Intensity	**49**	**tCO2e**
GRI 305-4 (Emissions per employee)	49	tCO2e


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