

2023

CARBON FOOTPRINT REPORT 2023

Caspy Commodity Exchange JSC



We realize that we must act now to get on the path to carbon neutrality and implement measures to reduce emissions.



Erik Tanayev

**PRESIDENT
CASPY COMMODITY EXCHANGE, JSC**

On behalf of Caspy Commodity Exchange JSC, I am pleased to welcome you and present our Carbon Footprint Report 2023, which details our carbon footprint calculations.

Being the first organized trading platform for CO2 emissions on the territory of the post-Soviet space, Caspy Commodity Exchange JSC for many years has been organizing GHG emissions spot trading. In addition, since 2019, the company is officially listed on the Kazakhstan Stock Exchange KASE, which promotes the implementation of sustainability principles and disclosure of information in this area among its issuers. We realize that not only countries, but also every company and person in the world must adopt plans to reach zero emissions, and should act now to get on the right path to achieve this goal and implement measures to reduce emissions.

“Caspy Commodity Exchange” JSC, as a company that is not included in the mandatory list of legal entities regulated by the legislation of the Republic of Kazakhstan in cap&trade system, has decided to monitor emissions and achieve carbon neutrality as soon as possible. To this end, we have decided to conduct an annual inventory of direct and indirect emissions by Scope 1, 2 and 3, as well as to implement measures to reduce emissions, and in case of failure to reduce, to cover with carbon units from voluntary markets. With this step, we want to set an example for other companies in the country to follow our path and accelerate processes to reduce carbon emissions from operations.

We are confident that by working together we can achieve significant results in combating climate change and promoting sustainable development in Kazakhstan and beyond.

Sincerely,
Erik Tanayev
Caspy Commodity Exchange

Introduction

“Caspy Commodity Exchange” JSC voluntarily, in order to increase the transparency of its activities and to improve its environmental performance, decided to prepare and publish this report. The carbon footprint report is an important tool for assessing and managing the company's impact on the climate. This report provides a comprehensive analysis of greenhouse gas emissions, identifying key sources of carbon footprint and developing measures to reduce it.

This report on our company's carbon footprint includes key greenhouse gas emissions for 2023, such as CO₂, N₂O and CH₄. The main purpose of this report is to disclose Scope 1, 2 and 3 greenhouse gas emissions and further actions to reduce the carbon footprint. Carbon footprint calculations are based on a comprehensive analysis of internal and external data on the company's operations.

The report was prepared in accordance with the recommendations of the international protocol on greenhouse gases (GHG Protocol) and Standard ST RK ISO 14064-1-2019. As of the end of the reporting year, Caspian Commodity Exchange JSC emitted greenhouse gases exclusively on the territory of the Republic of Kazakhstan.

This report has been verified in accordance with the requirements of ST RK ISO 14064-3-2019. Expert opinion (professional opinion) № SSDC-0184-PM issued by ‘SSDC’ LLP dated 19.08.2024 (Accreditation Certificate № KZ.V.01.E1491, till ‘30’ December 2027).

Carbon footprint calculation methodology

For the purposes of this report, an approach based on the operational control of Caspy Commodity Exchange JSC over the sources of greenhouse gas emissions was used. Operational control means the ability to make managerial decisions regarding the operational activities of the facility, which may lead to changes in the volume of greenhouse gas emissions.

In case the amount of information is insufficient for certain objects, a combination of calculation methodologies (emissions calculation, conservative estimate methodology) is used. This approach will allow to take into account all greenhouse gas emissions of Caspy Commodity Exchange even taking into account existing gaps in the available information. This approach also takes into account the geographical location of the facilities of Caspy Commodity Exchange exclusively on the territory of the Republic of Kazakhstan, which allows to apply unified national coefficients of greenhouse gas emissions.

Scope 1 greenhouse gas emissions

The organization's boundaries include the following Scope 1 of greenhouse gas emissions:

Direct emissions (Scope 1) from sources that include greenhouse gases from mobile sources owned by CCX, as well as fugitive greenhouse gas emissions from refrigerant leaks from the air conditioning systems of mobile facilities.

Indirect emissions (Scope 2) from purchased electricity and heat for the facilities leased from CCX.

Indirect emissions (Scope 3) resulting from employee business trips and home-office travel, as well as from purchased goods (office paper).

For the purposes of this report, the following types of greenhouse gases are included within the organization's boundaries:

The following 4 of the 6 major types of greenhouse gases are reported in this report (no information on sulfur hexafluoride (SF6) and PFC emissions at the company's facilities is available at the time of this report):

CO₂
CH₄
N₂O
HFC

Scope f greenhouse gas emissions

Scope	Category	Emissions source	Activity data
Scope 1	Direct greenhouse gas emissions from mobile sources	Company's own motor transport	Type and volume of fuel used, litres
	Direct fugitive emissions from air-conditioning systems of mobile facilities	Company's own motor transport	Number of vehicles and type of refrigerant
Scope 2	Indirect greenhouse gas emissions associated with the use of grid electricity	Electricity consumption by leased premises companies	kWh of electricity consumed per year, occupied area of leased premises of the company
	Indirect greenhouse gas emissions associated with the use of heat from the grid	Heat consumption by rented premises companies	Gcal of heat per year, occupied area of leased premises of the company

Scope f greenhouse gas emissions

Scope	Category	Emissions source	Activity data
Scope 3	Category 1: Purchased goods and services - Indirect greenhouse gas emissions from the use of office paper	Use of office paper	Purchased number of paper packages per year
	Category 6: Staff secondments	Employee travel using transport that is not under the control of the organisation (Air and road transport)	Travel destinations, number of employees, mode of transport
	Category 7: Staff travel to work	Daily logistics of employees home-work	Questionnaire survey of employees

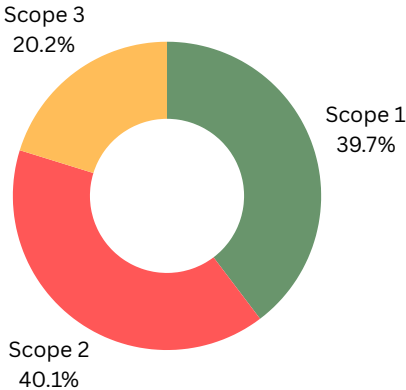
Carbon footprint of the “Caspian Commodity Exchange” JSC

According to the calculations made, the company's carbon footprint for 2023 was:

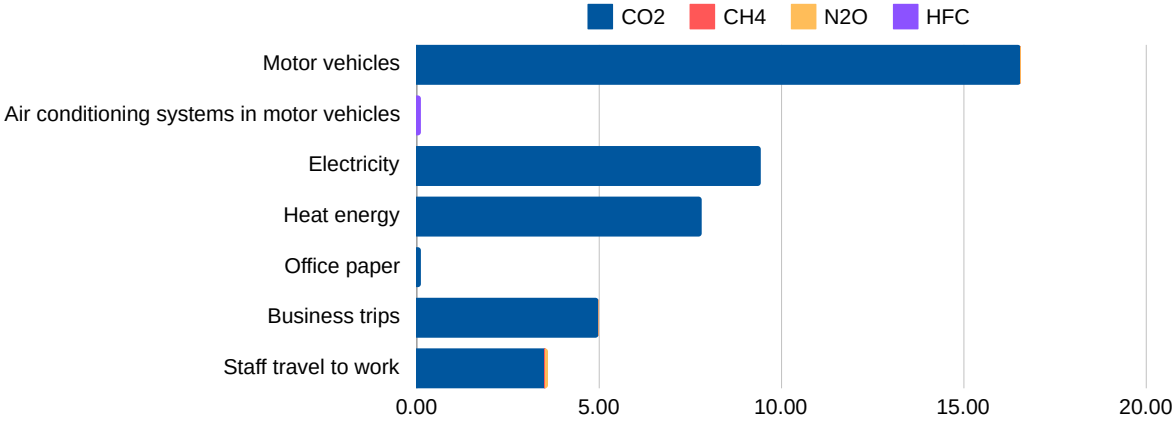


The carbon footprint in 2023 was:

42.99 tCO₂e



Greenhouse gas emissions by source in tCO₂e



Carbon footprint of the “Caspian Commodity Exchange” JSC

The diagram above shows the distribution of emissions by sources. The most significant sources of greenhouse gas emissions of JSC ‘Commodity Exchange “Caspian” are fuel combustion by the company's own vehicles in Scope 1 (16.94 tCO₂e or 39%), electricity consumption by the company's rented premises in Scope 2 (9.43 tCO₂e or 22%) and business trips in Scope 3 (4.98 tCO₂e or 12%). Meanwhile, carbon dioxide emissions are the main contributor to the company's carbon footprint, while methane and nitrous oxide emissions are negligible.

These data point to the need to focus efforts to reduce the carbon footprint, primarily in the above categories.

Scope	Category	tCO ₂ e
Scope 1	Direct greenhouse gas emissions from mobile sources	16,94
	Direct fugitive emissions from air-conditioning systems of mobile facilities	0,11

Carbon footprint of the “Caspy Commodity Exchange” JSC

Scope	Category	tCO2e
Scope 2	Indirect greenhouse gas emissions associated with the use of electricity from the grid	9,43
	Indirect greenhouse gas emissions associated with the use of heat from the grid	7,81
Scope 3	Category 1: Purchased goods and services - Indirect greenhouse gas emissions from the use of office paper	0,11
	Category 6: Staff business trips	4,98
	Category 7: Staff travel to work	3,59

Selecting the base year

The base year chosen is 2022.

Dynamics of the organisation's emissions by years

The organisation's total emissions in 2023 are 42.99 tCO₂e, in 2022 are 22.61 tCO₂e, and in 2021 are 38 tCO₂e

The 2023 emissions are greater than the 2022 emissions (by 20.39 tCO₂e or 47%) and 2021 emissions (by 4.99 tCO₂e or 11.6%) due to the fact that mobile source combustion emissions increased in 2023. And also in the 2023 report, emissions from electricity and heat utilisation increased. The base year has not been recalculated as the conditions for this have not occurred.

Measures to reduce the carbon footprint of JSC Caspian Commodity Exchange

Caspian Commodity Exchange JSC recognises the importance of monitoring and reducing carbon footprint in order to contribute to the fight against climate change. Below are activities that can help reduce greenhouse gas emissions and achieve carbon neutrality.

Scope 1

- Replacing an existing petrol-powered vehicle with a gas-powered or electric vehicle.

Scope 2

- Establishing '0-consumption' rules to switch off all appliances at the end of the working day.
- Intelligent energy management systems: introduction of automated lighting and climate control systems to optimise energy use.

Scope 3

- Utilising videoconferencing and other remote communication technologies to reduce the need for business travel where possible.
- Opting for more environmentally friendly modes of transport for business travel.
- Adopting paperless technologies and digital systems for document management.
- Choosing suppliers who are committed to sustainability and offer environmentally friendly products/services.
- Raising employee awareness of the importance of reducing carbon footprint.

Also to achieve carbon neutrality, the company can buy 42.99 tCO₂e carbon units.

Annex

The emission factors presented in the table below were used in the carbon footprint calculations.

Scope	Category	Emission factor	Source
Scope 1	Direct greenhouse gas emissions from mobile sources	Fuel - petrol CO ₂ - 69.3 t/TJ CH ₄ - 0,0038 t/TJ N ₂ O - 0.0057 t/TJ	Table 3.2.1 Guidelines for National Greenhouse Gas Inventories IPCC, 2006, Volume 2, Chapter 3
	Direct fugitive emissions from air-conditioning systems of mobile facilities	Initial refrigerant charge - 0.44 kg Conversion factor - 0.001 tonnes/kg Annual leakage rate - 20%	Table 2 Calculation of HFC and PFC emissions from the manufacture, installation, operation and disposal of refrigeration and air-conditioning equipment (version 1.0), GHG Protocol
Scope 2	Indirect greenhouse gas emissions associated with the use of grid electricity	0.797 tCO ₂ /MWh	IFI Default Grid Factors 2021 v3.1, UNFCCC
	Indirect greenhouse gas emissions associated with the use of heat from the grid	0.484 tCO ₂ /Gcal	Order of the Acting Minister of Ecology, Geology and Natural Resources of the Republic of Kazakhstan No. 260 dated 19 July 2021 'On Approval of the List of Benchmarks in Regulated Sectors of the Economy'

Annex

Scope	Category	Emissions factor	Source
Scope 3	Category 1: Purchased goods and services - Indirect greenhouse gas emissions from the use of office paper	4.74 gCO ₂ -eq./pc. A4	British Standards Institution Publicly Available Specification 2050-2008
	Category 6: Staff business trips	<u>Avia</u>	ICAO Carbon Emissions Calculator
		<u>Auto</u> Fuel - petrol CO ₂ - 69.3 t/TJ CH ₄ - 0.0038 t/TJ N ₂ O - 0.0057 t/TJ	Table 3.2.1 Guidelines for National Greenhouse Gas Inventories IPCC, 2006, Volume 2, Chapter 3
Category 7: Staff travel to work	Fuel - petrol CO ₂ - 69.3 t/TJ CH ₄ - 0,0038 t/TJ N ₂ O - 0.0057 t/TJ Fuel - diesel CO ₂ - 74.1 t/TJ CH ₄ - 0.0039 t/TJ N ₂ O - 0.0039 t/TJ	Table 3.2.1 Guidelines for National Greenhouse Gas Inventories IPCC, 2006, Volume 2, Chapter 3	