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CARBON FOOTPRINT REPORT

2022

CARBON FOOTPRINT REPORT

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This report brings together Meconet Oy's carbon footprint. The report deals with the calculation methods used and the results of the calculation.

Carbon footprint refers to the total amount of an organisation's greenhouse gas emissions during the reference period. The most significant greenhouse gases affecting the carbon footprint are carbon dioxide, methane and nitrous oxide. The resulting greenhouse gases are presented in carbon dioxide equivalents. Carbon dioxide equivalent is abbreviated as CO2 equivalent (CO2e).

Date of calculation 5.5.2022. The report has been prepared by Reforest Finland Oy on behalf of Meconet Oy.

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MECONET OY

Meconet is your domestic partner for the production of demanding metal products. We believe in cooperation and the ability to develop your business. Together, we can cut costs and shorten response times.

When we understand your needs, we can help you throughout your lifecycle: from product design and prototyping to efficient mass production.

Investments in new technologies and continuous improvement of operations ensure you world-class competitiveness, quality and security of supply.

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WHAT IS THE CARBON FOOTPRINT?

Calculating an organization's carbon footprint means calculating its greenhouse gas emissions through operations. The unit of the carbon footprint is the carbon dioxide equivalent, which reflects the global warming effect of different greenhouse gases converted to the corresponding effect of carbon dioxide in the atmosphere. The carbon footprint measurement method for this calculation is based on the GHG Protocol guidelines. The GHG Protocol is a standard published by the World Economic Council for Sustainable Development (WBCSD) and the World Resource Center (WRI) in 1998 to help companies determine their greenhouse gas emissions.

The greenhouse gas emissions generated according to the guidelines are sorted into Scope 1, Scope 2 and Scope 3 emissions. The factors affecting the company's greenhouse gas emissions are divided into scopes 1-3.

Scope 1 - Direct emissions from the organization. Property owned by the enterprise, which includes the enterprise's own energy production and fuel consumption of its own or controlled vehicles.

Indirect emissions from the organization. Electricity and heat / cooling energy purchased by the company.

Scope 3 Upstream and downstream. Scope 3 includes a large number of other business emissions from subcontracting to the customer. Scope 3 includes, inter alia, business travel, waste, purchased transport, packaging and commuting.



FROM THE CALCULATION

The management of the carbon footprint is based on the identification of emission sources and the determination of the amount of emissions from operations. The calculation of the carbon footprint makes it possible to identify the largest emission sources, so that measures to reduce emissions can also be targeted correctly.

This calculation provides Meconet Oy with a report on the company's carbon dioxide emissions. The results of the calculation will enable the company to develop its operations in an even lower-emission direction in the future. The calculation also shows the amount of emission compensation required for carbon neutrality.

The report includes the carbon footprint of Meconet Oy's operations from 01.01.2021 to 31.12.2021, presented in carbon dioxide equivalents (CO2e).

The calculation of the 2021 figures is the company's first carbon footprint calculation and the results of this calculation will be used as a reference year in future calculations.

In the calculation of the carbon footprint, the consumption figures of the company's various emission sources and site-specific emission factors for the period 01.01.2021 - 31.12.2021 have been used.

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CALCULATION LIMITS



The limitation of the calculation of the carbon footprint is based on the breakdown according to the GHG Protocol standard, according to which direct greenhouse gas emissions (Scope 1) and indirect emissions (Scope 2) must be included in the calculation. Other indirect greenhouse gas emissions (Scope 3) may be included in the calculation on a case-by-case basis.

The functional limitation of the calculation is based on the emissions caused by the activities under the control of the company, ie the emissions that the company can influence through its operations.

In addition to Scope 1 and 2 emission sources, the calculation of the carbon footprint includes logistics controlled by Meconet from Scope 3 emission sources, employee travel (travel between home and work), business travel, waste, water and procured materials, and raw materials.

In accordance with the Gradle - to - customer principle, the calculation was limited to ending when the ownership of an asset changes from company to customer. On the next page, the emission sources included in the calculation are specified in more detail.

SOURCES OF EMISSIONS INCLUDED IN THE CALCULATION

Scope	Description	Emission source	Informant
Scope 1	Direct emissions from own activities	Company owned vehicles	 Petrol (liters / year) Diesel (liters / year)
Scope 1	Direct emissions from own activities	Gases and fuels	Nitrogen (kg / year) Oxygen (kg / year) Argon (kg / year Methanol (kg / year)
Scope 1	Direct emissions from own activities	Natural gas	Tallinn heating natural gas (m3 / year)
Scope 2	Indirect emissions from own activities	Purchased energy	 Heating energy (kWh / year) - consumption readings and emission factor from the supplier Electricity (kWh / year) - consumption readings and emission factor from the supplier
Scope 3	Other indirect emissions	Business travel	Flights Mileage driven based on mileage compensation paid (km / year) Hotel nights (Finland / Abroad)
Scope 3	Other indirect emissions	Waste	Waste by fraction (kg / year) from the following waste fractions: Energy waste biowaste cardboard waste cardboard waste wood waste mixed waste
Scope 3	Other indirect emissions	Procurement	Packaging (kg / year) Olis / excipients (list of purchases from suppliers) Chemicals (list of purchases from suppliers) Metals (list of purchases from suppliers) Water (m3 / year) IT Procurement (phones pcs / year)
Scope 3	Other indirect emissions	Outgoing logistics	Emissions reported by the logistics company
Scope 3	Other indirect emissions	Getting to work	Survey on the travel of company staff to work

SCOPE OF CALCULATION



KEY FIGURES FOR CARBON FOOTPRINT CALCULATION



026
252.7
1313.5
28,973.2

The distribution of Meconet Oy's carbon footprint into direct and indirect emissions (scopes) as defined in the GHG Protocol guidelines is shown in the figure.

The largest emissions come from the sourcing of raw materials, especially steel. Scope 3 emissions account for about 95% of the company's total emissions.

In the following pages, the formation of the carbon footprint is discussed in more detail.



Resource	t CO2e	Share
Natural gas	88.78	35%
Other gases	88.8	35%
Fuels	60.9	24%
Engine gases	14.06	6%
Methanol	0.1	0%

- Scope 1 Direct emissions from the organization. Corporate owned assets that include the company's own energy production and fuel consumption of its own or controlled vehicles.
- Direct sources of emissions include, for example, fuels used in production processes and inhouse energy production, and in-use vehicles and small machines.
- Most of the company's direct scope 1 emissions consist of natural gas used to heat the Tallinn plant (35%) and other gases used in production.
- Fuels owned or controlled by the company account for about a quarter of direct emissions and motor gases for about 6% scope 1 emissions.

FUELS AND GASES

Gas	Unit	t CO2e
Oxygen	600 kg	0
Argon	7.3 kg	0
Nitrogen 2	11,200 kg 88.8	4
Natural gas 4	7 352 m3 88.7	8
Engine gas	5460 kg	14.06
Petrol	12,750 l	28.69
Diesel	12,750 l	32.26
Methanol	200 kg	0.09

- The production process uses oxygen, nitrogen and argonia. Of these, nitrogen accounts for the largest total of 211,200 kilograms.
- The use of argon and oxygen does not emit greenhouse gases emissions.
- In 2021, a total of 5,460 kg of motor gases were purchased and its emissions were 14.06 t CO2e.
- The Tallinn office is heated by natural gas, which consumed 47,352 m3.



Fuels and gases t CO2e

SCOPE 1 BY LOCATION



- Tallinn scope 1 emissions by site are the largest, just over 90t CO2e.
- This is largely due to the form of heating in the Tallinn office. Emissions from heating at other sites are shown in the scope 2 category.
- If the place of consumption of an emission source has not been allocated to a specific site, the amount of the emission source is divided by the relative size of the sites (in relation to turnover).

INDIRECT EMISSIONS FROM THE COMPANY (SCOPE 2)



Scope 2 Indirect emissions from the organization.
 Electricity and heat / cooling energy purchased by the company.

• Meconet Oy's scope 2 emissions totaled 1,313.53 t CO2e

- The company's electricity consumption in 2021 was a total of 6970 MWh, of which about 10%, was generated from renewable energy.
- Meconet's district heating consumption in 2021 totaled 2,827
 MWh. With the exception of Tallinn, district heating is the form of heating for all offices.

• On the next page, the consumption of the company's various locations is compared in more detail.

INDIRECT EMISSIONS FROM THE COMPANY (SCOPE 2)



- Differences in heating emissions from different sites arising from large variations in the emission factors of different district heating companies.
 - The emission factor for district heat produced by Äänekoski's energy is 0.26 CO2 kg / MWh
 - District heating in Vantaa the emission factor was 162.7 kg kg / MWh
- The electricity at the Tallinn office was renewable.

SCOPE 1 AND 2 BY LOCATION

Differences in the emission volumes of heating at different sites are due to large variations in the emission factors of different district heating companies. The emission factor for district heat produced by Äänekoski's energy is 0.26 CO2 kg / MWh, while the emission factor for district heating in Vantaa's energy was 162.7 CO2 kg / MWh. The electricity used at the Tallinn office was renewable.



UP AND DOWN (SCOPE 3)



- Scope 3 Upstream and downstream. Scope 3 includes a large number of other business emissions from subcontracting to the customer. Scope 3 includes, inter alia, business travel, waste, purchased transport, packaging and commuting.
- Scope 3 emissions included in the calculation purchases were taken (metals, oils and auxiliaries, chemicals, packaging), employee business trips, waste, business travel.
- For purchases (excluding metals) of Meconet purchases were received from 87% of suppliers (relative to the purchase price). The remaining purchases were excluded from the calculation.
- Purchases such as work gloves, bolts and nuts were also excluded

UP AND DOWN (SCOPE 3)

Resource	t CO2e	share
Metals	27503,59	95%
Logistics EXW	1018.00	4%
Traveling to work	269.36	1%
Oils and excipients	73.11	0%
Waste	35.81	0%
Packaging materials	34.79	0%
Business travel	32.55	0%
Water	5.44	0%
IT procurement	0.54	0%

• Metals account for about 95% of total scope 3 emissions and about 90% of the company's total emissions

• For purchases (excluding metals) of Meconet purchases were received from 87% of suppliers (relative to the purchase price). The remaining purchases were excluded from the calculation. Purchases such as work gloves, bolts and nuts were also excluded from the calculation

UP AND DOWN (SCOPE 3)



Raw material	kilos	t CO2e
Steel	7,677,238	23 799
Roster	352 502	1199
Brass	499 966	1850
Aluminum	58 071	412
Copper	51 474	190
Lead	12 165	25
Tin bronze	7249	17
New silver	107	11

- In 2021, Meconet Oy acquired a total of more than 7.6 million kilos of steel.
- A total of about 8.6 different metals were procured million pounds.
- Meconet Oy has numerous different metal suppliers and the suppliers do not provide exact emissions.
- It is good to note that the best available data have been used for the emission factors, but the emission levels are not completely accurate.

TOTAL CARBON FOOTPRINT

Total carbon footprint formation by resource category (tonnes and percentages)



Resource	t CO2e	Share
Metals	27503.6	90%
Electrical energy	1052.8	3%
Logistics EXW	1018.0	3%
Traveling to work	269.4	1%
Heating energy	260.7	1%
Natural gas	88.8	0.3%
Other gases	88.8	0.3%
Oils and excipients	73.1	0.2%
Fuels	60.9	0.2%
Waste	35.8	0.1%
Packaging materials	34.8	0.1%
Business travel	32.6	0.1%
Engine gases	14.1	0.0%
Water	5.4	0.0%
IT procurement	0.5	0.0%
Methanol	0.1	0.0%

TOTAL CARBON FOOTPRINT

Total carbon footprint by site with steel quantities reported by Meconet



TOTAL CARBON FOOTPRINT

Total carbon footprint excluding metals



CONCLUSIONS

Procurement

Acquisitions, especially metals, account for about 90% of Meconet's total value chain emissions. Meconet's ability to influence metal emissions is limited. In the metal industry, too, more attention has been paid to emissions, and already now there is a great deal of variation in the market in terms of metal emissions. The choice of suppliers can significantly reduce emissions, but the challenge is that suppliers do not know or disclose emissions data from the manufacture of their own products, which makes the comparison very challenging. There will be new low-emission products in the sector, but the reduction in emissions from metal fabrication is also reflected in the price of the final product.

With regard to Scope 3 and especially procurement, the most effective action Meconet can take is to communicate and encourage its suppliers to participate in the management of their carbon footprint in the future, which will further improve the availability of data.

Electricity - Scope 2

Electricity is Meconet's second largest source of emissions. Of the electricity used by the company, the electricity at the Tallinn office is produced from renewable energy, but not at the other offices. The easiest and most moderately low-cost measure to reduce emissions would be to convert energy from other sites to renewable energy. Switching to renewable energy can reduce annual CO2 emissions by 1,052 tonnes, which is about two-thirds of the company's own emissions.

Heating energy - Scope 2

The company's offices in Finland are all heated by district heating. It is difficult to influence the emissions of district heating, and it is not sensible to change the form of heating, but it is good to note that, for example, at the Vantaa office, Vantaa Energy will strive for emission-free heat production by 2026.

Fuels and motor gases

For the cars used by the company, low-emission solutions (hybrid / electric) would make it possible to reduce the company's own emissions. For example, emission limits for company cars or electric forklifts could be viable options.

Travel to work and business travel

When it comes to commuting, the use of a car is likely to be forced by many. In addition to reducing emissions, other benefits can be achieved by encouraging the use of public transport or tourism by cycling and walking to work . Providing a bicycle benefit is a good example of an incentive to reduce emissions and improve public health.

Due to the Covid pandemic, business travel has declined significantly in several places in recent years. Good teleworking practices and the rationalization of travel should be considered practices even after a pandemic.

CONCLUSIONS



• Example of a coal roadmap to 2026

• The replacement of renewable energy, the reduction of emissions from district heating in Vantaa and the renewal of the car fleet will result in a reduction of more than 80% of the company's own scope 1 and 2 emissions.

• Remaining emissions can be compensated.



- Science Based Targets -Initiative
- A project in which the company commits to reducing its emissions in Paris in accordance with the climate agreement
- "Certificate" for emission reduction measures
- The SBT initiative is divided into short-term and net zero goal
 - Short-term target approx. 45% of scope 1 and 2 emissions by 2030
 - Net Zero carbon neutrality by 2050
- A short-term goal alone is enough
- Own emissions can be easily reduced
- The short-term objectives are for own (scope 1 and 2) emissions
- Meconet Oy is counted as an SME in the SBT criteria applying is more straightforward and cheaper than for companies with more than 500 employees.

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SOK Corporation Finland, Europe	1370
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