Plieno Fortas

CO2 imprint report
2023 y.
II semester

CO2 imprint relevance of accounting

The relevance of capturing the CO2 footprint on a global scale is high, as climate change is one of the greatest challenges and threats to humanity and nature of our time. Many countries and organizations are committed to reducing their GHG emissions and contributing to the overall goal of keeping the global average temperature below 1.5°C above pre-industrial levels.

CO2 footprint accounting helps to determine how many GHG emissions are emitted as a result of a particular organisation or activity and what are the main sources of emissions. This allows you to plan and implement effective measures to reduce emissions, as well as to track and evaluate your progress and results. Co2 footprint accounting can also help organizations meet legal requirements, improve their reputation and competitiveness, reduce costs and increase efficiency.

CO2 Imprint calculation principles

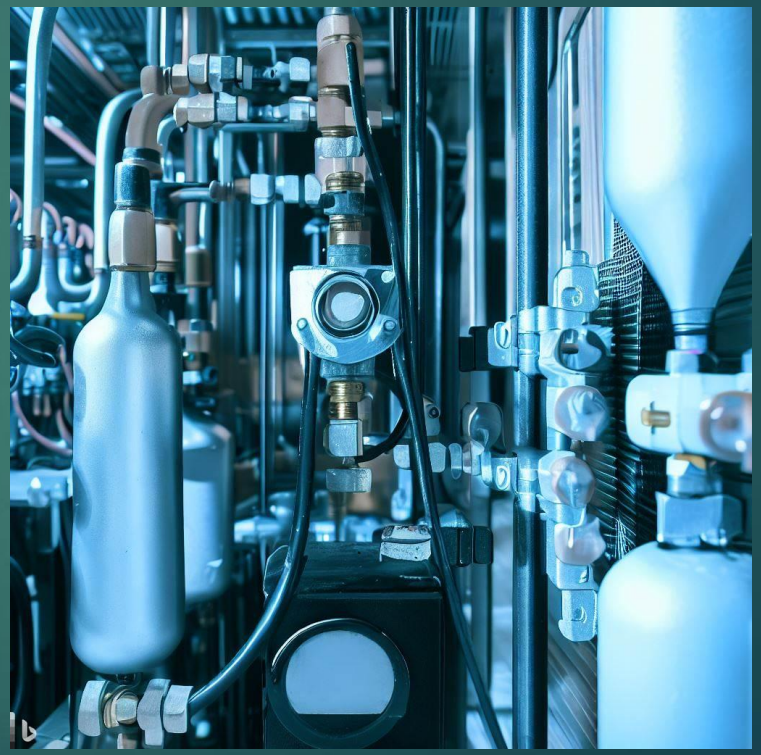
The accounting of the CO2 footprint can be carried out in different ways, but the most common method is to determine the CO2 emissions of all activities, including energy consumption, transport, food production, waste management, etc. this information can be used to identify the largest sources of CO2 emissions and take action to reduce them.

Accounting for the CO2 footprint on a global scale is carried out on the basis of international standards, such as the ISO 14064 or GHG protocol, which establish common principles and methodologies for the assessment and accounting of GHG emissions.

Emissions from refrigeration equipment CO2

- Only R32 freon is used in refrigeration equipment, which, due to its smaller carbon footprint compared to other HFC refrigerants, R32 freon has significantly less negative impact on the environment. Also, in comparison with such refrigerants as R22 and R-410A, freon R32 has a third lower global warming potential. R22 has a global warming potential of 1,810 and R-410A of 2,090. Meanwhile, the global warming potential of R32 freon is 675. The popularity of Freon R32 has increased significantly over the past couple of years, as manufacturers began to look for less environmentally harmful alternatives.

Mark	Quantity	Measure	Total CO2, t
R32	0	t	0



CO2 emissions from mobile sources

- Mobile sources of pollution are vehicles and mechanisms that use internal combustion engines and emit carbon dioxide (CO2) and other pollutant gases into the air. CO2 is one of the main greenhouse gases that contribute to climate change and global warming. Examples of mobile sources of pollution are cars, trains, ships, airplanes.

Mark	Quantity	Measure	Total CO2, t
Petrol	8.81	t	19.3
Diesel	7	t	17.56

CO2 emissions from electricity generation

- CO2 emissions from electricity production depend on the resources used to generate electricity. The more fossil fuels such as gas, coal or oil are used, the higher the CO2 emissions. The more renewable sources such as wind, sun or biomass are used, the lower the CO2 emissions. Nuclear energy also does not cause CO2 emissions, but has other environmental and safety problems.

Mark	Quantity	Measure	Total CO2, t
Elektra	476.44	MWh	285.86
Žalioji elektra	40.89	MWh	0.74

CO2 emissions from gas energy production

- Natural gas is extracted from the depths of the earth, which is used as an energy source or raw material. Gas extraction also causes CO2 emissions, as it requires the combustion of gas or other fuels to create pressure and electricity.
- Co2 emissions from gas extraction depend on many factors, such as the type of gas, extraction technology, transportation and treatment methods, etc.

Mark	Quantity	Measure	Total CO2, t
Gas	167.949	MWh	28.55

CO2 emissions from the water used to

- The amount of CO2 emitted to extract water depends on the technology and energy source used by the means of extracting water. Water extraction is the process by which water is pumped or pumped from surface or underground water bodies. Water extraction facilities can be stationary or mobile, and they can use different energy sources, such as electricity, diesel fuel combustion, solar energy or wind energy.

Mark	Quantity	Measure	Total CO2, t
Vanduo	764	m3	0.22

CO2 in waste management

- The AMOUNT of CO2 generated by waste is one of the factors that influence climate change and the greenhouse effect. Waste is any substance or object that is not used or is disposed of from the process of production, consumption or other activity. Waste can be divided by origin, composition, hazard and other criteria. Waste can be handled in different ways, such as recycling, composting, incineration, landfilling, etc. Each method of waste management has its advantages and disadvantages, as well as different effects on the environment and human health.

Mark	Quantity	Measure	Total CO2, t
Non-recyclable waste	35.437	t	16.55
Recyclable waste	510.302	t	10.86

Plieno Fortas In the second half of 2023, the CO2 left in the Imprint is 379,64 tons.

- The CO2 footprint is a measure that shows how much greenhouse gas (GHG) the company emits. Reducing the CO2 footprint is an important step towards reducing the impact of climate change and adapting to new sustainability standards and requirements. Steel Fort is already taking concrete steps to reduce its CO2 footprint and achieve CO2 neutrality or even a negative CO2 footprint.

Actions taken by JSC Plieno Fortas to reduce its CO2 footprint.

- Calculates its current CO2 footprint. It helps to determine the main line from which progress and efficiency can be tracked.
- Targets for reducing its OWN CO2 footprint. It helps to indicate clear and measurable indicators that need to be achieved over a certain period of time.
- Develops and implements a strategy to reduce the CO2 footprint.
- Monitors and evaluates the results of reducing its CO2 footprint.

Thank you for your attention