



Giza Systems Carbon Footprint Report

For Fiscal Year 2024

Executive Summary

The year 2024 marked the second chapter in Giza Systems’ journey toward climate accountability. Following the baseline established in our inaugural GHG report in 2023, this year’s analysis presents a clearer and more complete picture of our environmental footprint. In 2024, Giza Systems reported 1,711.97 metric tons of CO₂e, a figure 22% higher than 2023.

This increase does not only reflect higher activity, but also the deliberate decision to expand our measurement boundaries to capture sources that were not included in the baseline year.

The growth largely stems from the expansion of Scope 3 reporting to reflect more dimensions of our value chain, both upstream, such as freight and purchased goods, and downstream, such as business travel and services. By doing so, we capture a fuller picture of our supply chain’s climate impact, aligning our disclosures with international best practices.

The data reveals that electricity consumption and business travel remain our largest emission sources, together representing just over two-thirds of the footprint, a share broadly consistent with last year, even as reporting expanded. Freight and the use of company-owned vehicles continue to contribute significantly, while smaller categories like waste and office materials provide insight into the everyday impacts of our operation.

By presenting this comprehensive view of our environmental footprint, we are advancing transparency and laying the groundwork for more targeted reduction strategies in the years ahead. This report reflects Giza Systems’ commitment to continuous improvement, holding ourselves to a higher standard and ensuring that reduction efforts are strategically focused and data-driven.

GHG Breakdown Emissions in Metric Tons of Carbon Dioxide Equivalent (mtCO₂e)

Total Emissions	1,711.97
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Total Scope 1	233.51
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Total Scope 2	692.64
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Total Scope 3	785.82
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mtCO ₂ e Emissions per Employee	0.91
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Giza Systems GHG At a Glance

GHG Breakdown Emissions in Metric Tons of Carbon Dioxide Equivalent (mtCO₂e)

Category	Emission Source Category	mtCO ₂ e
SCOPE 1 Direct emissions arising from owned or controlled stationary sources that use fossil fuels and/or emit fugitive emissions	Fugitive Emissions	0
	Stationary Combustion	54.42
	Mobile Combustion	179.09
	Total	233.51
SCOPE 2 Location-based emissions from the generation of purchased electricity, heat, steam or cooling	Electricity	692.64
	Total	692.64
SCOPE 3 Upstream emissions: indirect emissions that occur in the value chain before company's operations Downstream emissions: indirect emissions that occur after company's operations	Purchased Goods & Services	17.76
	Waste Generated in Operations	20.19
	Upstream Transportation and Distribution	234.38
	Business Travel	513.49
	Total	785.82
Total Emissions		1,711.97

Giza Systems reported total emissions of 1,711.97 mtCO₂e, in 2024, distributed across Scopes 1, 2, and selected categories of Scope 3. Scope 1 accounted for 14% of the footprint, primarily from fuel use in company-owned vehicles and, to a lesser degree, stationary combustion. As in the prior year, no fugitive emissions were recorded during the reporting year. Scope 2 represented 40% of the footprint, all stemming from electricity purchased from Egypt's national grid. This made electricity the single-largest emission source for the year. Scope 3 was slightly higher still, at 46%, underscoring that almost half of the company's impact occurs outside of its immediate operations in the wider value chain.

Within Scope 3, business travel stood out as the dominant category, representing 30% of total emissions. This reflects the nature of our regional operations, where in-person collaboration with clients and partners is often essential. Freight activities contributed a further 14%, underlining the central role of logistics in enabling our regional service delivery. Other Scope 3 categories, including purchased goods and services and waste generated in operations, played smaller roles, but their inclusion in this year's inventory demonstrates a commitment to more comprehensive measurement and accountability.

Collectively, electricity and business travel still represent the structural core of Giza Systems' footprint, accounting for nearly 70% of total emissions. Vehicles and freight add another significant share, underscoring the combined weight of mobility and logistics in our carbon profile. By contrast, categories such as waste, office materials, and purchased services contribute a smaller fraction, yet their inclusion ensures that the footprint reflects the full range of daily operational choices. These categories, while modest in scale, will become increasingly relevant as reductions are achieved in the larger sources.

Methodology and Scope

Followed Protocols & Standards

This report follows international best practices, including the GHG Protocol, ISO 14064, and ISO 14068, to provide a comprehensive carbon footprint assessment. Calculations were carried out in line with the GHG Protocol Corporate Standard, ISO 14064-1, and the 2006 IPCC Guidelines (2019 Refinements), with activity-specific guidance from ICAO applied for flights.

Reporting Period

The reporting period for this carbon footprint assessment runs from January 1 to December 31, 2024.

As Giza Systems’ second GHG report, this year’s analysis builds on the 2023 baseline while expanding coverage to provide a more comprehensive view of our footprint.

Boundaries & Scope

Organizational Boundaries

In calculating GHG emissions, and in line with the GHG Protocol, Giza Systems adhered to the operational control approach, including emissions from facilities where the company has the authority to implement operational policies.

Basis of Calculation

The general calculation approach for the emissions, evaluated in mtCO₂e, is multiplying the activity data with its corresponding emission factor.

E = A x EF

E = GHG Emissions in mtCO₂e
A = Activity unit
EF = Emission Factor



Scope 1: Diesel and natural gas for stationary uses; fuel and distance data for company vehicles.



Scope 2: Metered electricity at HQ (location-based method).



Scope 3: Primary records (flights, hotels, shipments, procurement, waste) supplemented by conservative proxies where needed. Mode, weight and distance were applied for freight; flight distances were categorized by ICAO ranges; hotel nights used standardized per-night factors.

Emission Factors

Emission factors were sourced from internationally recognized databases, including:

- IPCC 2006/2019 refinements: fuels
- ERA: electricity grid factor
- DEFRA 2023: waste, water, freight, purchased goods & services, hotels.
- ICAO: flights

Data Quality & Assumptions

Giza Systems follows a rigorous process to ensure relevance, completeness, and accuracy in reporting. The process begins with the collection of primary activity data from invoices, utility bills, vehicle logs, travel records, and procurement systems. This is supplemented with secondary data, proxies, and assumptions where primary records are unavailable.

Key primary data sources include:

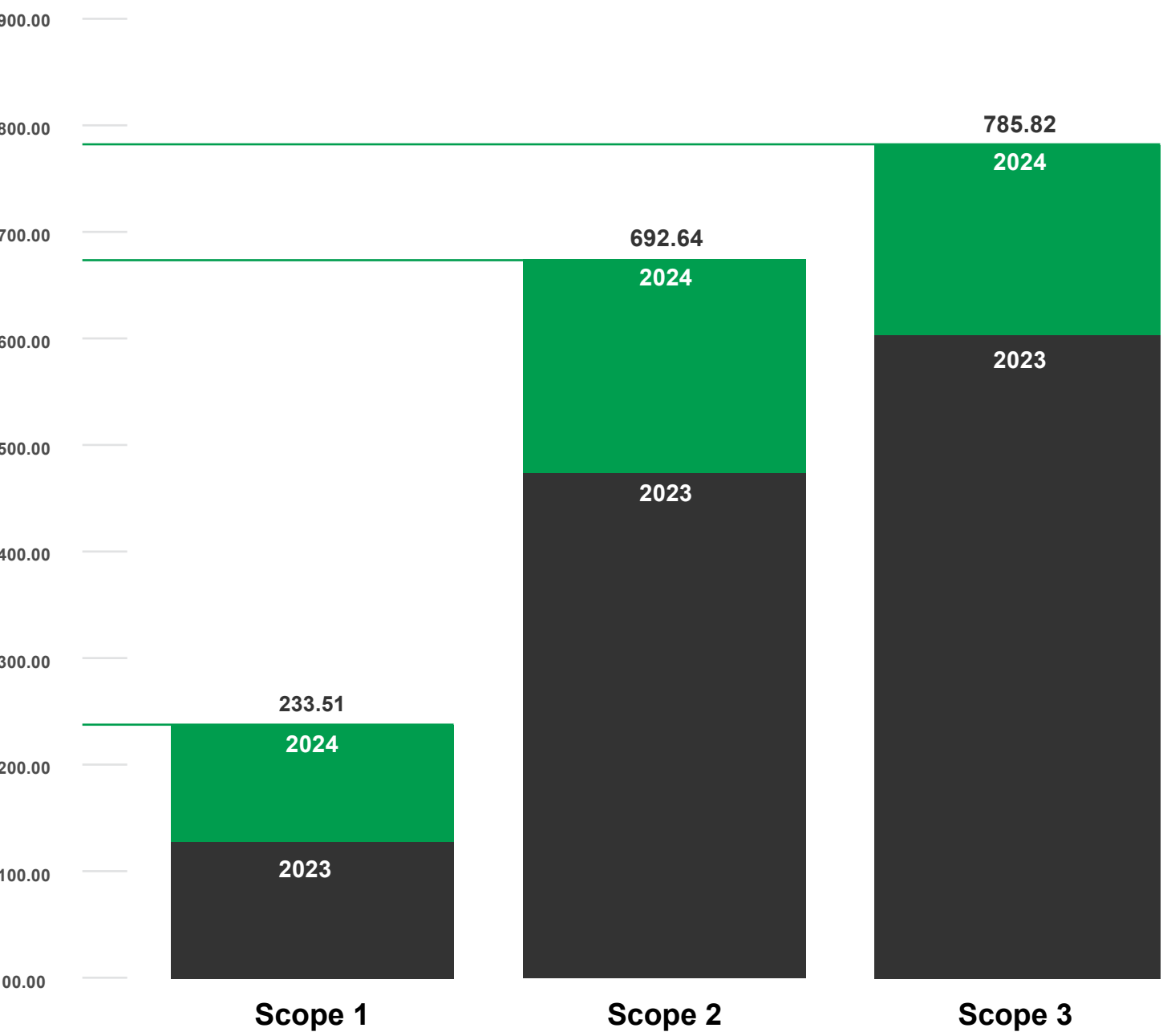
	Company Vehicles: Kilometer readings from Giza Systems’ owned vehicles. Cars were set as ‘medium’ type.
	Energy Consumption: Utility bills from consumption meters to determine electricity usage.
	Business Travel: Flight and hotel booking records for employee travel.
	Procurement: Records of procurement included documentation of purchased goods and services. For purchased services, emissions were calculated in line with Microsoft’s guidance, using expected user license allocations as the basis.
	Supply Chain & Logistics: Freight records for both local and international transportation.


Scope 1: Stationary combustion and mobile combustion included. Fugitive emissions are excluded as no leaks detected.

Scope 2: Electricity consumption included.

Scope 3: Business travel, upstream freight, waste generated in operations, purchased goods & services, and purchased services included. Other Scope 3 categories are excluded due to data limitations.

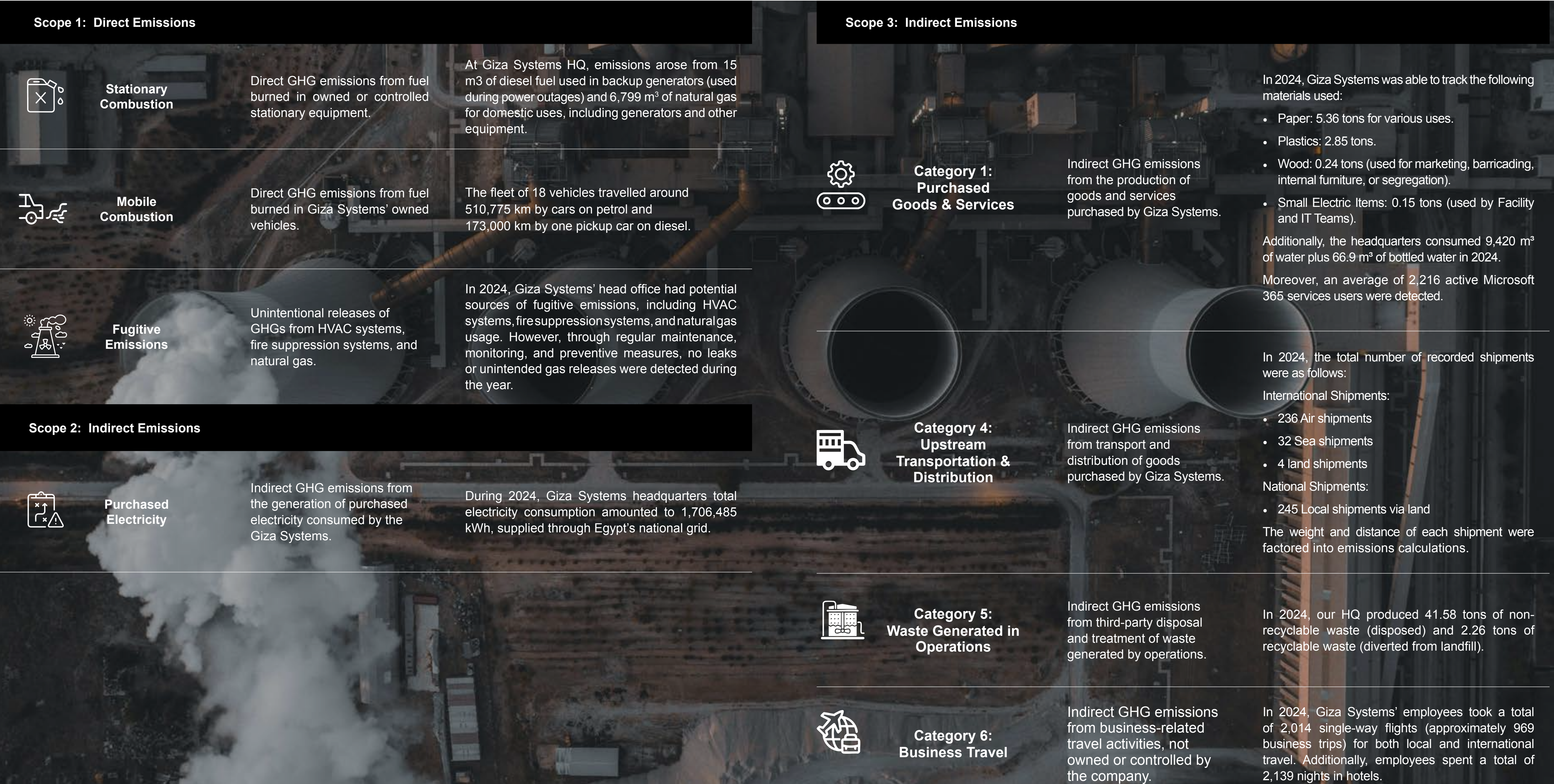
Carbon Footprint Analysis



The comparison of 2023 and 2024 reveals both continuity and significant change. Total emissions rose by 22% to 1,711.97 mtCO₂e. This rise is a result of both increased activity and the decision to expand reporting boundaries. Scope 1 nearly doubled, reflecting higher fuel use in company vehicles and greater reliance on generators. Scope 2 grew by about 4%, suggesting relative stability in electricity demand even as operations expanded. The largest shift was in Scope 3, which rose by 29%. This increase was driven primarily by operational growth and more intensive business travel, rather than simply the inclusion of new categories (freight, waste, and purchased services). Compared to the prior year, Scope 3 coverage was significantly expanded. In 2023, only business travel was included; the 2024 inventory now accounts for four additional categories, providing a far more comprehensive view of indirect emissions.

Despite the increase in total emissions, the overall composition of the footprint has remained concentrated in electricity and business travel. What has changed is the growing contribution of owned vehicles and freight, which now represent a larger share than in 2023. This shift highlights how mobility and logistics are becoming increasingly central to Giza Systems’ emissions profile, underscoring the need for reduction efforts that balance operational efficiency with value-chain engagement.

GHG Breakdown by Scopes



Emission Intensity Metrics

Beyond absolute totals, intensity metrics provide a clearer view of how emissions relate to operational scale. In 2024, Scope 1 & 2 emissions amounted to 926.15 mtCO₂e.

Normalized by workforce for direct comparison with the 2023 baseline report, this equates to 0.359 mtCO₂e per employee in 2024 (2,581 employees) versus 0.440 mtCO₂e per employee in 2023 (1,812 employees). On this basis, employee intensity declined, showing that emissions rose more slowly than the workforce expanded.

To better reflect real operational activity levels and establish a new best practice, Giza Systems calculated the primary intensity metric using the average workforce of 1,873 employees during 2024, which results in an intensity of 0.494 mtCO₂e per employee. From 2024 onward, employee intensity will be consistently calculated using average Full-Time Equivalents (FTEs), a method that aligns with reporting best practice.

When measured against floor area, Scope 1 and 2 emissions reached 0.077 mtCO₂e per square meter, up from 0.066 in 2023, a 17% rise. Electricity intensity was 142.2 kWh per square meter, slightly higher than 137.2 kWh per square meter in 2023.

Total Scope 1 & 2 Emission Intensities		
	2024	2023
Scope 1 & 2 Carbon Intensity (per Area)	0.077 mtCO ₂ e/m ²	0.066 mtCO ₂ e/m ²
Electricity Intensity (per Area)	142.207 kWh/m ²	137.162 kWh/m ²

These upward shifts show that while Giza Systems has grown in activity and reporting scope, efficiency gains did not fully offset the added operational demands. They also point to where reductions will matter most: improving building performance and managing travel. Together, these indicators form the baseline against which future progress will be measured.

Carbon Emissions Mitigation: Our

Measurement is the starting point; action is the necessary outcome. The insights gained from our 2024 footprint assessment guide the initiatives we are prioritizing to reduce emissions across direct, energy-related, and value-chain activities. Further operational details are reported in the 2024 Sustainability Report (Environmental section); here, we highlight the strategic pathway.

Scope 1: Minimizing Fuel Consumption and Vehicle Emissions

Company vehicles and stationary fuel use are the largest contributors within Scope 1. To reduce their impact, Giza Systems focuses on vehicle efficiency and preventive maintenance. GPS-based route optimization and driving behavior monitoring are being used to cut unnecessary mileage and fuel consumption. Trials with hybrid and electric vehicles are planned, offering long-term potential to shift the fleet toward lower-carbon mobility. Preventive maintenance of generators and HVAC equipment also limits fuel demand and reduces the risk of leaks.

Scope 2: Enhancing Energy Efficiency

Electricity is the single largest source of emissions in our footprint. To address this, Giza Systems has begun upgrading building systems with motion-activated lighting, high-efficiency HVAC, and smart controls to optimize energy use.

Alongside efficiency, renewables are entering the mix: a solar PV project is under preparation for headquarters, designed to reduce reliance on the national grid and provide a visible step toward energy transition.

Scope 3: Managing Business Travel, Freight, and Purchased Services

Scope 3 is where indirect emissions dominate, and it remains the most diverse area for action. Business travel continues to be a major driver, so Giza Systems is expanding the use of digital collaboration tools and tightening travel approvals to avoid unnecessary trips. Freight activities are being addressed through closer collaboration with logistics partners, aiming to improve load management and consider lower-emission modes of transport. For purchased services, emissions linked to Microsoft user licenses are calculated in line with Microsoft’s guidance, ensuring transparency in reporting and providing an external benchmark.

Waste management also falls under Scope 3 and contributes both to sustainability and to emission reduction. Recycling programs, waste segregation, and the digitalization of workflows reduce the volume of material sent to landfill and limit associated emissions. Although its share of the footprint is modest compared to other categories, waste provides an important opportunity to embed circular practices into daily operations.



Additional Supporting Actions

Some initiatives support decarbonization across scopes rather than falling neatly into one category. These include awareness campaigns, employee engagement, workflow digitalization, and the integration of environmental management systems such as ISO 14001. While their direct impact on emissions may be modest, they strengthen the cultural and operational foundation for long-term, systemic reductions.

Future Goals: Energy Management System

Looking ahead, Giza Systems recognizes the importance of a dedicated Energy Management System (EnMS) in achieving meaningful reductions in carbon emissions. With purchased electricity accounting for around 40% of our total footprint, energy management represents the single greatest opportunity for impact. Establishing an EnMS will enable the company to systematically monitor, optimize, and reduce energy use across operations, while embedding efficiency into everyday practice.

The EnMS will focus on several key areas:

- **Energy Efficiency:** Measures such as LED lighting, efficient office equipment, and optimized HVAC systems will be expanded to reduce demand.
- **Advanced Monitoring:** Tools including IoT sensors and Building Management Systems (BMS) will provide real-time data to guide decision-making and ensure continuous improvement.
- **Renewable Integration:** Renewable energy will play an increasing role, starting with on-site solar installations at headquarters and the gradual integration of green power procurement.
- **Technical Optimization:** Technical improvements such as power factor optimization will further enhance the efficiency of electrical distribution.
- **Employee Engagement:** Employee engagement will remain central, with awareness programs and training designed to encourage energy-conscious behavior at every level of the company.

Through this system, Giza Systems aims not only to lower emissions but also to reduce operational costs, strengthen resilience, and reinforce its long-term commitment to sustainable business operations.

While the near-term priority is the implementation of an Energy Management System, Giza Systems also continues to pursue the broader targets outlined in last year’s roadmap.

These include reducing business travel emissions through digital collaboration, piloting hybrid and electric vehicles for the company fleet, and expanding renewable energy capacity beyond the initial solar PV installation.

Together, these goals ensure that progress on energy management is complemented by parallel action in mobility and value-chain engagement.



Glossary of Terms Used in the Report

CO₂e

Carbon dioxide equivalent; common unit for different GHGs based on their global warming potential.

Downstream emissions

Indirect value-chain emissions after company operations (e.g., distribution, use of sold products, end-of-life).

DEFRA

UK Department for Environment, Food & Rural Affairs (emission factor database).

ERA

Egypt Electricity Regulatory Authority.

ICAO

International Civil Aviation Organization.

Intensity

Emissions per unit of activity (e.g., per FTE, per m²).

IPCC

Intergovernmental Panel on Climate Change.

ISO 14064 / 14068

International Standards Organization: The standards for GHG quantification, reporting, and climate neutrality.

ISO 50001

International Standards Organization: The standard for Energy Management Systems.

mtCO₂e

Metric tons (tonnes) of CO₂e.

Scope 1

Direct emissions from sources owned or controlled by the company (e.g., fuel burned on-site, company vehicles).

Scope 2

Indirect emissions from purchased electricity, heat, steam, or cooling.

Scope 3

Other indirect emissions across the value chain (upstream and downstream).

Upstream emissions

Indirect value-chain emissions before company operations (e.g., purchased goods & services, freight, waste generated).





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