South Pole **Climate Solutions**

Final report

2022 Greenhouse gas (GHG) accounting report

Jet Edge

Reporting Period 01/01/2022 to 31/12/2022

October 2023

south pole
The Climate Company

Details

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Acronyms and abbreviations

CH_4	Methane
CO_2	Carbon dioxide
tCO_2e	Tonnes of carbon dioxide equivalent
GHG	Greenhouse gases
HFCs	Hydrofluorocarbons
kg	Kilogram
MWh	Megawatt hour
N_2O	Nitrous oxide
t	tonne
UNFCCC	United Nations Framework Convention on Climate Change
US	United States
WFH	Work-From-Home
GJ	Gigajoules
CEDA	Comprehensive Environmental Data Archive
BEIS	UK Department for Business, Energy & Industrial Strategy

Executive summary

This report presents the inventory of Jet Edge's operational greenhouse gas (GHG) emissions for the 2022 calendar year, based on its reported data. Jet Edge was acquired by Vista Global Holding Limited (Vista) in 2022, hence this is the first reporting year and comparisons with previous years is not possible.

An operational control approach was taken for this accounting exercise, meaning emissions for all activities conducted under the control of Jet Edge were calculated, using a combination of primary and extrapolated data.

A breakdown of emissions and relevant analysis is provided in this report for key sources of emissions, as per the categorisation specified in the GHG Protocol. All assumptions, data challenges, extrapolations, and limitations are described within this report and its annexes.

Based on the data provided by Jet Edge, the total GHG emissions reported for the year 2022 are estimated to be **228,180.25** tonnes of carbon dioxide equivalent (tCO_2e). Scope 1 emissions from the combustion of aviation fuel was the largest contributor to the footprint, and accounted for 174,800.16 tCO_2e, 76.61% of total emissions.

Key performance indicators (KPIs) are found in Table 1, and an overview of GHG emissions by source is provided in Table 2, and Figures 1 and 2. The emissions intensity of Jet Edge is 1,152.43 tCO_2e per employee and 62.49 tCO_2e per m2 in 2022.

Please note that, due to rounding of numbers, the figures in the tables in this report may not add up exactly to the totals provided.

Table 1: Summary of key performance indicators (KPIs)

Number of employees	198	**tCO_2e/**employee	1,152.42
Total area (m2)	3,652	**tCO_2e/**m2	62.49

(Source: South Pole, based on Jet Edge, 2023)

Table 2: GHG emissions by scope and greenhouse gas

Scope	Total (tCO_2e)	Percentage of total (%)
Scope 1: direct GHG emissions	174,800.16	76.61%
Scope 2: indirect GHG emissions (market based)	271.47	0.12%
Dual reporting Scope 2: indirect GHG emissions (location-based[1])	271.47	-
Scope 3: other indirect GHG emissions	53,108.63	23.27%

[1] A location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data). A market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice): it derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation or for unbundled attribute claims (e.g. RECs, GOs, etc.).

Scope	Total (tCO_2e)	Percentage of total (%)
Total GHG emissions (market-based)	228,180.25	100%

(Source: South Pole, based on Jet Edge, 2023)

Please note that since there was no residual mix emission factor available for the US, the same emission factor was used for marked-based and location-based estimation, in line with the GHG Protocol Scope 2 Guidance.

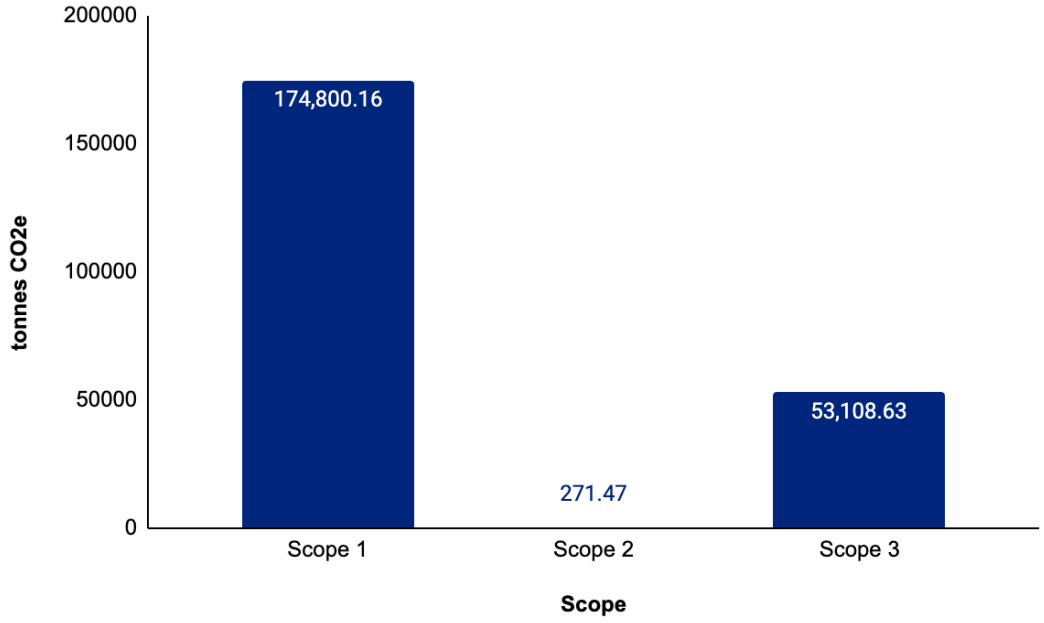

Figure 1: GHG emissions in 2022 by scope

(Source: South Pole, based on Jet Edge, 2023)

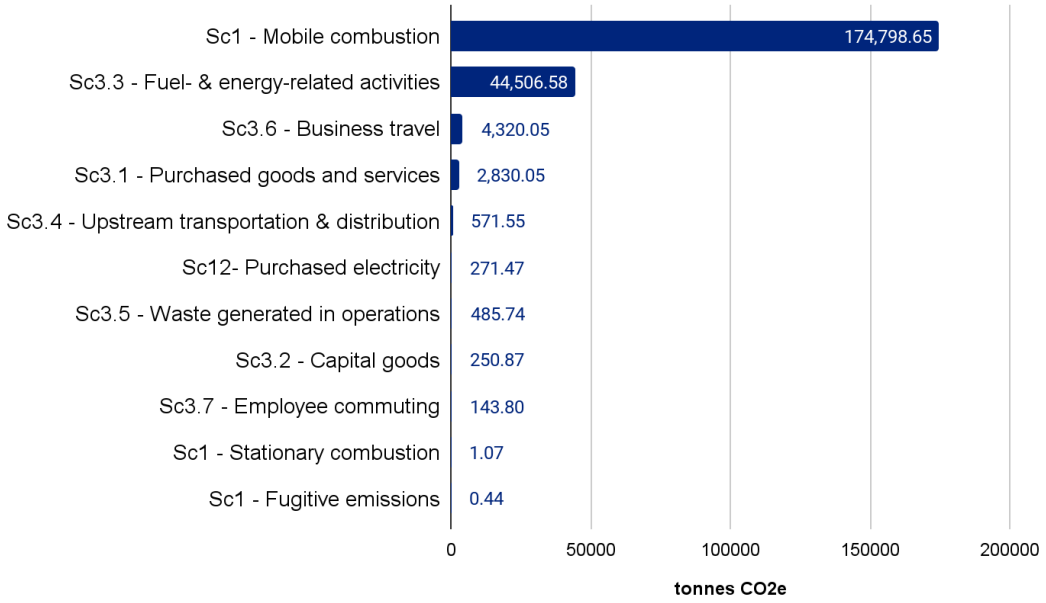

Figure 2: GHG emissions by GHG Protocol category
(Source: South Pole, based on Jet Edge, 2023)

Introduction

Vista, the world's leading global private aviation group, has previously undertaken GHG inventories for 2019, 2020 and 2021. This is the first reporting year for Jet Edge. This report provides an account of the GHG emissions from Jet Edge's global operations from 1st January 2022 to the 31st December 2022, based on reported data by the client. It includes an analysis of key sources of emissions, as well as targeted recommendations focused on data improvement and decarbonisation.

Company information and the reporting period are presented in Table 3.

Table 3: Company information

Company information	
Website	https://www.flyjetedge.com/
Business function	Private aviation company
Reporting period	January 1 to December 31, 2022

(Source: South Pole, based on Jet Edge, 2023)

Methodology

The GHG accounting and reporting procedure is based on the 'The Greenhouse Gas Protocol: GHG Protocol: A Corporate Accounting and Reporting Standard – Revised Edition' (GHG Protocol) and the complementary 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard' – the

most widely used international accounting tools for government and business leaders to understand, quantify, and manage GHG emissions. The standards were developed in partnership between the World Resources Institute and the World Business Council for Sustainable Development.

All accounting is based on the principles of the 'GHG Protocol':

- **Relevance:** establishing an appropriate inventory boundary that reflects the GHG emissions of the company and serves the decision-making needs of users;
- **Completeness:** including all emission sources within the chosen inventory boundary. Any specific exclusion is disclosed and specified;
- **Consistency:** ensuring meaningful comparison of information over time and transparently documented changes to the data;
- **Transparency:** guaranteeing data inventory sufficiency and clarity, where relevant issues are addressed in a coherent manner; and
- **Accuracy:** minimising uncertainty and avoiding systematic over- or under-quantification of GHG emissions.

Global warming potential (GWP)

Global warming potential (GWP) is a measure of the climate impact of a GHG compared to carbon dioxide over a time horizon. GHG emissions have different GWP values depending on their efficiency at absorbing longwave radiation, and the atmospheric lifetime of the gas. The GWP values used in GHG accounting include the six GHGs covered by the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol, as presented in Table 4. These are the GWP used by the United Kingdom Department for Business, Energy and Industrial Strategy (BEIS) and are based on the 'Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5)', unless otherwise stated.

Table 4: Applied global warming potentials (GWPs)

GHG	GWP (100 years)
Carbon dioxide (CO_2)	1
Methane (CH_4)	28
Nitrous oxide (N_2O)	265
Hydrofluorocarbons (HFCs)	See IPCC AR5
Perfluorocarbons (PFCs)	See IPCC AR5
Refrigerants	See IPCC AR5

(Source: IPCC AR5, 2014)

System Boundaries

Organisational boundaries

Jet Edge's GHG inventory follows the operational control approach, in accordance with the GHG Protocol. Under the operational control approach, a company accounts for 100% of emissions from

operations over which it or one of its subsidiaries has operational control. This GHG inventory covers all activity from Jet Edge's offices.
Table 5 shows the sites that were included in the 2022 GHG inventory.

Table 5: Key figures for Jet Edge's sites

Site location	Type of facility	Area (m^2)	Headcount
Jet Edge Colombus	Headquarter	2,323	125
Jet Edge Van Nuys	Office / hangar	1,189	70
Jet Edge Maryland	Office	140	3
Total	-	3,652	198

(Source: South Pole, based on Jet Edge, 2023)

Operational boundaries

Under the 'GHG Protocol', emissions are divided into direct and indirect emissions. Direct emissions are those originating from sources owned or controlled by the reporting entity. Indirect emissions are generated as a result of the reporting entity's activities but occur at sources owned or controlled by another entity.

The direct and indirect emissions are divided into three scopes as found below.

Scope 1

Scope 1 emissions are all carbon emissions originating from sources that are directly managed by the organisation (direct GHG emissions). This includes the emissions from the combustion of fossil fuels in mobile and stationary sources (e.g. owned or controlled aircrafts, boilers, power generators and vehicles) and carbon emissions generated by chemical and physical processes, as well as fugitive emissions from the use of cooling and air-conditioning (AC) equipment. Table 6 (below) gives an overview of the emission sources considered in scope 1, based on the information provided by Jet Edge.

Table 6: Overview of scope 1 emission sources for 2022

Category	Emission sources	Boundary and justification for exclusion
Stationary combustion	Generation of electricity and heat	Included
Mobile combustion	Company-owned or leased vehicles / Fuels for mobile sources for passenger aircraft	Included
Physical or chemical processing	Manufacture or processing of chemicals and materials	Not applicable
Fugitive emissions	Emissions from the use of cooling systems and AC equipment, leakage from CO_2 tanks or methane tubes	Included

Scope 2

Scope 2 includes indirect GHG emissions from the generation of purchased electricity, steam, heat or cooling purchased by the organisation from external energy providers.

As required by the GHG Protocol, Scope 2 emissions are reported using both the location-based method and the market-based method[2]. This dual reporting allows corporations to compare their individual purchasing decisions to the overall GHG-intensity of the grids on which they operate.

The market-based method reflects emissions that result from electricity purchases that the company has purposefully chosen. When a contract is set up for the sale of electricity and the origin of energy generation can be guaranteed, then those specific and relevant emissions factors can be applied. The location-based method applies average emission factors that correspond to the grid where consumption occurs. The default method applied to Jet Edge reporting is market-based; location-based results are shown for completeness and transparency.

Table 7 presents an overview of the emission sources considered in scope 2.

Table 7: Overview of scope 2 emission sources for 2022

Category	Emission sources	Boundary
Electricity	Purchased electricity	Included
Steam	Purchased steam	Not applicable
District heating	Purchased heating	Not applicable
District cooling	Purchased district cooling	Not applicable

Scope 3

Scope 3 includes other indirect emissions, such as emissions from the extraction and production of purchased materials and services, vehicles not owned or controlled by the reporting entity, outsourced activities, or waste disposal.

According to the 'GHG Protocol', companies shall separately account for and report for emissions from Scope 1 and 2. Scope 3 is an optional reporting category according to the 'GHG Protocol', but as it is the most important scope for many organisations, companies are expected to assess at least the most relevant categories. In addition, it is best practice to include scope 3 emissions and it is a requirement for setting science-based targets (SBTs).

Table 8 presents an overview of the emission sources considered in Scope 3.

[2] A location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data). A market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice): it derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation for unbundled attribute claims (e.g. RECs, GOs, etc.).

Table 8: Overview of scope 3 emission sources for 2022

Category	Emission sources	Boundary
Purchased goods and services	Purchased goods (raw materials) and services	Included
Capital goods	Production of capital goods (information technology [IT] equipment, machinery, buildings etc.)	Included
Fuel- and energy-related activities	Emissions from fuel and electricity generation, including transmission and distribution (T&D) losses	Included
Upstream transportation and distribution	Transportation and distribution of goods and services purchased by the reporting company	Included
Waste generated in operations	Waste management of operational waste (landfilling, recycling, etc.)	Included
Business travel	Travel and accommodation of employees/contractors	Included
Employee commuting and teleworking	Employee travel between home and work and incremental emissions related to working from home	Included
Upstream leased assets	Operation of assets leased by the organisation (lessee) in the reporting year and not included in scope 1 or 2	Not material. Not included
Downstream transportation and distribution	Transportation and distribution of products not purchased by the reporting company	Not material. Not included
Processing of sold products	Processing of intermediate products sold by the organisation	Not material. Not included
Use of sold products	Emissions from the use of sold products (e.g. energy consumption during use)	Not material. Not included
End-of-life treatment of sold products	Waste disposal and treatment of sold products	Not material. Not included
Downstream leased assets	Operation of assets owned by the company (lessor) and leased to other entities, not included in scope 1 or 2	Not material. Not included
Franchises	Operation of franchises not included in scope 1 or 2	Not material. Not included
Investments	Operation of investments not included in scope 1 or 2	Not material. Not included

Data inventory and assumptions

Overall, the data inventory, emission factors, and assumptions are based on the 'GHG Protocol'. Unless otherwise specified, all emission values in this report are given in metric tonnes of carbon dioxide equivalent (tCO_2e).

Where activity data of the inventory was lacking, extrapolations and estimations were made. The complete overview of activity data, extrapolations, and estimations is summarised in Annex II. Whilst every effort has been made to calculate emissions as accurately as possible, GHG emissions calculations carry an inherent level of limitation and uncertainty. As standard practice and in line with the GHG Protocol, the choice of assumptions and emission factors followed a conservative approach.

The quality of activity data provided for a GHG inventory has a significant impact on the reliability and accuracy of emissions calculations. Primary activity data, such as the kWh of electricity purchased within a reporting year, yields to the highest quality calculations. Spend based data, which relies on a far greater number of assumptions, results in the least accurate.

Results

Based on the data provided by Jet Edge, the total GHG emissions for the year 2022 are estimated to be **228,180.30 tCO_2e.** Table 9 below illustrates the key figures in terms of GHG emissions (in tCO_2e) and energy intensity (in gigajoules [GJ]) relevant to corporate sustainability reporting, in accordance with the GRI Standards. Please note that, due to rounding of numbers, the figures may not add up exactly to the total provided.

Table 9: Key figures according to the Global Reporting Initiative (GRI)

GRI Standard		Topic	Quantity	Unit
302-1	e	Energy consumption within the organisation	2,447,143.00	GJ
	a	Total fuel consumption from non-renewable sources	2,444,757.68	GJ
		Aviation fuel	2,444,736.30	GJ
		Natural gas	21.38	GJ
		Diesel	0.0	GJ
	b	Total fuel consumption from renewable sources	0.00	GJ
	c	Total electricity consumption	2,385.31	GJ
305-1	a	Direct GHG emissions (scope 1)	174,800.16	tCO_2e
305-2	a	Location-based energy indirect GHG emissions (scope 2)	271.47	tCO_2e
	b	Market-based energy indirect GHG emissions (scope 2)	271.47	tCO_2e
305-3	a	Other indirect GHG emissions (scope 3)	53,108.63	tCO_2e
302-4		GHG emissions intensity	1,152.43	tCO_2e/ employee

(Source: South Pole, based on Jet Edge data, 2023)

Table 10: GHG emissions by scope and activity for 2022

Activity	Consumption	Unit	Emissions (tCO_2e)	Percentage of total (%)
Scope 1: direct GHG emissions			174,800.16	76.61%
Stationary combustion			1.07	<0.01%
Natural gas	5.06	MWh	0.91	<0.01%
Natural gas	80.00	m3	0.16	<0.01%
Mobile combustion			174,798.65	76.61%
Aviation fuel	19,055,762.00	gal	174,798.65	76.61%
Fugitive emissions			0.449	<0.01%
Refrigerants	3,652.16	m2	0.44	<0.01%
Scope 2: indirect GHG emissions from purchased electricity, heating and cooling (market-based)			271.47	0.12%
Purchased Electricity			271.47	0.12%
Grid	662.59	MWh	271.47	0.12%
Scope 3: other indirect GHG emissions			53,120.80	23.27%
Category 1: Purchased goods and services			2,830.058	1.24%
Non flight-related (i.e. training, food and drink products, marketing materials, etc)	25,066,522.00	USD	2,782.27	1.24%
Non flight-related (i.e. training, food and drink products, marketing materials, etc)	N/A	volumes/units	47.78	<0.01%
Category 2: Capital goods			573.52	0.11%
Non flight-related (IT equipment)	1,081.00	units	250.87	0.11%
Category 3: Fuel- and energy-related activities			37,304.77	19.51%
Aviation fuel	19,055,762.00	gal	44,494.20	19.51%
Natural gas	5.06	MWh	0.17	<0.01%
Natural gas	80.00	m3	0.03	<0.01%
Electricity	662.59	MWh	12.17	<0.01%
Category 4: Upstream transportation and distribution			571.55	0.25%
Ground transportation	1,197,273.30	USD	571.55	0.25%
Category 5: Waste generated in operations			485.75	0.21%
Commercial and industrial waste	414.23	ton	157.31	0.07%
Glass	361.73	ton	6.72	<0.01%

Activity	Consumption	Unit	Emissions (tCO_2e)	Percentage of total (%)
Oil waste	507.08	ton	10.79	<0.01%
Paper/Cardboard	553.58	ton	310.91	0.14%
Category 6: Business travel			4,320.05	1.89%
Air travel	18,728,118.80	pkm	3,466.17	1.52%
Ground transportation (rental car, taxi, e-bike and train)	1,985,480.00	USD	853.88	0.37%
Category 7: Employee commuting			143.8	0.06%
Car	501,368.56	km	109.96	0.05%
Other (taxi and motorbike)	119,839.76	km	24.21	0.01%
Public transport (bus and train)	8,246.83	pkm	0.68	<0.01%
Teleworking	6,660.00	person days	8.94	<0.01%
Walk	14,889.17	pkm	0.00	0.00%
Total GHG emissions (location-based)			228,180.25	-
Total GHG emissions (market-based)			228,180.25	100%

(Source: South Pole, based on Jet Edge, 2023)

Overall results - Vista

Figure 3 presents a breakdown of Vista's GHG emissions for each of its eight business units. In 2022 Jet Edge is the second in terms of highest GHG emissions of all eight global entities, at 228,180.25, tCO_2e, accounting for 15.8% of the overall global footprint.

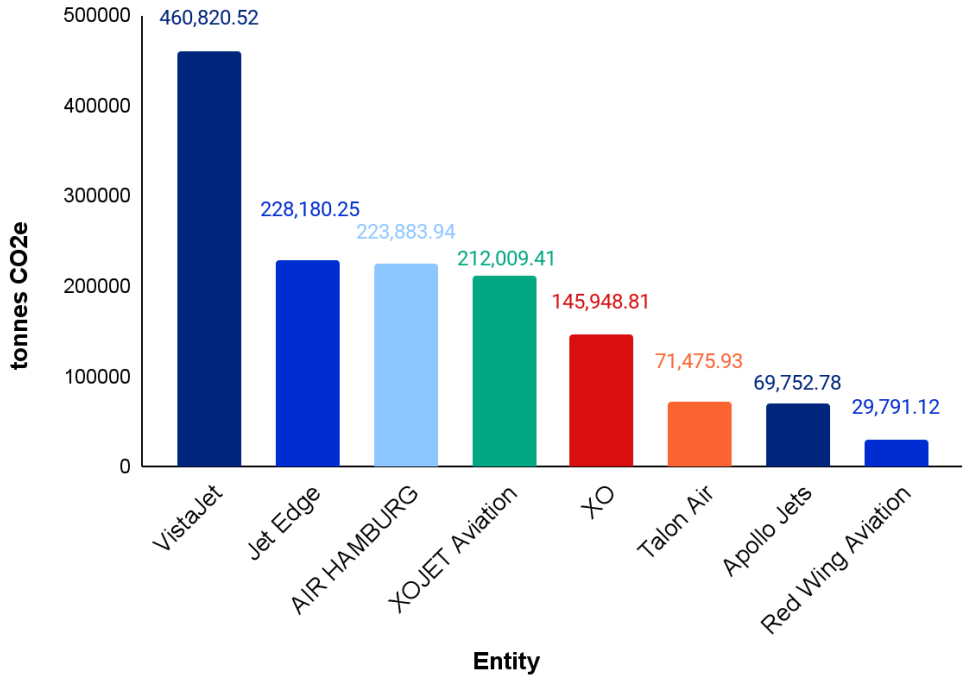

Figure 3: Vista overall 2022 GHG emissions by business entity
(Source: South Pole, based on Vista 2023)

Site-level results

Figure 4 presents a breakdown of emissions for each of Jet Edge's 3 sites. Over 99% of emissions fall under Jet Edge's global operations in this GHG inventory. This is partly because scope 1 and scope 3 (Category 3) emissions from aviation fuel fall under Jet Edge's global operations, but also because a significant quantity of scope 3 data for business travel, upstream transportation and distribution, and purchased goods and services have been provided at the entity ('Jet Edge') level rather than site level for this inventory.

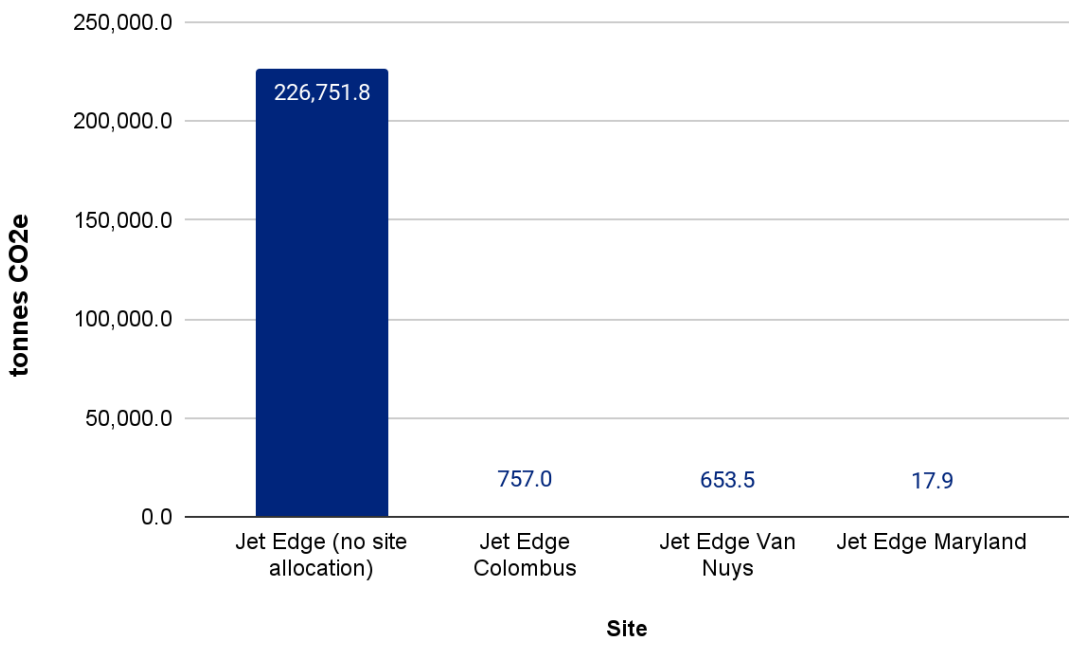

Figure 4: Jet Edge's 2022 GHG emissions by site
(Source: South Pole, based on Jet Edge, 2023)

Category-level results

Figure 5 presents a breakdown of Jet Edge's overall 2022 emissions by scope. The vast majority of emissions - 76.61% - fall under Scope 1. This is largely driven by emissions associated with the burning of aviation fuel, which accounts for a rounded 100% of the Scope 1 footprint. 23.27% of emissions fall under Scope 3, and 0.12% under Scope 1.

Figure 6 further provides a breakdown of emissions by GHG Protocol category.

The upstream scope 3 emissions associated with burning aviation fuel - which are accounted for under *Category 3 - Fuel and energy related activities* is the second largest source of emissions, and specifically accounts for 19.50% of the 2022 footprint. Overall, aviation fuel is therefore responsible for 96% of the total emissions for 2022.

Business travel and Purchased goods and services are the third and fourth highest sources of emissions, accounting for 1.89% and 1.24% of the total footprint respectively.

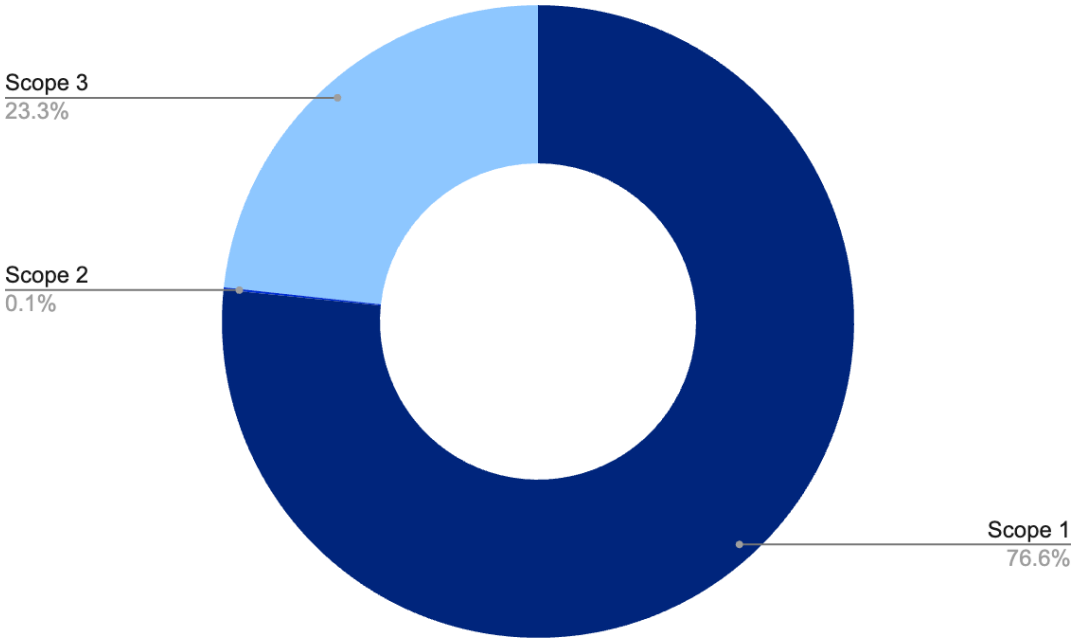

Figure 5: Jet Edge's 2022 GHG emissions by scope
(Source: South Pole, based on Jet Edge, 2023)

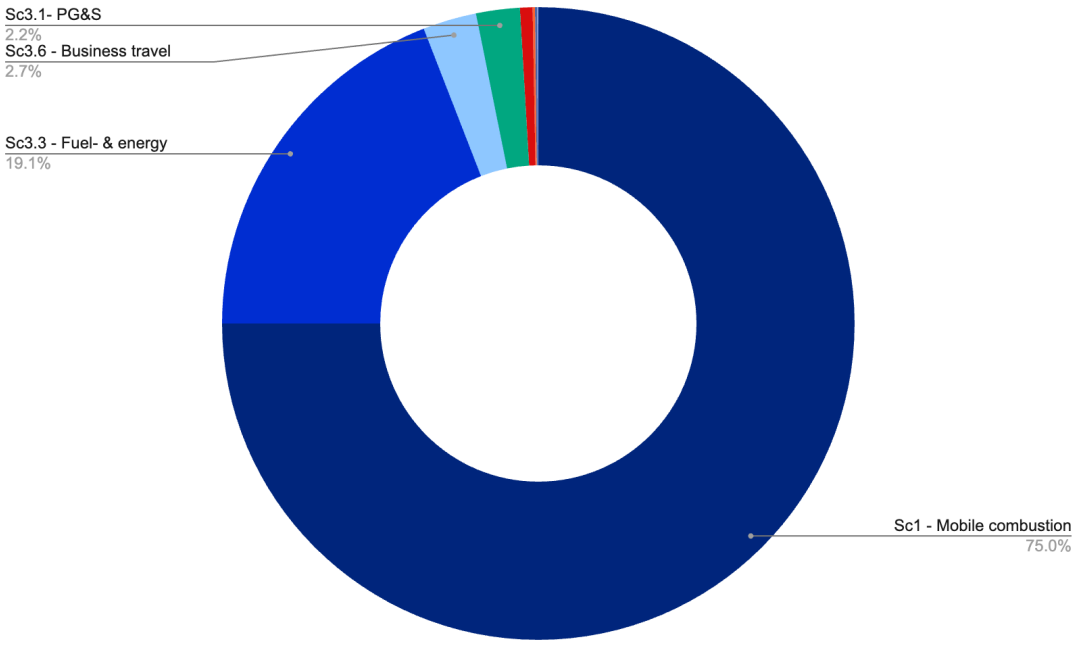

Figure 6: GHG emissions in 2022 by GHG Protocol category
(Source: South Pole, based on Jet Edge, 2023)

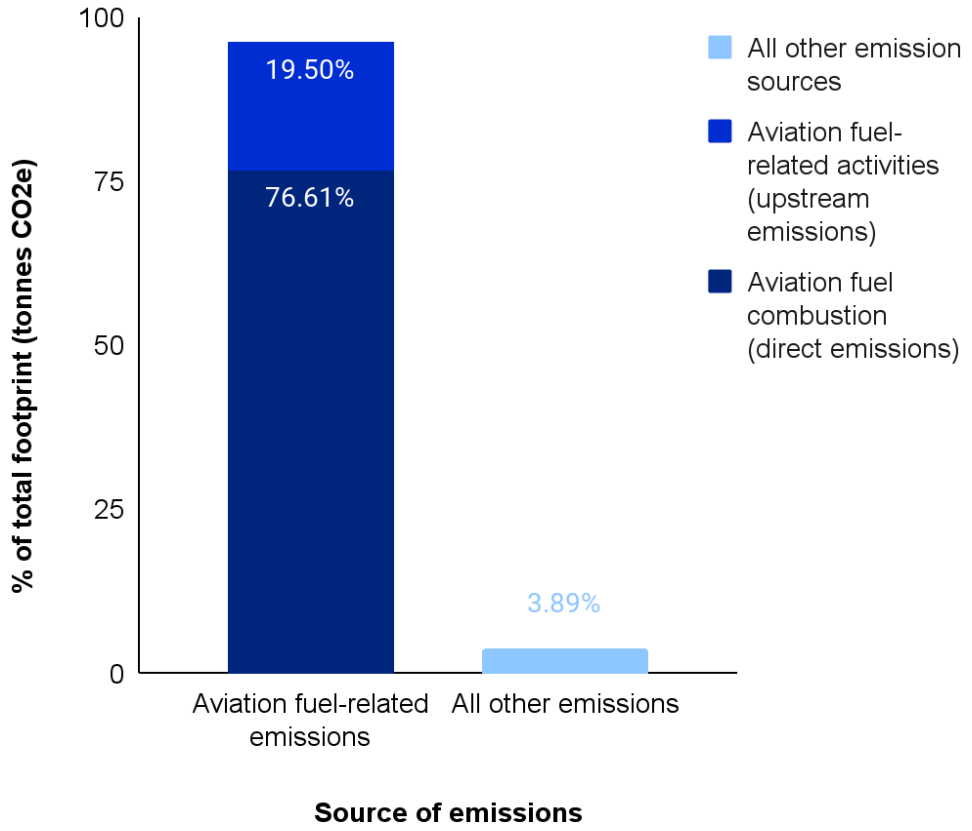

Figure 7: A comparison of Jet Edge's aviation fuel emissions and all other emissions
(Source: South Pole, based on Jet Edge, 2023)

Conclusions

The annual measurement of GHG emissions is an essential first step that organisations must take on their journey to mitigating climate impact.

This report has presented a summary of Jet Edge's 2022 GHG footprint. The mobile combustion of aviation fuel is the primary driver of emissions.

It is important that Jet Edge takes steps to continue improving the quality and accuracy of its GHG footprint, and implements measures to decarbonise its operations. Glasgow's COP26 and the 2021 IPCC report shone a spotlight on the critical need to achieve Net Zero emissions to keep global warming within the 1.5 degree limit. Private aviation is a highly emissions intensive industry, and Jet Edge has an important role to play in this transition.

In order to improve the quality of the GHG footprint, the following courses of action are recommended:

- **Collect primary activity data:** Jet Edge can improve data quality by collecting primary consumption data as activity volumes for all sources of emissions. This allows for far more accurate and reliable GHG calculations than spend-based data.
- **Continue establishing formalised data collection procedures:** Formalised data collection procedures, with internal quality controls, supplier communication, assigned roles, and

clear frameworks allow for a more streamlined data collection processes and limits the risk of missed data.

- **Review data assumptions in Annex 2:** Annex 2 in this document provides a more granular breakdown of key data assumptions. Treat these as priority emission sources to act on and improve data collection procedures for.

The following next steps are recommended for Jet Edge to continue on its decarbonisation journey.

- **Prioritise investment in and uptake of Sustainable Aviation Fuel (SAF):** The 2022 GHG footprint re-emphasised the role of aviation fuel in Jet Edge's footprint. Decarbonising fuel, for instance by switching to SAF, should be an absolute priority for Jet Edge to act on its climate ambitions.
- **Set science based targets with SBTi:** The Science Based Targets initiative drives ambitious climate action in the private sector by enabling companies to set science-based emissions targets. Jet Edge should demonstrate its commitment to sustainability in the aviation sector, and cement its position as a sector leader, by setting targets with SBTi.

Annex I

Emission factors sources

Table 11: Emission factors sources

Activity	Emission factor reference[3]
Fuel	BEIS 2022, SBTi Aviation Tool 2.0
Refrigerants	ADEME 2022; BC V8.8
Electricity (market-based)	eGrid 2021
Electricity (location-based)	eGrid 2021
Purchased goods and services	BEIS 2022, CEDA Global 6, 2022
Capital goods	CEDA Global 6, 2022
Freight	US EPA 2022, BEIS 2022, CEDA Global 6, 2022
Waste	BEIS 2022
Business travel	BEIS 2022, CEDA Global 6, 2022
Commuter travel	BEIS 2022
Teleworking	IEA energy indicators 2022; Anthesis, 2020; BEIS 2022; eGRID, 2021; SP custom EF's

[3] South Pole derives its emission factors from reliable and credible sources. South Pole is not responsible for inaccuracies in emission factors provided by third parties.

Annex II

Data assumptions and extrapolations

Table 12: Data assumptions and extrapolations

Category	Sub-Category	Relevant sites	Assumption
Purchased heat	Heating	Maryland	Emissions from heating consumption were estimated based on average sectoral heat intensity metrics from the U.S. Energy Information Administration (EIA). Heating method was assumed to be natural gas.
Fugitive emissions	Refrigerants	All	Emissions from refrigerant leakage were estimated based on average sectoral consumption values and applied to Jet Edge sites based on total site area.
Purchased electricity	Electricity	Maryland and Van Nuys	Emissions from purchased electricity were estimated based on average kWh/m2 from the primary data of the other Air Hamburg sites electricity consumptions.
Purchased goods and services	Water supply	Maryland and Van Nuys	Emissions from water supply were estimated based on figures for country/regional level water consumption and extrapolated based on site headcount.
Waste generated in operations	All	Columbus and Van Nuys	Emissions from waste generation were estimated based on country/regional figures for waste consumption, waste type and waste disposal, and applied to each site based on the area (m^2).
Business travel	All	All	When applicable, Scope 3 emissions include Well-to-tank (WTT) emissions, which are those associated with the upstream production and distribution of the fuel and energy.
Business travel	Flights	All	Flight emissions include a radiative forcing index (RFI) multiplier of 1.9, which accounts for the effects of non-CO2 emissions (contrails, water vapour, nitrogen oxides and soot). This is in line with BEIS recommendations, which are informed by wider industry research.
Employee commuting	Teleworking	All	Teleworking emissions were estimated based on country and regional electricity and heating consumption for employees working from home, and applied to sites based on headcount.
Employee commuting	Travel	All	Employee travel emissions were estimated based on country and regional travel data for modes of commuter transport and applied to sites based on headcount.


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