2023 | Carbon Footprint Elettro One srl

Elettro-One Srl

Prepared in February 2025

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Executive Summary

CHAPTER 1

Executive Summary

CONTEXT

We are facing a climate emergency that threatens people and planet. The global scientific community has warned us that we are in the decade of action to address climate change in order to avoid catastrophic changes. Businesses have the opportunity to catalyse positive transformation and adopt practices that enable a more sustainable and equitable future. The first step to taking action is understanding current impacts. As such, Elettro-One Srl has used the Green Future Project Carbon tool to calculate its 2023 carbon footprint to understand impacts and to identify opportunities for Elettro-One Srl to take action on climate. This footprint reports emissions for "The whole company".

METHODOLOGY

The Greenhouse Gas Protocol was used as the carbon accounting framework to calculate carbon emissions across impact areas. The impact areas are categorised into the following scopes set out by the protocol:

SCOPE 1

Direct emissions
(e.g. natural gas, transport fuels and more)

SCOPE 2

Indirect energy-related emissions
(e.g. electricity, heat and steam or cooling)

SCOPE 3

All other indirect emissions
(e.g. business travel, procurement, staff commuting, homeworking, waste, water, and more)

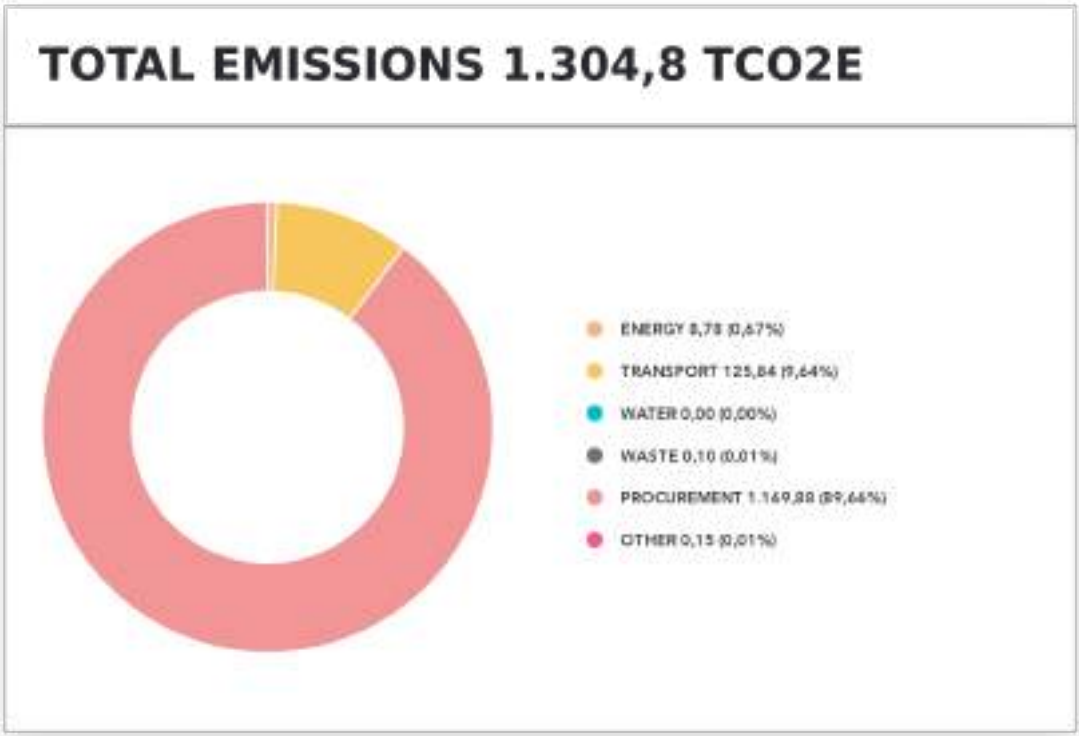
Data has been converted into Greenhouse Gas (GHG) emissions utilising the databases outlined in the Methodology chapter. By default, we use the market-based emissions method to reflect business-specific choices. See "Market-based vs. Location-based emissions" at the end of this chapter for more information.

RESULTS BY IMPACT

The total emissions in 2023 were 1.304,8 tCO2e.

Total emissions were dominated by procurement impact, which contributed **89,7% of the total footprint**. The table below shows emissions distributed across all the available impact areas for reporting. Notes on inclusions and exclusions are reported in the Methodology section.

Impact Area	Scope	Totals (tCO2e)	%
Energy	1,2	8,78	0,67
Transport	1,3	125,84	9,64
Water	3	0,00	0,00
Waste	3	0,10	0,01
Procurement	3	1.169,88	89,66
Other	3	0,15	0,01
Total		**1.304,75**	**100,00**


TOTAL EMISSIONS 1.304,8 TCO2E
ENERGY 8,78 (0,67%)
TRANSPORT 125,84 (9,64%)
WATER 0,00 (0,00%)
WASTE 0,10 (0,01%)
PROCUREMENT 1.169,88 (89,66%)
OTHER 0,15 (0,01%)

TOTAL EMISSIONS BY GROUP

ELETTRO ONE - VIA BORGONUOVO 2,76 (0,21%)

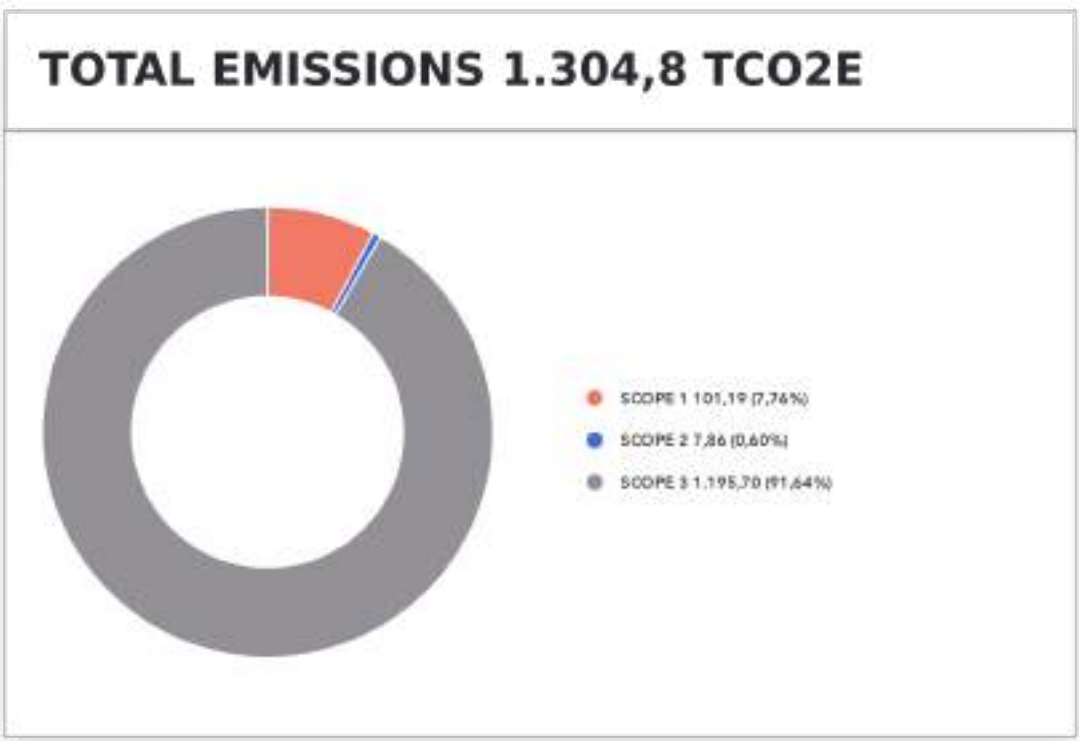
ELETTRO ONE - VIA COLLUNGO 1.301,97 (99,79%)

RESULTS BY SCOPE

The total emissions in 2023 were 1.304,8 tCO2e.

Total emissions were dominated by Scope 3, which contributed **91,6% of the total footprint**. The table below shows emissions distributed across all the available Scopes for reporting. Notes on inclusions and exclusions are reported in the Methodology section.

GHG Protocol Scope	Totals (tCO2e)	%
Scope 1	101,19	7,76
Scope 2	7,86	0,60
Scope 3	1.195,70	91,64
Total	**1.304,75**	**100,00**



EXPERT INSIGHTS

Enhance your understanding with our 'Expert Insights' add-on feature. Our carbon specialists will provide personalized guidance to help you interpret your results, identify reduction opportunities, and implement sustainability practices in your business.
To request 'Expert Insights', simply click on the 'Ask the Expert' icon located in the 'Actions' column of your carbon footprint homepage.

MARKET-BASED VS. LOCATION-BASED EMISSIONS

Greenhouse gas emissions can be measured using two methods: location-based and market-based. By default, we use market-based emissions to reflect business-specific choices.

- **Market-based Emissions:** Reflects emissions from goods or services companies purposefully chosen. It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of goods and services bundled with attributes about their specific carbon credentials. For example, by choosing cleaner energy products, such as renewable energy certificates (RECs) or power purchase agreements (PPAs), businesses can report lower emissions even if their local electricity grid relies on fossil fuels.

- **Location-based Emissions:** Reflects the average emissions intensity of the regional grid, goods, or services where consumed, highlighting the environmental impact of the local energy mix, such as coal, gas, or renewables.

If no market-based tariff data is provided for purchased electricity, we apply the **Residual Mix** factor, which adjusts emissions after excluding certificates, contracts, and supplier-specific attributes. This may sometimes make market-based emissions higher than location-based ones. If unavailable, location-based factors are used.

See the Results > Energy chapter for a focus on purchased electricity.

Understanding these methods helps organizations effectively manage and reduce their carbon footprint.

Scope	Location (tCO2e)	Market (tCO2e)	% Difference
Total emissions (Scope1, Scope2 and Scope3)	1.302,29	1.304,75	0.19%

Context

CHAPTER 2

Context

Using the Green Future Project Carbon tool, Elettro-One Srl has calculated its company carbon footprint for 2023 to understand its environmental impacts and identify opportunities for improvement.

COMPANY DESCRIPTION

Elettro One, established in 2007 and based in Trentino-Alto Adige, Italy, specializes in electrical, hydraulic, and renewable energy systems. With over 17 years of experience and a commitment to sustainability, the company offers innovative solutions for both residential and commercial clients.

REPORTING PERIOD

2023

REPORTING TYPE

Voluntary disclosure based on the Greenhouse Gas Protocol methodology.

DATA

Elettro-One Srl available data in the Green Future Project Carbon tool.

Climate change

We are facing a climate emergency. Our planet is changing as a result of our reliance on fossil fuels like oil, gas, and coal as our primary energy sources. These fossil fuels emit greenhouse gases (GHG) (most notably, carbon dioxide (CO2)) into our atmosphere and lead to warmer global temperatures. As a result we are witnessing an increase in natural disasters like droughts, flooding, and fires, all of which threaten human livelihoods. The international scientific community has warned us that we need to take significant action to halt and reverse climate change by 2030 in order to prevent catastrophic damage. In response, global initiatives including the United Nations Sustainable Development Goals and the 2015 Paris Climate Agreement aim to catalyse collaborative action to limit global warming to 1.5°C above pre-industrial levels while improving nature and social equity. With 2030 on the horizon, we are in the decade of action to tackle climate change. Companies such as Elettro-One Srl have the opportunity to be on the forefront of catalysing a transformation to sustainable and equitable economy.

Energy transition

Achieving net zero emissions is vital for combating climate change. "Net zero" means reducing greenhouse gas emissions as close to zero as possible and offsetting any remaining emissions through CO2 absorption projects. The key is decarbonising the energy sector, as most greenhouse gas emissions come from fossil fuels. Transitioning to renewable energy sources like solar, wind, and hydropower is essential, and many countries are increasing their use of renewables to reduce carbon emissions and promote sustainability.

Businesses like Elettro-One Srl can contribute to the achievement of a net zero ambition through switching to renewable energy or going on a green tariff in order to increase demand for renewable energy. This is the most effective way to reduce company GHG emissions while contributing to a wider change.

Scope 3 and green supply chains

This carbon footprint follows the GHG Protocol, the international standard for carbon accounting. The protocol categorises emissions into scopes.

Many businesses have the largest impact on Scope 3 supply chain emissions, which are beyond their direct control. Effective reductions often come from engaging with suppliers.

Very often a business's greatest impact is within its Scope 3 supply chain emissions. As these do not fall under the direct control of a business, the most effective way to make reductions is through engagement with suppliers.

For Elettro-One Srl this could include sharing this carbon footprint with suppliers to encourage them to measure their impacts, or developing sustainability criteria by which new suppliers are chosen.

Methodology

CHAPTER 3

Methodology

The Elettro-One Srl prepared its carbon footprint for 2023 using the Greenhouse Gas (GHG) Protocol, an international standard for measuring and reporting GHG emissions. This protocol was developed **over 20 years in partnership** between the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).

UNDER THE PROTOCOL,
GHG EMISSIONS ARE ORGANISED UNDER THREE SCOPES:

SCOPE 1	SCOPE 2	SCOPE 3
Direct emissions (e.g. natural gas, transport fuels and more)	Indirect energy-related emissions (e.g. electricity, heat and steam or cooling)	All other indirect emissions (e.g. business travel, procurement, staff commuting, homeworking, waste, water, and more)

UPSTREAM AND DOWNSTREAM EMISSIONS

Until recently, most companies have focused on measuring emissions from their own operations and electricity consumption. But what about all of the emissions a company is responsible for outside of its own walls — from the goods it purchases to the disposal of the products it sells? These fall within the Scope 3 category. The Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard divides Scope 3 GHG emissions into Upstream and Downstream emissions. The distinction is based on the financial transactions of the reporting company.

1. *Upstream emissions are indirect GHG emissions related to purchased or acquired goods and services.*
2. *Downstream emissions are indirect GHG emissions related to sold goods and services*

The table below reports the Scope 3 categories that Elettro-One Srl has included in this report.

Upstream and downstream	Scope 3 categories	Included
Upstream SCOPE 3 emissions	1. Purchased goods & services	✓
	2. Capital goods	✓
	3. Fuel- and energy-related activities (not included in scope 1 or scope 2)	✓
	4. Upstream transportation and distribution	
	5. Waste generated in operations	✓
	6. Business travel	
	7. Employee commuting & home working	✓
	8. Upstream leased assets	
Downstream SCOPE 3 emissions	10. Processing of sold products	
	11. Use of sold products	
	12. End-of-life treatment of sold products	
	13. Downstream leased assets	
	14. Franchises	
	15. Investments	
	9. Downstream transportation and distribution	✓

OUT OF SCOPE

The following areas **do not currently form** part of the Elettro-One Srl's reporting.
The rationale behind their exclusion is provided here:

In this report, the emissions related to the operational headquarters on Via Collungo and the store on Via Borgonuovo have been considered. The latter was taken over in April, so the associated emissions have been accounted for from that month onward. The categories excluded due to lack of data or non-applicability are: 3.4 - Inbound transportation 3.6 - Business travel From 3.8 - Upstream leased assets to 3.15 - Investments

EMISSION CONVERSION FACTORS

Input data has been converted into GHG emissions (measured as metric tonnes of carbon dioxide equivalent) using the below databases:

- UK Government, Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy.
- UK Government Department for Environment, Food & Rural Affairs and Leeds University, UK Footprint Results (1990 - 2021).
- GOV UK, SECR Environmental Reporting Guidance (2019) Annex E emission factors by spend. Pilio adjusted to UK inflation.
- Association of Issuing Bodies (AIB) 2023 (CO2 Only)

Results

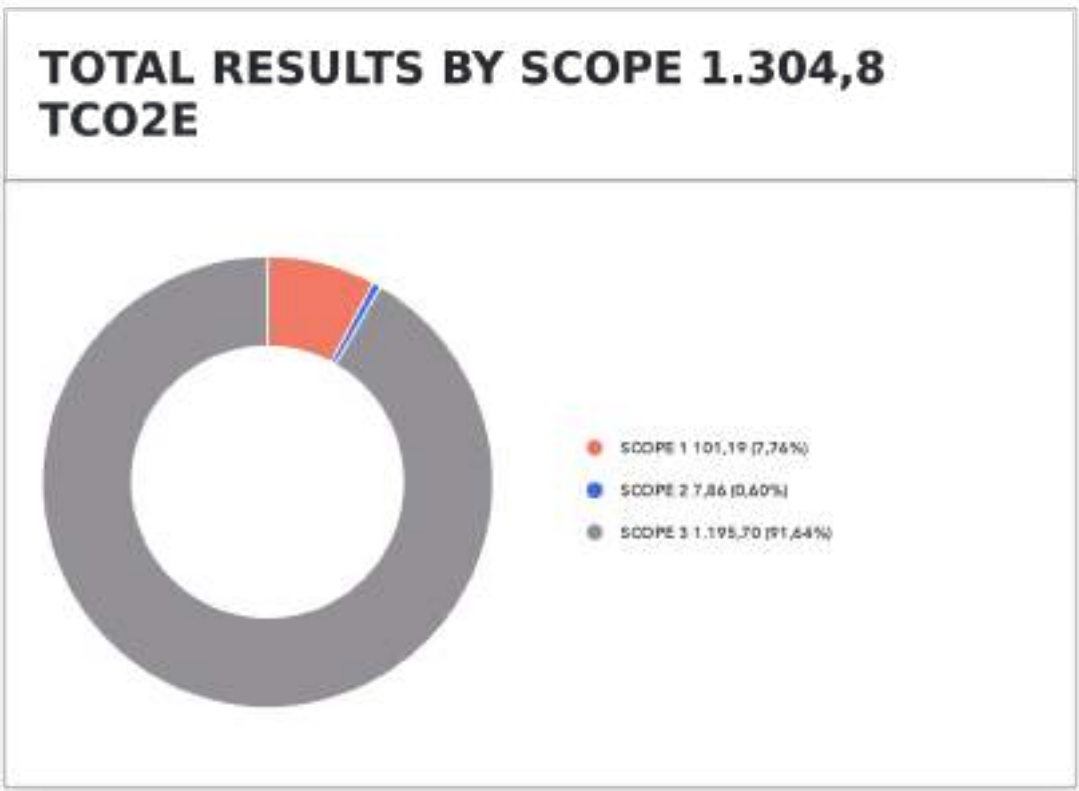
CHAPTER 4

Total results

The total emissions in 2023 were 1.304,8 tCO2e.

Total emissions by scope are shown below.

Scope	Emissions (tCO2e)	%
Scope 1	101,19	7,76
Scope 2	7,86	0,60
Scope 3	1.195,70	91,64
Total	**1.304,75**	**100,00**



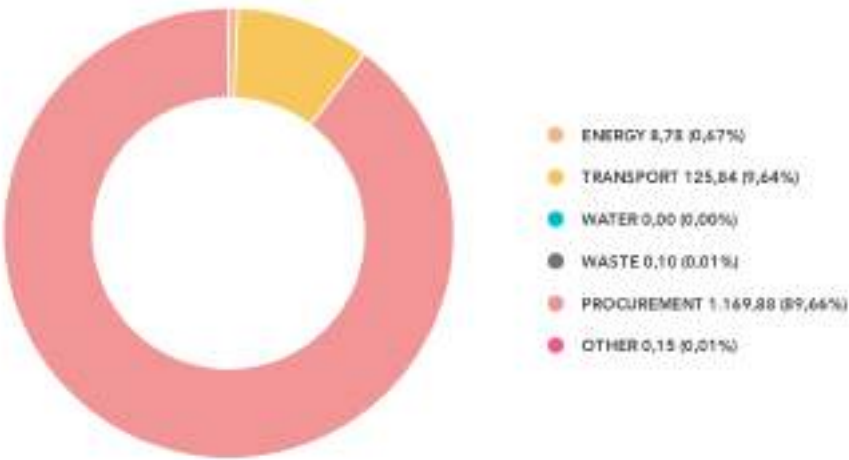
Emissions were dominated by **Scope 3**, which accounted for 91,6% of the total footprint. Scope 3 includes all other indirect emissions (e.g. business travel, procurement, staff commuting, homeworking, waste, water, and more).
Scopes Scope 1 and Scope 2 were a relatively small portion of the total footprint and are concerned with direct emissions (e.g. natural gas, transport fuels and more) and indirect energy-related emissions (e.g. electricity, heat and steam or cooling).'

Total emissions by impact area are shown below.

Impact Area	Scope	Totals (tCO2e)	%
Energy	1,2	8,78	0,67
Transport	1,3	125,84	9,64
Water	3	0,00	0,00
Waste	3	0,10	0,01
Procurement	3	1.169,88	89,66
Other	3	0,15	0,01
Total		**1.304,75**	**100,00**

Emissions are dominated by procurement which contribute **89,7% of the total**.

TOTAL RESULTS BY IMPACT AREA
1.304,8 TCO2E



Scope 3 by GHG Protocol categories

2. Capital goods accounted for the greatest impact on total Scope 3 emissions at 97.42%. This was followed by 7. Employee commuting & home working (1.77%) and 1. Purchased goods & services (0.42%).

The total emissions from Scope 3 in 2023 were 1.195,70 tCO2e.

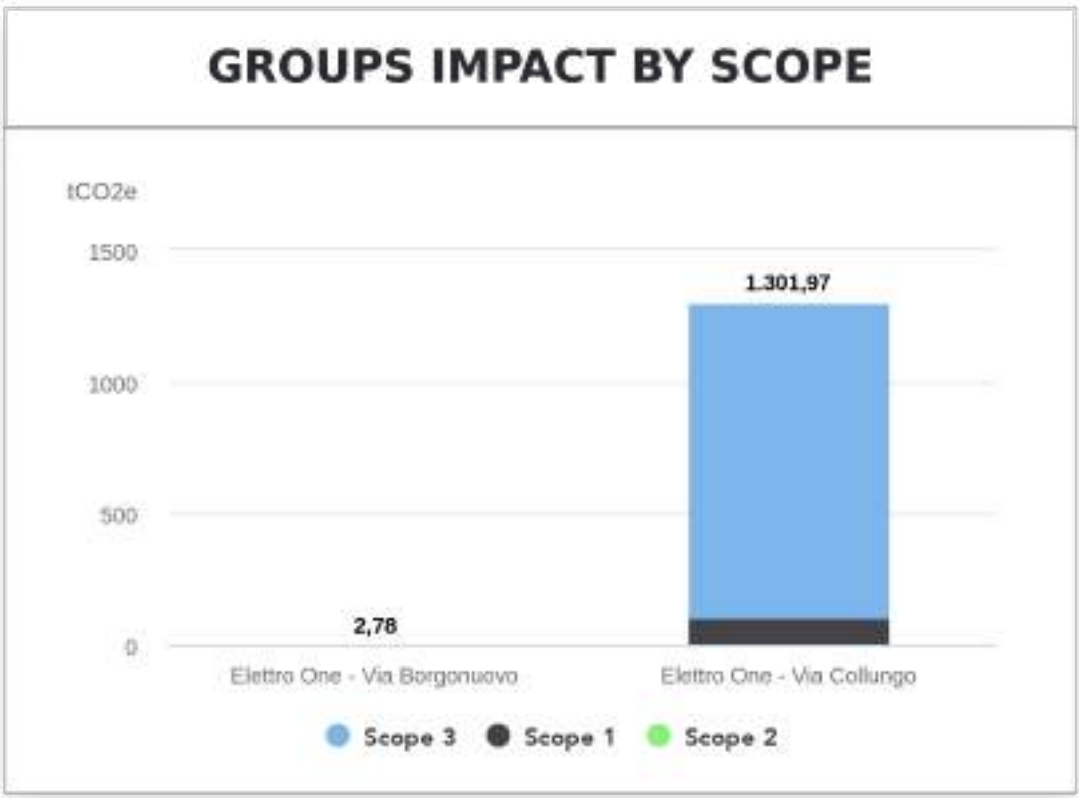
Scope 3 GHGP category	Emissions (tCO2e)	%
Unknown Scope 3 category	0,00	0,00
1. Purchased goods & services	5,08	0,42
2. Capital goods	1.164,81	97,42
3. Fuel- and energy-related activities (not included in scope 1 or scope 2)	0,15	0,01
5. Waste generated in operations	0,10	0,01
7. Employee commuting & home working	21,20	1,77
9. Downstream transportation and distribution	4,37	0,37
Total	**1.195,70**	**100,00**

TOTAL SCOPE 3 EMISSIONS 1.195,70 TCO2E

- UNKNOWN SCOPE 3 CATEGORY 0,00 (0,00%)
- 1. PURCHASED GOODS & SERVICES 5,08 (0,42%)
- 2. CAPITAL GOODS 1.164,81 (97,42%)
- 3. FUEL- AND ENERGY-RELATED ACTIVITIES (NOT INCLUDED IN SCOPE 1 OR SCOPE 2) 0,15 (0,01%)
- 5. WASTE GENERATED IN OPERATIONS 0,10 (0,01%)
- 7. EMPLOYEE COMMUTING & HOME WORKING 21,20 (1,77%)
- 9. DOWNSTREAM TRANSPORTATION AND DISTRIBUTION 4,37 (0,37%)

Total emissions group scope weight are shown below.

Group	Scope 1	Scope 2	Scope 3	Totals (tCO2e)	%
Elettro One - Via Borgonuovo	0,14	2,62	0,02	2,78	0,21
Elettro One - Via Collungo	101,05	5,24	1.195,68	1.301,97	99,79
Total	**101,19**	**7,86**	**1.195,70**	**1.304,75**	**100,00**



For more granular information please refer to the Carbon Footprint Report of each company Group.

Energy

Total emissions from energy in year 2023 were 8,8 tCO2e.

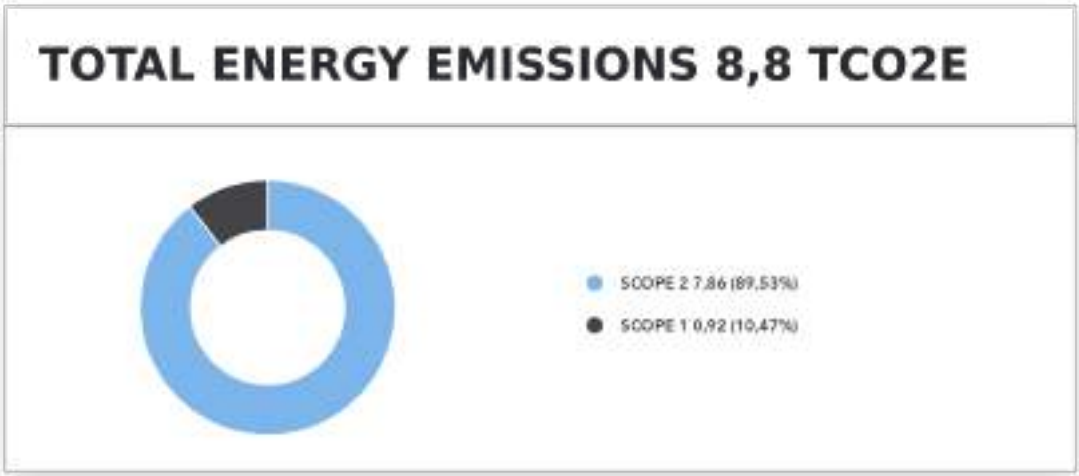
These emissions refer to GHG Protocol:

- Scope 1
- Scope 2

Emissions from energy accounted for 0,7% of Elettro-One Srl's total carbon footprint.

RESULTS

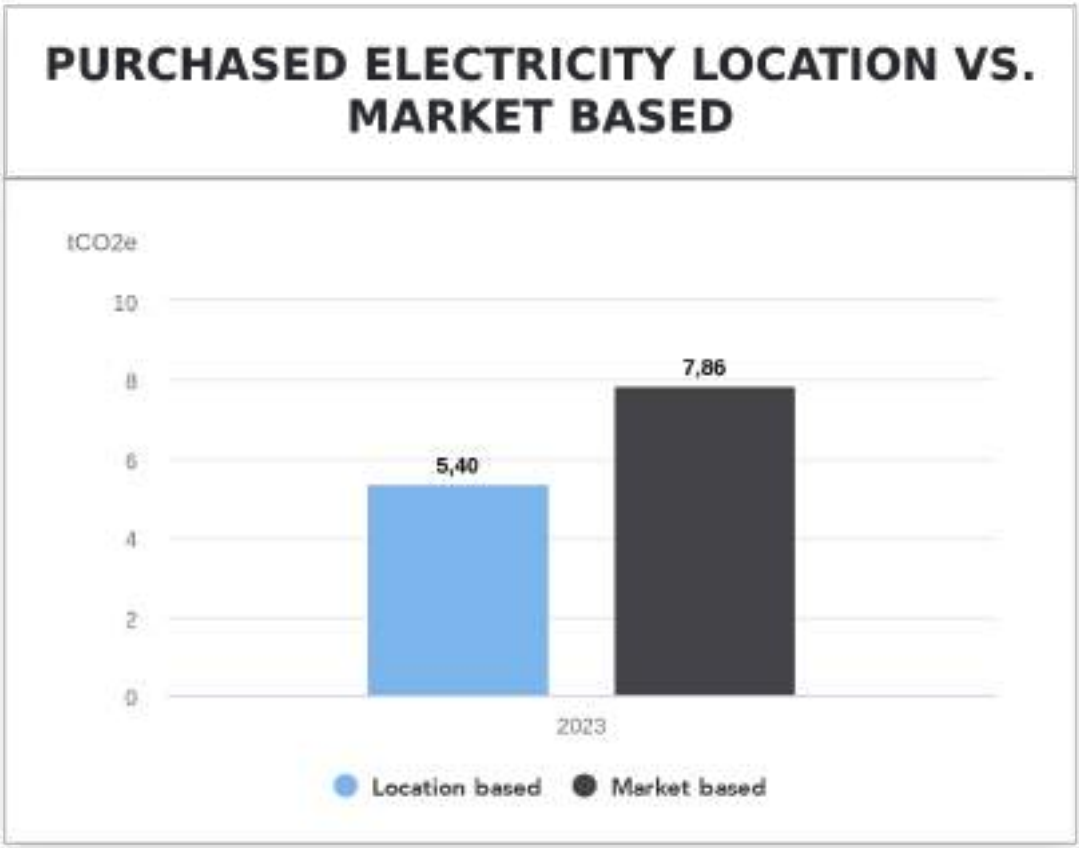
Scope	Emissions (tCO2e)	%
Scope 2	7,86	89,53
Scope 1	0,92	10,47
Total	**8,78**	**100,00**



PURCHASED ELECTRICITY LOCATION VS. MARKET BASED

Purchased electricity emissions can be measured using two methods: location-based and market-based. The location-based method reflects the average emissions intensity of the electricity grid in the region where it is consumed, highlighting the environmental impact of the local energy mix, such as coal, gas, or renewables.
The market-based approach, however, focuses on the specific energy products a company buys, like renewable energy certificates (RECs) or power purchase agreements (PPAs). This allows businesses to report lower emissions by supporting cleaner energy, even if their local grid relies on fossil fuels. If you haven't provided any information on your tariffs, we will use the Residual Mix factor where available. This factor accounts for emissions after certificates, contracts, and supplier-specific factors are excluded, which might explain why your market-based emissions are higher than the location-based ones. When the Residual Mix is not available, we use a location-based emission factor.
Comparing both methods helps organisations better understand and manage their carbon impact.

Scope	Location (tCO2e)	Market (tCO2e)	% Difference
Scope 2	5,40	7,86	46%



METHODOLOGY

The energy data was collected directly from the organization's POD meters or from the bills provided by the company.

Transport

Total emissions from transport in year 2023 were 125,84 tCO2e.

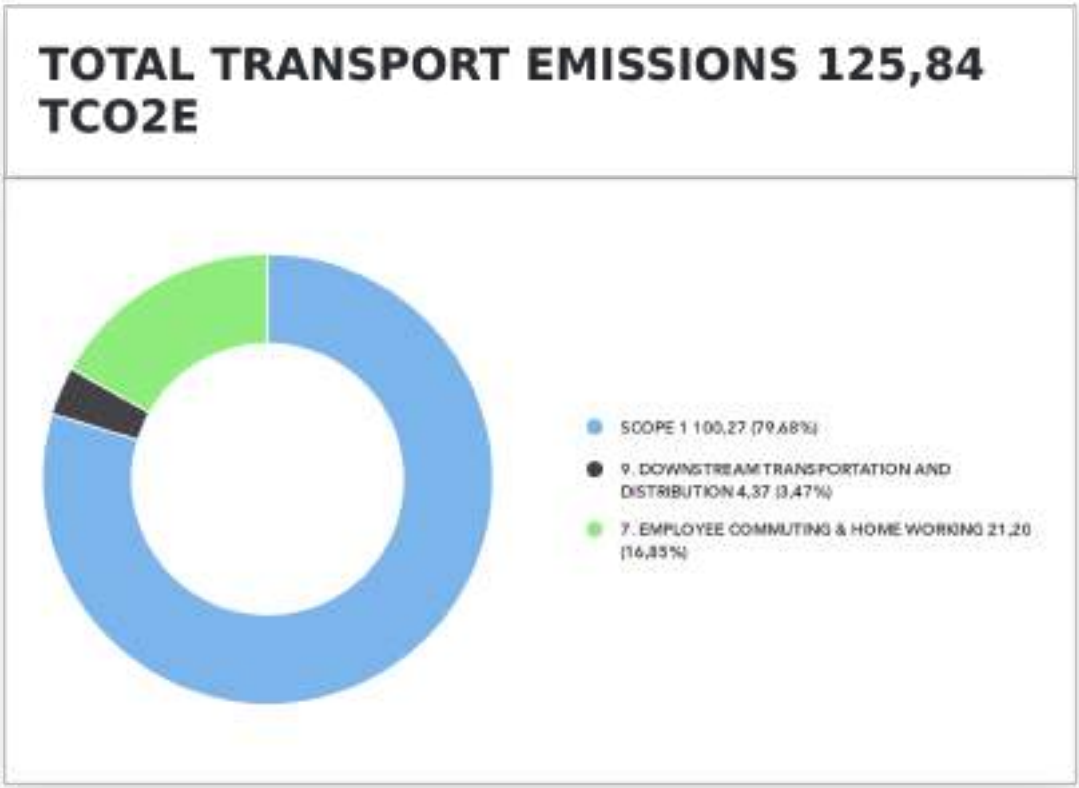
These emissions refer to GHG Protocol:

- Scope 1
- 9. Downstream transportation and distribution
- 7. Employee commuting & home working

Emissions from transport accounted for 9,6% of Elettro-One Srl's total carbon footprint.

RESULTS

GHGP category	Emissions (tCO2e)	%
Scope 1	100,27	79,68
9. Downstream transportation and distribution	4,37	3,47
7. Employee commuting & home working	21,20	16,85
Total	**125,84**	**100,00**



METHODOLOGY

The company directly monitors the kilometers traveled by each vehicle in its fleet. Inbound transportation was assessed by calculating the distance between the supplier's registered address and the operational headquarters. Since the vehicle type is unknown, a conservative estimate was made based on a medium-sized van. Employee commuting data was collected through an internal survey distributed to all employees.

Water

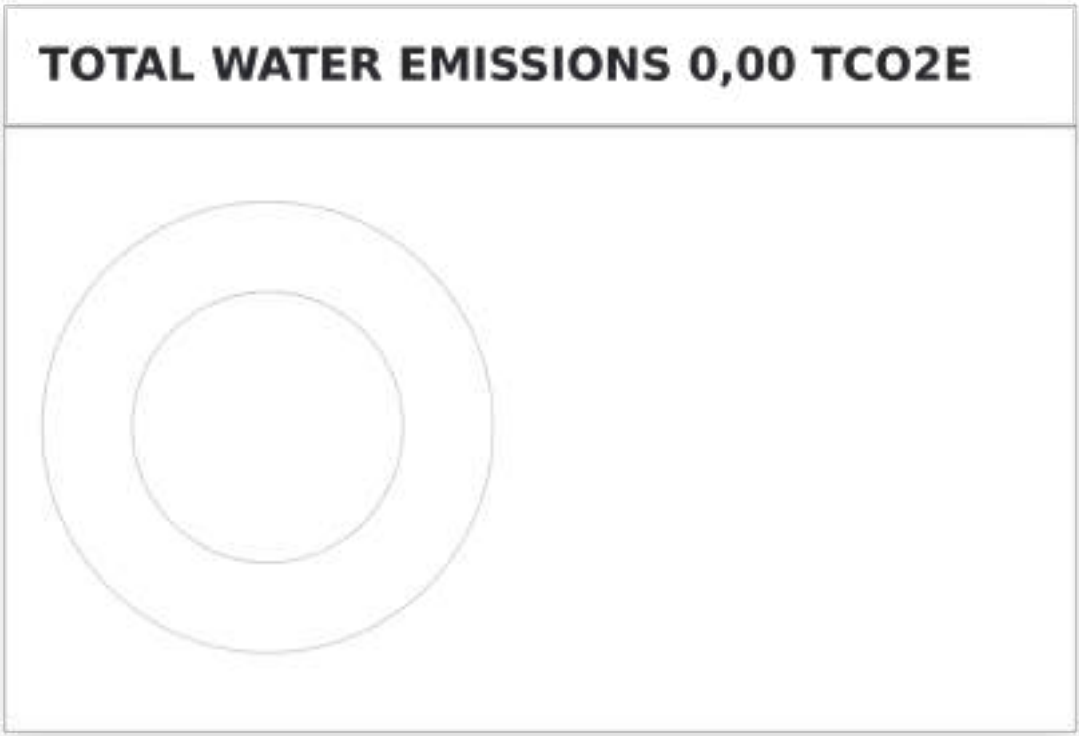
Total emissions from water in year 2023 were 0,00 tCO2e.

These emissions refer to GHG Protocol:

Emissions from Water accounted for 0,0% of Elettro-One Srl's total carbon footprint.

RESULTS

GHGP category	Emissions (tCO2e)	%
Total	0,00	100,00



METHODOLOGY

Water consumption data comes directly from the bills provided by the company. A conservative model was assumed, considering that the water withdrawn equals the water discharged.

Waste

Total emissions from waste in year 2023 were 0,10 tCO2e.

These emissions refer to GHG Protocol:

- 5. Waste generated in operations

Emissions from Waste accounted for 0,0% of Elettro-One Srl's total carbon footprint.

RESULTS

GHGP category	Emissions (tCO2e)	%
5. Waste generated in operations	0,10	100,00
Total	**0,10**	**100,00**

METHODOLOGY

Waste production data was obtained directly from the company's waste management documents (MUD).

Procurement

Total emissions from procurement in year 2023 were 1.169,88 tCO2e.

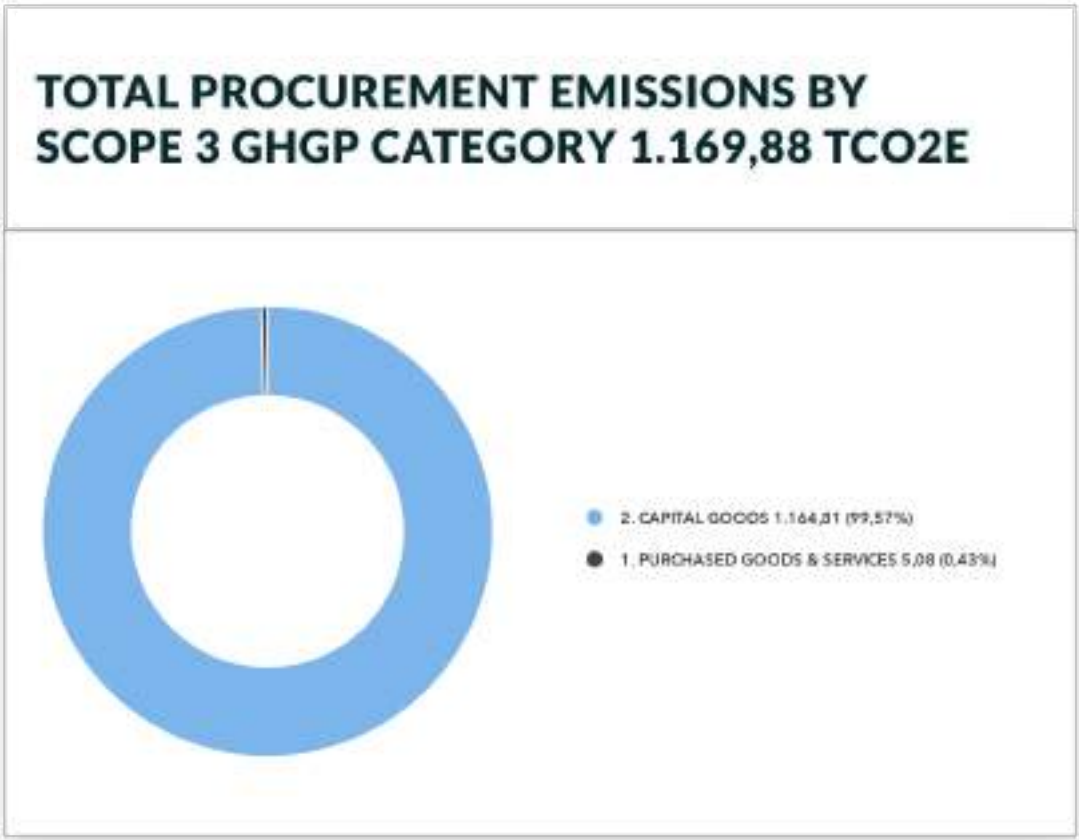
These emissions refer to GHG Protocol:

- 2. Capital goods
- 1. Purchased goods & services

Emissions from Procurement accounted for 89,7% of Elettro-One Srl's total carbon footprint.

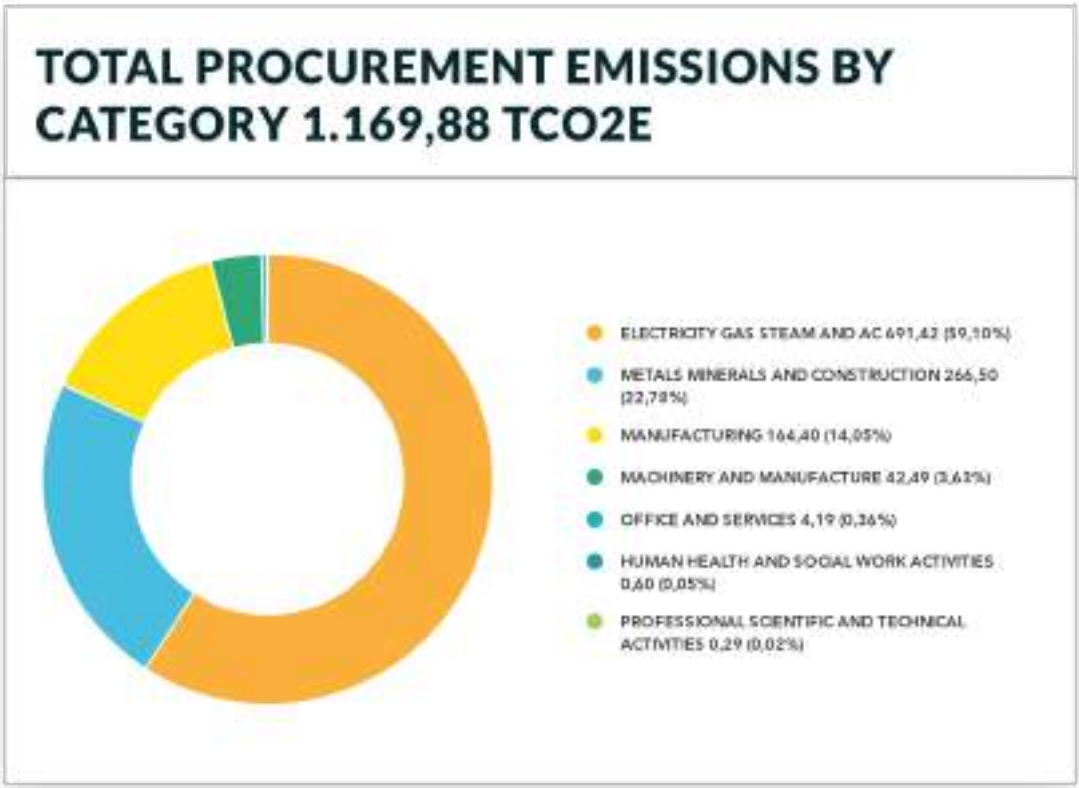
RESULTS BY SCOPE 3 GHGP CATEGORY

GHGP category	Emissions (tCO2e)	%
2. Capital goods	1.164,81	99,57
1. Purchased goods & services	5,08	0,43
Total	**1.169,88**	**100,00**


TOTAL PROCUREMENT EMISSIONS BY SCOPE 3 GHGP CATEGORY 1.169,88 TCO2E
2. CAPITAL GOODS 1.164,81 (99,57%)
1. PURCHASED GOODS & SERVICES 5,08 (0,43%)

RESULTS BY SIMPLIFIED CATEGORY

GHGP category	Emissions (tCO2e)	%
Electricity gas steam and AC	691,42	59,10
Metals Minerals and Construction	266,50	22,78
Manufacturing	164,40	14,05
Machinery and Manufacture	42,49	3,63
Office and Services	4,19	0,36
Human health and social work activities	0,60	0,05
Professional scientific and technical activities	0,29	0,02
Total	**1.169,88**	**100,00**



METHODOLOGY

In terms of Procurement, all data was collected based on expenditure and categorized using appropriate methodologies. This year, it was not possible to obtain purchase data based on mass.

Other

Total emissions from other in year 2023 were 0,15 tCO2e.

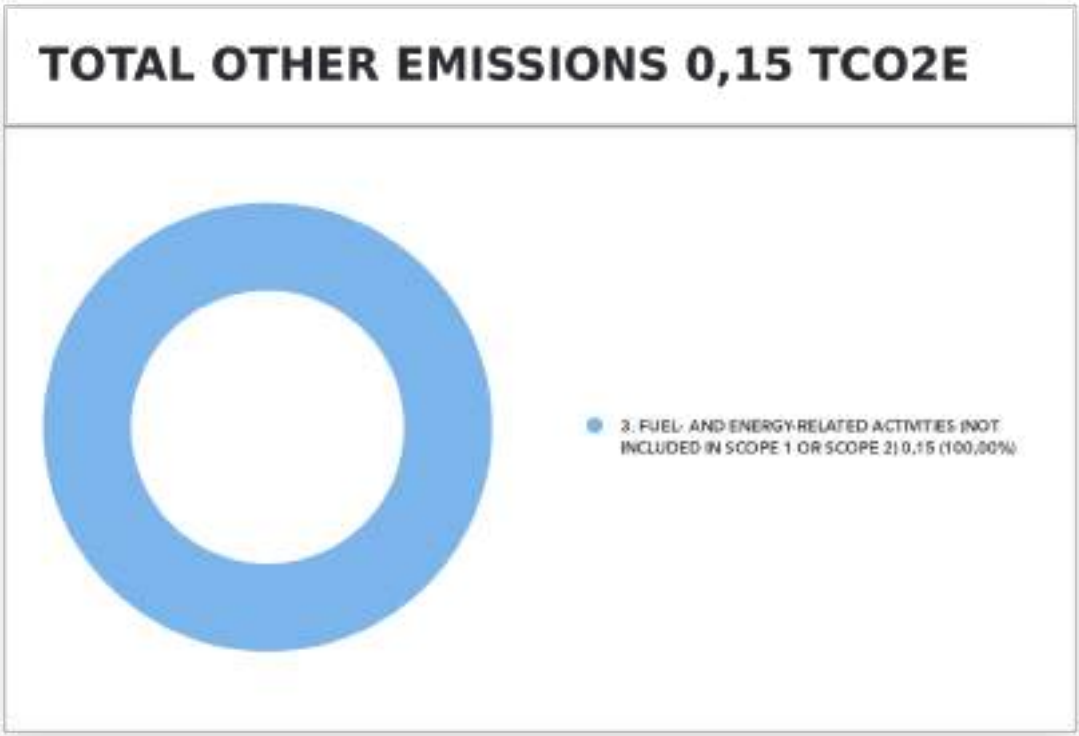
These emissions refer to GHG Protocol:

- 3. Fuel- and energy-related activities (not included in scope 1 or scope 2)

Emissions from Other accounted for 0,0% of Elettro-One Srl's total carbon footprint.

RESULTS

GHGP category	Emissions (tCO2e)	%
3. Fuel- and energy-related activities (not included in scope 1 or scope 2)	0,15	100,00
Total	**0,15**	**100,00**



METHODOLOGY

In this context, upstream emissions related to stationary gas combustion have been calculated. The starting data is therefore the one already discussed in the Energy section.

Summary & What's next

CHAPTER 5

Conclusions

Global records show a troubling rise in greenhouse gas emissions over the last decade, mainly from industrial activities, transportation, and energy production. Current efforts to mitigate this trend are inadequate to meet international **climate targets**, endangering both the environment and human health.
To combat this, we require stronger measures, including greater investment in renewable energy, improved energy efficiency, and sustainable practices. Global cooperation and public engagement are crucial for driving these changes. While the challenge is significant, it also presents an opportunity for transformative action to reduce emissions and secure a sustainable future.

We commend your commitment to sustainability and encourage you to **begin implementing the recommended actions** in the next section.

Recommendations for next steps

This report provides an understanding of the Elettro-One Srl emissions impact for the year 2023, and the progress made from the baseline and previous year measurements where applicable. We provide below insights and recommendations based on the findings.

EXPERT INSIGHTS

The recommended next steps focus on improving data collection, particularly in terms of quality.

A key improvement would be shifting procurement data collection from a spend-based approach to one based on the weight of purchased materials. This would provide more detailed and accurate input data, leading to a more precise emissions calculation.

Enhancing procurement data would also improve inbound transport calculations. Instead of relying solely on distance (km), using tonne-km would account for the weight transported, resulting in a more accurate assessment. The same applies to outbound transport.

For the company fleet, while tracking kilometers is valid, measuring fuel consumption in liters would allow for an even more refined calculation.

Lastly, this year's report does not include emissions related to the use phase or end-of-life of sold products. These aspects should be considered in future reports to ensure a more comprehensive assessment of the company's Scope 1, 2, and 3 emissions.

GREEN FUTURE PROJECT

About

THE 360° ESG SOLUTION FOR YOUR NET ZERO JOURNEY

Green Future Project (GFP) is a climate tech Benefit company, B Corp, and RINA-certified digital partner aiming to support companies on their decarbonisation journey through a single platform. Businesses can optimise utilities, measure their carbon footprint, offset emissions with carbon credits, and invest in environmental projects via e-commerce and other solutions.

Green Future Project's technology enables companies to monitor their positive climate impact in real time, track projects with geospatial data, and transparently report results. The platform also supports businesses in communicating sustainability efforts and engage with stakeholders. The advisory team also offers ESG consulting.

With headquarters in Milan and Trento and an office in Abu Dhabi, GFP operates globally. In 2023, it partnered with Itochu Fashion System to help Japanese companies to achieve Net Zero.

GREENFUTUREPROJECT.COM