

Report

Corporate Carbon Footprint

Group: CCF 2022



August 2023

Jauch Quartz GmbH

Corporate Carbon Footprint

Jauch Quartz GmbH has worked with ClimatePartner to calculate several of their company's carbon footprints: Corporate Carbon Footprints (CCFs).

The CCF is the sum of the CO₂ emissions released by the company within the defined system boundaries over a specified period of time. In this report, the different CCFs are grouped together as **CCF 2022** and include the following individual calculations: **Jauch Quartz America, Inc., Jauch Quartz France SAS, Jauch Quartz GmbH** and **Jauch Quartz UK Ltd.**

The calculations were based on the guidelines of the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol).

CCF - the basis for climate action

Calculate, reduce, finance climate projects - these are the crucial steps to tackling climate change in accordance with the Paris Agreement.

The foundation for any climate action starts with calculation: A company that knows their carbon footprint also knows which parts of their business cause emissions and how high the emissions are.

At the same time, a carbon footprint helps companies to understand which areas have the greatest potential for avoidance and reduction, to set reduction targets, and to develop and implement appropriate reduction measures. Annual CCF reports allow companies to check their progress against reduction targets and to identify areas where emissions can be further reduced.

Overall results

This is the result of the calculation for the group's business activities **CCF 2022**.

CO₂ emissions

Result

Overall results	1,036,397.56 kg CO ₂
-----------------	---------------------------------

By comparison



The emissions correspond to the carbon footprint of 119 Europeans.
One person in Europe emits an average of 8.7 t of CO₂ per year¹

1) Source: EEA 2019, European Environment Agency: EEA greenhouse gas - data viewer, EU-27 value for total emissions with international transport (CO₂e), <https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer> (retrieved 01/31/2022.)

Our calculation approach

Principles

In preparing the corporate carbon footprint and this report, five basic principles were observed in accordance with the GHG Protocol:

Relevance: The calculation should account for all greenhouse gas (GHG) emissions that appropriately reflect the company's carbon footprint. This report is designed to support internal and external decision-making.

Completeness: The report must include all GHG emissions within the selected system boundaries. Any significant exclusions of data must be clearly documented, disclosed, and justified.

Consistency: Consistent methodologies are used so that the company's emissions can be compared over time.

Transparency: All important aspects of a company are recorded objectively, and any assumptions, data gaps and resulting extrapolations or data exclusions are presented clearly and openly in this report.

Accuracy: The calculations of GHG emissions are designed to ensure that they are neither over- nor undervalued. The report aims to be as accurate as possible and to minimise uncertainties, so that the company can make appropriate decisions.

Data collection and calculation

CO₂ emissions were calculated using the company's consumption data and emission factors researched by ClimatePartner. Wherever possible, primary data were used. If no primary data were available, secondary data from highly credible sources were used. Emission factors were taken from scientifically recognized databases such as ecoinvent and DEFRA.

CO₂ equivalents

The corporate carbon footprint calculates all emissions as CO₂ equivalents (CO₂e), which this report also refers to as "CO₂".

This means that all relevant greenhouse gases, as stated in the IPCC Assessment Report, were taken into account in the calculations. These include carbon dioxide (CO₂), methane (N₂O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃). Each gas has a different ability to warm the earth's atmosphere, and each remains in the atmosphere for different lengths of time. To make their effect comparable, they are converted to CO₂ equivalents (CO₂e) as a basic unit and multiplied by their global warming potential (GWP). The GWP describes how strong a gas can warm the atmosphere compared to CO₂ over a period of time, usually 100 years.

For example, methane has a global warming potential of 28, so the warming effect of methane is 28 times greater than CO₂ over 100 years.²

Electricity: market-based and location-based approaches

Emissions for electricity were calculated using both the market-based method and the location-based method. This dual reporting approach is recommended by the GHG Protocol.

For the market-based method, the company provided specific emission factors for the electricity they purchased, if available. If these specific factors were not available, factors for the residual mix in the country of operation were used, or, if this was unavailable, the average grid mix of the country was used.

The report also states the location-based method. In this method, the average electricity grid mix for the country is calculated. This enables a direct comparison of the company's values with the country-specific average.

2) Source: Intergovernmental Panel on climate change, "Climate Change 2021 The Physical Science Basis", S. 1842, https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (retrieved on 31.01.2022)

Operational System Boundaries

Operational System Boundaries indicate which of the company's activities are taken into account for the individual carbon footprints of **CCF 2022**. The various emission sources have been divided into three scopes in accordance with the GHG Protocol:

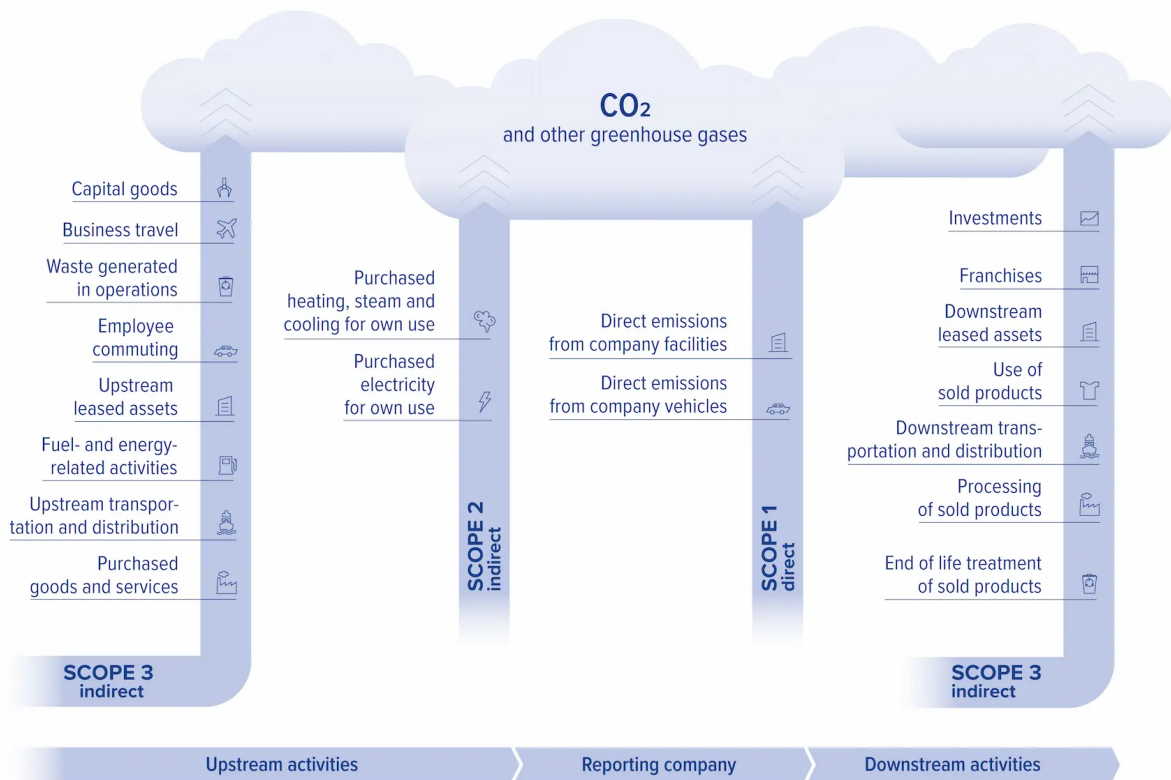
Scope 1 includes all emissions generated directly by **Jauch Quartz GmbH**, for example by company-owned equipment or vehicle fleets.

Scope 2 lists emissions generated by purchased energy, for example electricity and district heating.

Scope 3 includes all other emissions that are not under direct corporate control, such as employee travel or product disposal.

Figure

Activities divided by scope

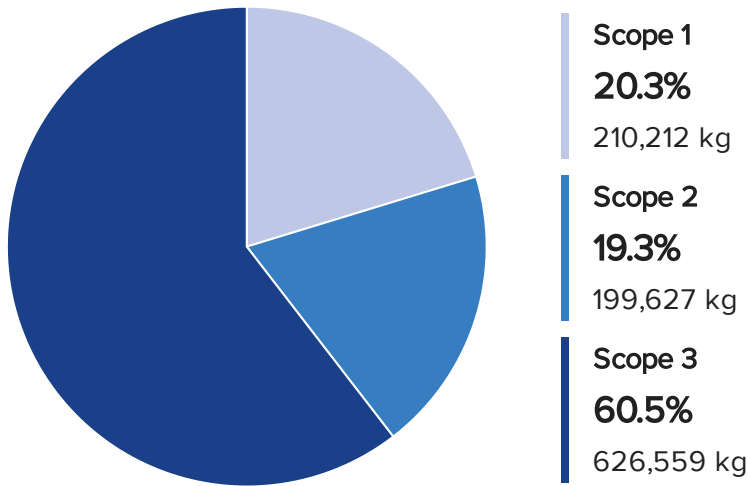


Largest emission sources - greatest potential for reduction

The CCF identifies the largest sources of emissions of the group **CCF 2022**. This is important in driving climate action as it highlights which areas should be prioritised in relation to emission reduction and avoidance.

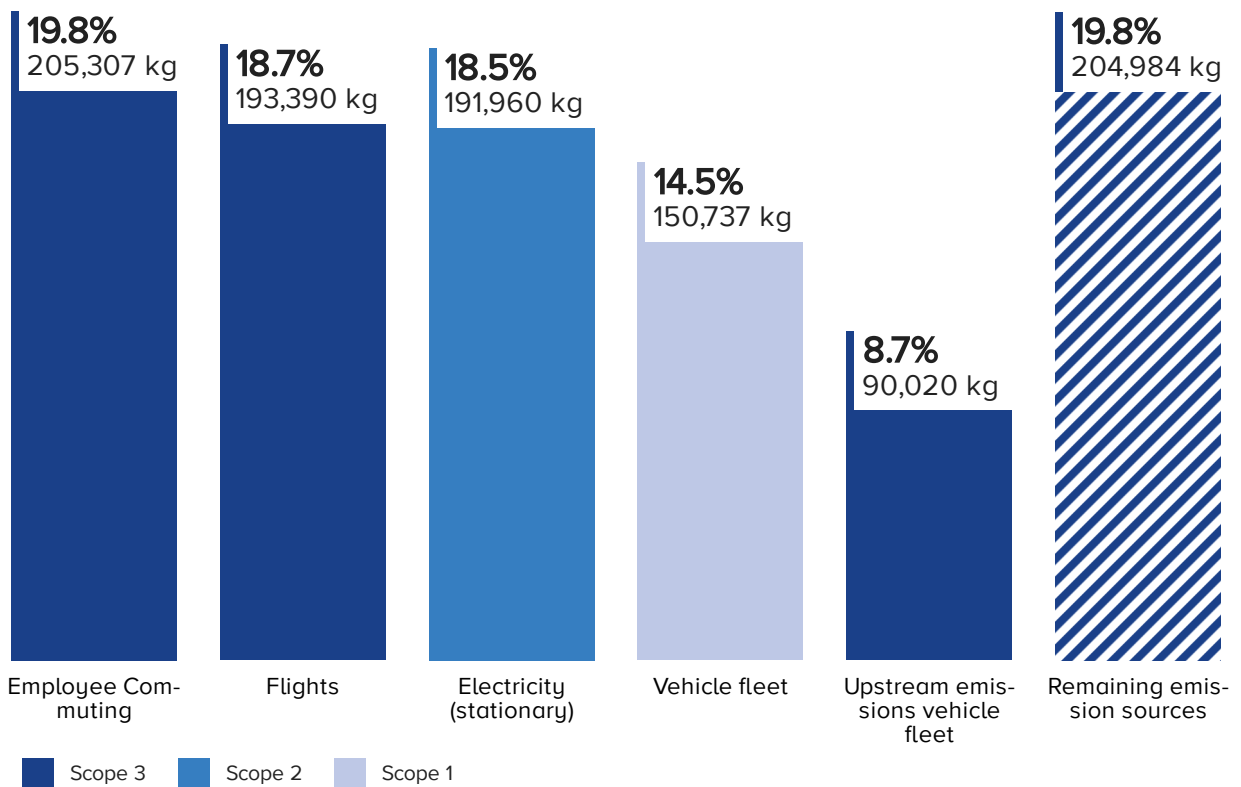
Figure

CO₂ emissions categorised by scope 1, 2, and 3



Figure

The largest CO₂ emission sources



CCF Results Table: Jauch Quartz GmbH

Total results for the group CCF 2022

Emission sources	kg CO ₂	%
Scope 1	210,211.62	20.3
Direct emissions from company vehicles	150,737.09	14.5
Vehicle fleet	150,737.09	14.5
Direct emissions from company facilities	59,474.53	5.7
Heat (self-generated)	59,474.53	5.7
Scope 2	199,626.69	19.3
Purchased electricity for own use ³	199,626.69	19.3
Electricity (stationary)	191,959.63	18.5
Electricity (vehicle fleet)	7,667.06	0.7
Scope 3	626,559.26	60.5
Business travel	238,281.28	23.0
Flights	193,390.18	18.7
Rental and private vehicles	29,337.89	2.8
Hotel nights	14,566.81	1.4
Rail	986.40	0.1
Employee commuting	221,357.15	21.4
Employee Commuting	205,306.55	19.8
Home office	16,050.60	1.5
Fuel- and energy-related activities	146,778.36	14.2
Upstream emissions vehicle fleet	90,020.03	8.7
Upstream emissions electricity	46,677.30	4.5
Upstream emissions heat	10,081.03	1.0
Purchased goods and services	18,995.42	1.8
Electronic devices	13,496.99	1.3
Food and drink	4,413.61	0.4
Office paper	673.53	0.1
Water	273.50	0.0
Print products	137.79	0.0
Waste generated in operations	1,147.04	0.1
Operational waste	1,147.04	0.1
Overall results	1,036,397.56	100.0

3) Calculated using the market-based method. Emissions calculated using the location-based method are 181,797.41 kg CO₂.

CCF Results Table: Jauch Quartz GmbH

For comparison, the total emissions of all individual calculations

CCF 2022	kg CO ₂	%
Jauch Quartz America, Inc.	168,004.26	16.2
Jauch Quartz France SAS	15,551.75	1.5
Jauch Quartz GmbH	756,212.80	73.0
Jauch Quartz UK Ltd.	96,628.75	9.3

CCF Results Table: Jauch Quartz GmbH

Results of the individual calculation **Jauch Quartz America, Inc.**

Emission sources	kg CO₂	%
Scope 1	1,816.44	1.1
Direct emissions from company facilities	1,816.44	1.1
Heat (self-generated)	1,816.44	1.1
Scope 2	8,074.84	4.8
Purchased electricity for own use ⁴	8,074.84	4.8
Electricity (stationary)	8,074.84	4.8
Scope 3	158,112.98	94.1
Business travel	122,254.63	72.8
Flights	92,492.92	55.1
Rental and private vehicles	23,016.72	13.7
Hotel nights	6,744.99	4.0
Employee commuting	33,328.18	19.8
Employee Commuting	33,328.18	19.8
Fuel- and energy-related activities	2,170.47	1.3
Upstream emissions electricity	1,958.11	1.2
Upstream emissions heat	212.37	0.1
Purchased goods and services	359.71	0.2
Food and drink	359.24	0.2
Water	0.47	0.0
Waste generated in operations	0.00	0.0
Operational waste	0.00	0.0
Overall results	168,004.26	100.0

4) Calculated using the market-based method. Emissions calculated using the location-based method are 8,074.84 kg CO₂.

CCF Results Table: Jauch Quartz GmbH

Results of the individual calculation **Jauch Quartz France SAS**

Emission sources	kg CO₂	%
Scope 1	4,141.59	26.6
Direct emissions from company vehicles	4,141.59	26.6
Vehicle fleet	4,141.59	26.6
Scope 2	717.92	4.6
Purchased electricity for own use ⁵	717.92	4.6
Electricity (stationary)	717.92	4.6
Electricity (vehicle fleet)	0.00	0.0
Scope 3	10,692.24	68.8
Employee commuting	5,717.31	36.8
Employee Commuting	5,717.31	36.8
Fuel- and energy-related activities	2,934.01	18.9
Upstream emissions vehicle fleet	2,562.67	16.5
Upstream emissions electricity	371.34	2.4
Business travel	2,040.92	13.1
Flights	1,625.80	10.5
Rail	415.11	2.7
Overall results	15,551.75	100.0

5) Calculated using the market-based method. Emissions calculated using the location-based method are 674.43 kg CO₂.

CCF Results Table: Jauch Quartz GmbH

Results of the individual calculation Jauch Quartz GmbH

Emission sources	kg CO ₂	%
Scope 1	204,253.59	27.0
Direct emissions from company vehicles	146,595.50	19.4
Vehicle fleet	146,595.50	19.4
Direct emissions from company facilities	57,658.09	7.6
Heat (self-generated)	57,658.09	7.6
Scope 2	170,951.47	22.6
Purchased electricity for own use ⁶	170,951.47	22.6
Electricity (stationary)	170,951.47	22.6
Electricity (vehicle fleet)	0.00	0.0
Scope 3	381,007.74	50.4
Employee commuting	173,091.49	22.9
Employee Commuting	157,040.89	20.8
Home office	16,050.60	2.1
Fuel- and energy-related activities	140,445.70	18.6
Upstream emissions vehicle fleet	87,457.36	11.6
Upstream emissions electricity	43,119.68	5.7
Upstream emissions heat	9,868.66	1.3
Business travel	48,463.79	6.4
Flights	39,696.09	5.2
Hotel nights	7,821.83	1.0
Rental and private vehicles	583.31	0.1
Rail	362.57	0.0
Purchased goods and services	18,227.72	2.4
Electronic devices	13,496.99	1.8
Food and drink	3,814.98	0.5
Office paper	509.16	0.1
Water	268.81	0.0
Print products	137.79	0.0
Waste generated in operations	779.04	0.1
Operational waste	779.04	0.1
Overall results	756,212.80	100.0

6) Calculated using the market-based method. Emissions calculated using the location-based method are 163,415.50 kg CO₂.

CCF Results Table: Jauch Quartz GmbH

Results of the individual calculation **Jauch Quartz UK Ltd.**

Emission sources	kg CO ₂	%
Scope 1	0.00	0.0
Direct emissions from company vehicles	0.00	0.0
Vehicle fleet	0.00	0.0
Scope 2	19,882.46	20.6
Purchased electricity for own use ⁷	19,882.46	20.6
Electricity (stationary)	12,215.39	12.6
Electricity (vehicle fleet)	7,667.06	7.9
Scope 3	76,746.30	79.4
Business travel	65,521.95	67.8
Flights	59,575.37	61.7
Rental and private vehicles	5,737.86	5.9
Rail	208.72	0.2
Employee commuting	9,220.17	9.5
Employee Commuting	9,220.17	9.5
Fuel- and energy-related activities	1,228.18	1.3
Upstream emissions electricity	1,228.18	1.3
Purchased goods and services	408.00	0.4
Food and drink	239.40	0.2
Office paper	164.37	0.2
Water	4.22	0.0
Waste generated in operations	368.00	0.4
Operational waste	368.00	0.4
Overall results	96,628.75	100.0

7) Calculated using the market-based method. Emissions calculated using the location-based method are 9,632.64 kg CO₂.

Next steps

The company should now use the findings of the calculation for effective climate protection. For this purpose, reduction targets must be defined and implemented, climate projects must be financed and the climate protection commitment must be communicated transparently.

Set reduction targets

The concentration of greenhouse gases in the atmosphere is responsible for global warming so we must reduce our emissions as quickly and broadly as possible. Defining clear and measurable reduction targets are the best way to start. A reduction plan detailing specific actions and team responsibilities will help the organisation to make quick and meaningful progress.

A creative and courageous approach is needed. Reduction targets should be ambitious and reflective of current scientific and technological understanding. ClimatePartner recommends differentiating between short-, medium-, and long-term reduction targets because some measures can be implemented quickly whilst others take time, for example, making changes to processes, product design and supply chains. Creating reduction plans is a continuous, iterative process that should be an integral part of the corporate strategy.

Implement reduction measures

In general, any reduction measures should be relevant to the needs of the company: there are no standard solutions. The corporate carbon footprint enables you to identify reduction potentials and use this knowledge to define individual reduction measures.

In general, there are two ways to reduce emissions:

Decrease activities that emit greenhouse gases, for example, by reducing energy consumption, use of raw materials, or the number of business trips taken by employees.

Reduce the intensity of emissions by selecting services, raw materials, and energy products that have lower emission factors, for example, by switching to a green electricity tariff.

The following section lists some the options for taking climate action.⁸

Scope 1 + 2

- **Use renewable energy sources** by switching to biogas, green electricity, etc.
- **Use more climate-friendly refrigerants** by switching to ammonia, propane, etc.
- **Increase energy efficiency** through newer machines, etc
- **Optimise processes and products** through new procedures, improved product design, etc.

Scope 3

- **Conserve resources** through avoidance, such as making fewer business trips, using less packaging, producing less waste, etc.
- **Use more climate-friendly raw materials** such as plant-based, regional and recycled raw materials
- **Choose more climate-friendly options in daily activities**, such as taking the train over flights or choosing a company bicycle over a company car, etc.
- **Engage with your suppliers** and encourage them to take more climate action by sharing best practices, knowledge, etc.
- **Engage your employees** by offering incentives to implement climate-friendly measures, providing continual training opportunities, etc.

8) This overview does not guarantee completeness. Each measure must be assessed for appropriateness to the specific company.

Finance climate projects

We must act now to tackle emissions globally and limit global warming to 1.5 °C. The implementation of some CO₂ reduction measures require fundamental changes and take time. Therefore, the financing of climate projects in addition to the reduction of emissions is urgent and necessary. In this way, companies take responsibility for the emissions they are still emitting today, while continuously reducing their emissions.

More than just climate action

Offset projects function in different ways. Some remove CO₂ from the atmosphere, for example, through reforestation projects, whilst others prevent further CO₂ emissions, for example, through the expansion of renewable energies.

In addition, our high-quality carbon offset projects promote the economic, social, and sustainable development of the region. Each of our projects are certified according to international standards, thus ensuring that they improve the lives of local communities as well as the climate.

Verified emissions savings

The exact amount of CO₂ saved by each project is determined by independent organisations. The project developers can then sell these CO₂ savings in the form of certified emission reductions. The resulting income then finances the project, which would be unable to function without it. Further information is available at: <https://www.climatepartner.com/en/carbon-offset-projects>

Communicate transparently

In climate protection, it is important to share successes and make visible what the company has achieved in each of the five steps in climate protection - calculate, set targets, implement measures, finance climate projects, communicate. This gives consumers, business partners or anyone interested an overview of where the company stands in climate protection. For example, this can be done with our ClimatePartner certification label and the Climate-ID website.

	kg CO ₂
Overall results	1,036,397.56
Already CO ₂ compensated	0.00
Not yet CO ₂ compensated	1,036,397.56
CO₂ emissions to be offset incl. 10% safety margin	1,140,037.32

Effective climate action

Our ClimatePartner team are happy to help you take further climate action!

Your contact

+49 89 1222875-0 or support@climatepartner.com.

Imprint

Publisher

ClimatePartner Deutschland GmbH
St.-Martin-Straße 59
81669 München

[+49 89 1222875-0](tel:+498912228750)

support@climatepartner.com

www.climatepartner.com

On behalf of

Jauch Quartz GmbH
In der Lache 24
78056 Villingen-Schwenningen

<https://www.jauch.com/>

Copyright

Copyright is held by the publisher. Reproduction of this report in whole or in part in any other form is permitted only with the written consent of the copyright holder.

August 2023

www.climatepartner.com