



ANS CR Carbon Footprint Report 2022

Executive Summary

1 INTRODUCTION

This document is an executive summary of the Air Navigation Services of the Czech Republic Carbon Footprint Report for the year 2022. The greenhouse gas inventory was carried out in accordance with the Greenhouse Gas Protocol (Scopes 1 to 3).

This document was prepared within the scope of Environmental Management System (EMS) which forms a part of Integrated Management System (IMS) in ANS CR. The information is intended for both internal and external stakeholders.

2 COMPANY DESCRIPTION AND BOUNDARY ANALYSIS

2.1 Company description

Air Navigation Services of the Czech Republic (ANS CR) provides air navigation services (air traffic services, air traffic flow management, airspace management) and search and rescue services - in the airspace of the Czech Republic and at Praha/Ruzyně, Brno/Tuřany, Ostrava/Mošnov and Karlovy Vary aerodromes. Further, ANS CR provides aeronautical information service and ensures flight inspection services, the operation and maintenance of its technical infrastructure and provides training of aviation personnel.

2.2 Processes description

The following processes represent the sources of company's greenhouse gas emissions:

- Air navigation services provision,
- Operation and maintenance of company's technical infrastructure,
- Training of aviation personnel,
- Facility management.

2.3 Year of calculation

This document provides information about ANS CR carbon footprint for a period from January 1st 2022 to December 31st 2022.

2.4 Inventory base year

In ANS CR, the year 2009 is the base year for the calculation of basic carbon footprint. The year 2018 is the base year for the calculation of full carbon footprint.

2.5 Organisational inventory boundary

To determine the inventory boundary a *control approach* method (see the Greenhouse Gas Protocol) was used. Therefore, the carbon footprint calculation includes greenhouse gas emissions from all facilities over which ANS CR has financial and operational control.

2.6 Operational inventory boundary

The operational inventory boundary was set as follows:

Scope	Emissions	Emission source	Relevance	Basic CF	Full CF	Emission source in detail
Scope 1	Direct emissions	Natural gas consumption	Relevant	✓	✓	Natural gas consumption
			Relevant	✓	✓	LPG consumption
		Automobile fuel consumption	Relevant	✓	✓	Automobile petrol consumption
			Relevant	✓	✓	Automobile diesel consumption
			Relevant	✓	✓	Automobile CNG consumption
		Diesel generator fuel consumption	Relevant	✓	✓	
		Own aircraft aviation fuel consumption	Relevant	✓	✓	
Scope 2	Indirect emissions from purchased energy	Refrigerant leakage	Relevant		✓	
		Electricity consumption	Relevant	✓	✓	
Scope 3	Other indirect emissions	Purchased goods and services	Relevant		✓	Office paper
					✓	Bottled water
					✓	ICT hardware
		Capital goods	Relevant		✓	Purchased automobiles
					✓	Purchased aircraft
		Fuel- and energy-related activities (not included in Scope 1 or Scope 2)	Relevant for market-based method	✓	✓	Transmission and distribution of electricity
			Relevant		✓	Transmission and distribution of natural gas
		Upstream transportation and distribution	Not relevant			
		Drinking water consumption	Relevant	✓	✓	
		Wastewater generation	Relevant	✓	✓	
		Waste generation	Relevant	✓	✓	Dangerous waste generation
				✓	✓	Other waste / energy recoverable waste generation
				✓	✓	Recyclable waste generation
				✓	✓	Mixed waste / landfilled waste generation
				✓	✓	Biodegradable waste generation
		Business travel	Relevant		✓	International business air travel
					✓	International business rail travel
					✓	International business bus travel
		Employee commuting	Relevant		✓	Employee commuting
					✓	Work from home
		Upstream leased assets	Not relevant			
		Downstream transportation and distribution	Not relevant			
		Processing of sold products	Not relevant			
		Use of sold products	Not relevant			
		End-of-life treatment of sold products	Not relevant			
		Downstream leased assets	Not relevant			
		Franchises	Not relevant			
		Investments	Not relevant			

Both *basic carbon footprint* and *full carbon footprint* were calculated in accordance with Air Navigation Service Provider Carbon Footprinting, A Best Practice Guide.

3 GREENHOUSE GASES

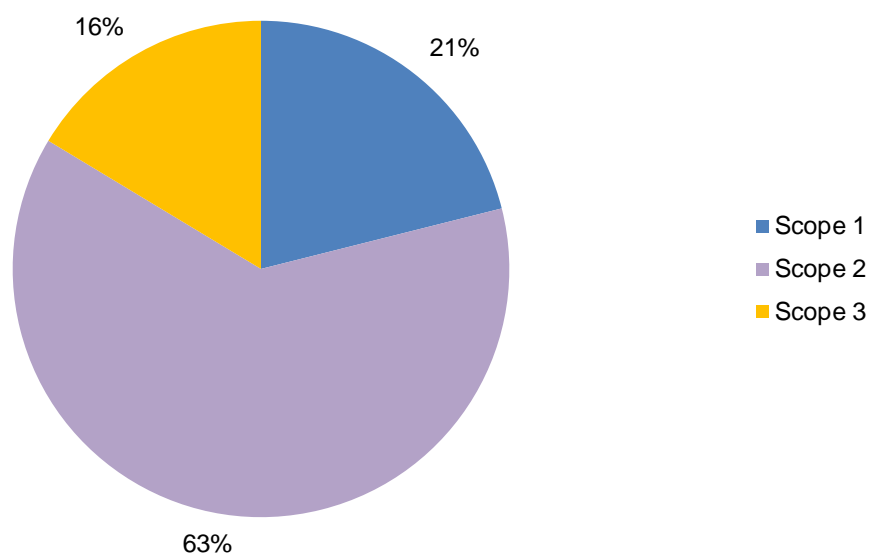
Following greenhouse gases were included in the carbon footprint calculation:

Greenhouse gas	Chemical formula	Included	Reason for inclusion / exclusion
Carbon dioxide	CO ₂	Yes	Main component of GHG emissions in all Scopes
Methane	CH ₄	Yes	Scope 3 – wastewater and waste generation
Nitrous oxide	N ₂ O	Yes	Scope 1 – combustion processes
HFC	See ISO 14064-1	Yes	Scope 1 – refrigerant leakage
PFC	See ISO 14064-1	Yes	Scope 1 – refrigerant leakage
Sulfur hexafluoride	SF ₆	No	Not relevant
Nitrogen trifluoride	NF ₃	No	Not relevant

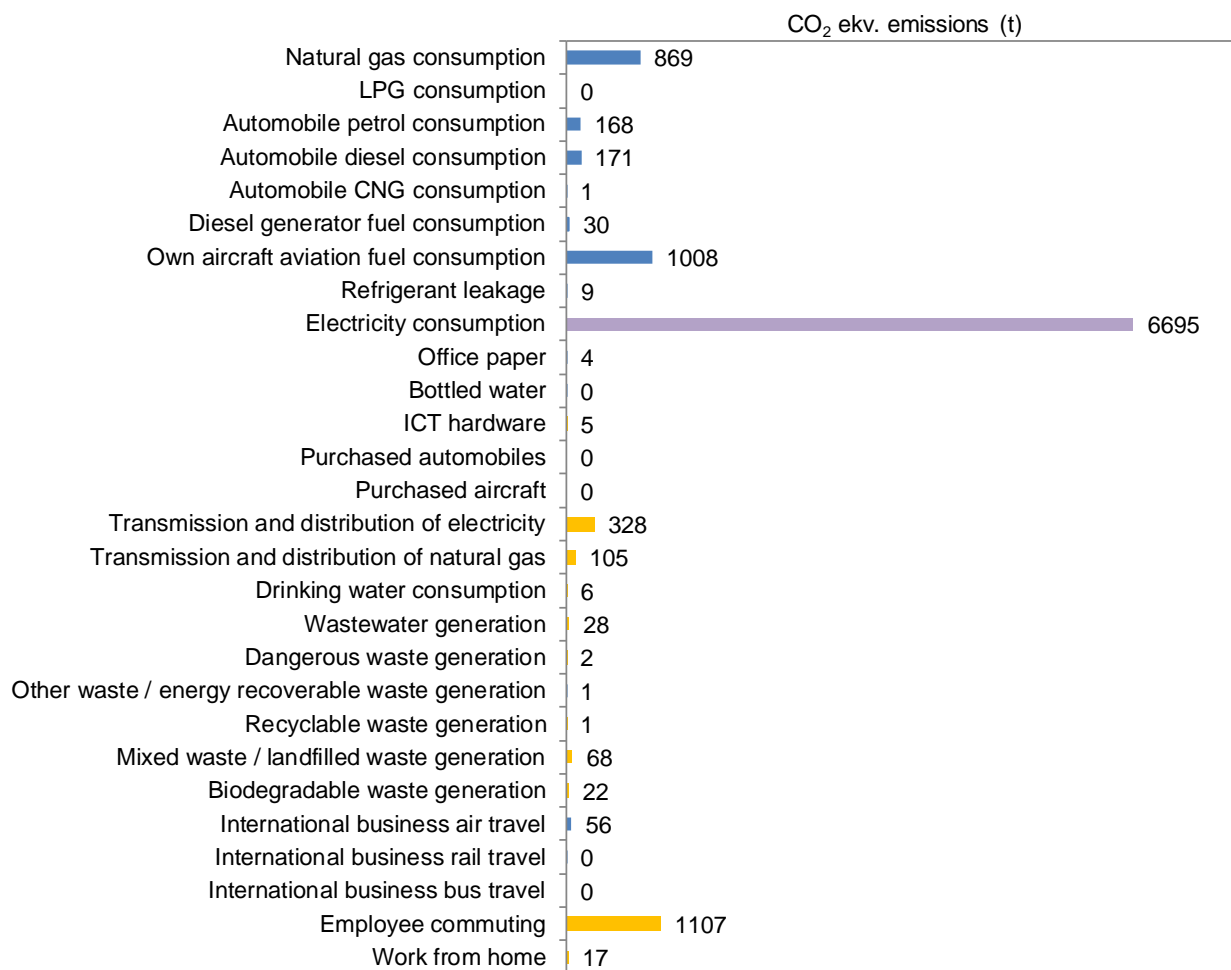
4 EMISSIONS AND RESULTS

Carbon footprints for the year 2022 with the use of location-based and market-based methods (CO₂ ekv. (t)):

**ANS CR full carbon footprint for the year 2022
(with the use of market-based method)
Scope 1, Scope 2 a Scope 3**



ANS CR full carbon footprint for the year 2022 - emission sources (with the use of market-based method)



Full carbon footprint (CO₂ ekv. (t) per year) since 2018:

Scope	2018	2019	2020	2021	2022
Scope 1	2476	2734	2173	2238	2256
Scope 2 (location-based)	8559	9023	8470	7701	7651
Scope 3 (location-based)	4956	4803	1326	1129	1319
Total (location-based)	15991	16560	11969	11068	11225
Scope 1	-	2734	2173	2238	2256
Scope 2 (market-based)	-	7964	7363	3455	695
Scope 3 (market-based)	-	5266	1664	1589	1751
Total (market-based)	-	15964	11199	7282	10702

5 CONCLUSION

The carbon footprint calculation (greenhouse gases inventory) of ANS CR for the year 2022 was carried out as both basic and **full carbon footprint**. The calculation was performed using both *location-based* and *market-based* methods (for emissions from purchased electricity).

The total amount of greenhouse gas emissions (using *location-based method*) was 11225 t CO₂ ekv. The total amount of greenhouse gas emissions (using *market-based method*) was **10702 t CO₂ ekv.**

The most significant portion of the carbon footprint is represented by emissions from purchased electricity (approx. 63 % using *market-based method*).