



**QALAA**  
HOLDINGS  
القلعة



**Qalaa Holdings**  
**Carbon Footprint**  
**Report**  
**2023/2024**



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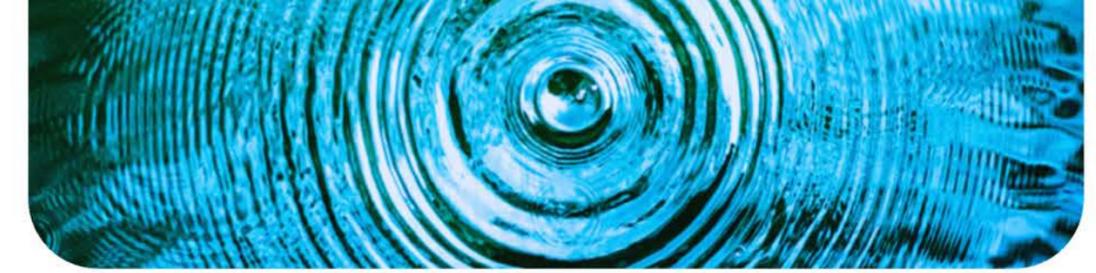
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## About This Report

This Carbon Footprint Report marks a foundational milestone in Qalaa Holdings’ sustainability journey, presenting the Group’s first holding-level greenhouse gas (GHG) inventory. The report establishes a robust and decision-useful emissions baseline, reinforcing transparency and accountability, while laying the groundwork for enhanced emissions governance, performance tracking, and the systematic integration of climate considerations across the Group’s operations and strategic decision-making.

It is prepared in accordance with the GHG Protocol Corporate Accounting and Reporting Standard and aligned with ISO 14064-1 requirements for organization-level GHG quantification and reporting.

The GHG calculations were conducted by ASEC Engineering’s technical team, in coordination with Qalaa Holdings to define boundaries, consolidate data, and document assumptions and limitations, consistent with the core reporting principles of relevance, completeness, consistency, transparency, and accuracy.

The report establishes 2023 as the base year and presents 2024 as the first progress reporting year, enabling consistent year-on-year tracking, hotspot identification, and decarbonization prioritization.

### This report is designed to:

- Provide a transparent holding-level GHG baseline aligned with recognized standards.
- Enable year-on-year performance tracking to support planning, target-setting, and reporting maturity.
- Strengthen internal data readiness and governance to meet stakeholder expectations for credible climate disclosure.

## Acronyms & Abbreviations

ASEC	Arab Swiss Engineering Co.
AR6	IPCC Sixth Assessment Report
CH4	Methane
CO2	Carbon dioxide
CO2e	Carbon dioxide equivalent
G	Grams
GHG	Greenhouse gas
GHG Protocol	Greenhouse Gas Protocol
GJ	Gigajoule
GWP	Global Warming Potentials
HFC	Hydrofluorocarbon
IPCC	Intergovernmental Panel on Climate Change
ICEM	Institutional Carbon Emission Management
Kg	Kilogram
kWh	Kilowatt/hour
MRV	Monitoring-Reporting-Verification
NF3	Nitrogen Trifluoride
N2O	Nitrous Oxide
PFC	Perfluorocarbon
SF6	Sulfur Hexafluoride
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute



## A Message from our Chairman

### To our stakeholders,

At Qalaa Holdings, responsible growth has always been central to our purpose. What defines Qalaa is not only the businesses we have built, but the values we have chosen to live by. We build businesses sustainably and responsibly, guided by the conviction that growth without accountability is hollow, and that resilience must go hand in hand with sustainability and long-term impact.



As we reflect on our journey, through challenges, volatility, and moments of achievement, we remain anchored by this conviction. It is in this spirit that we present our first Carbon Footprint Report at the holding-company level. This report establishes a baseline for emissions measurement, strengthens climate accountability in governance, and lays the foundation for more comprehensive reporting across the Group in the future.

### A First Step Toward Group-Wide Alignment

This assessment provides clarity on the holding company's emissions and reinforces our commitment to integrating climate considerations strategic decision-making. While the holding entity represents only one part of Qalaa's overall footprint, our long-term vision is to expand carbon accounting to a full Group-level assessment, capturing the emissions and climate impact of our diverse portfolio, from energy and agrifood to transportation, manufacturing, and community-focused operations.

### Decarbonization Across Our Subsidiaries

Even as this report focuses on the holding entity, the progress of our subsidiaries underscores the Group's broader commitment to decarbonization, including:

- TAQA Arabia: Expanding clean and renewable energy solutions that reduce emissions intensity across energy operations.
- Dina Farms: Advancing climate-smart agriculture through solar energy and modern irrigation systems.
- GlassRock: Scaling production of energy-efficient insulation materials to support national and regional decarbonization efforts.
- ERC: Reducing reliance on carbon-intensive imported fuels as a critical energy efficiency project in Egypt.
- ECARU and ENTAG Group: Converting agricultural waste into Refuse-Derived Fuel (RDF) for cement production, contributing to decarbonization and creating an integrated energy ecosystem aligned with national and global climate goals.

Together, these subsidiaries provide a clear view of where the Group stands and the opportunities ahead.

### Strengthening the Foundations of Carbon Management

This year, we enhanced emissions data collection and monitoring at the holding level, improving accuracy and consistency. We expanded governance structures to ensure climate considerations are embedded in operational decisions, capital allocation, and risk management. These efforts lay the groundwork for more rigorous measurement, effective mitigation, and a structured decarbonization roadmap in the years ahead.

### Looking Forward

As Qalaa Holdings enters its third decade, we remain committed to a low-carbon future. We will continue directing capital toward green, circular, and export-oriented projects, supporting our subsidiaries in reducing emissions, and ensuring our transition contributes to Egypt's and Africa's broader climate goals.

This Carbon Footprint Report is a beginning, not a conclusion. It provides the clarity needed to accelerate our journey toward Net Zero by 2050, strengthen resilience across our portfolio, and build a legacy of growth that is sustainable, accountable, and future-focused.

### Dr. Ahmed Heikal

Chairman and Founder, Qalaa Holdings

## A Message from our CSO

At Qalaa Holdings, sustainability is not a compliance exercise, it is a strategic imperative that guides how we operate, invest, and lead. Our first holding-company-level Carbon Footprint Report for 2023–2024 marks a key milestone in our commitment to measure, manage, and reduce our environmental impact. While this report focuses on the holding entity’s direct emissions, it lays the foundation for future Group-wide carbon accounting across all subsidiaries and operational sectors.



### Comprehensive Climate Governance

Qalaa has developed a comprehensive climate policy framework that applies to all operational sectors under the holding company. This framework addresses:

- Use of energy and energy efficiency in operations
- Facility design and infrastructure planning
- Use of materials and responsible sourcing
- Resource management, including water, waste, and emissions
- Operational processes aligned with global environmental standards

This framework ensures that climate considerations are embedded at the strategic, governance, and operational levels, enabling the holding company to set clear baselines, monitor performance, and integrate climate-related risk into decision-making.

### Decarbonization in Practice

Our approach to decarbonization is multi-pronged, combining internal operational measures with external influence through our subsidiaries:

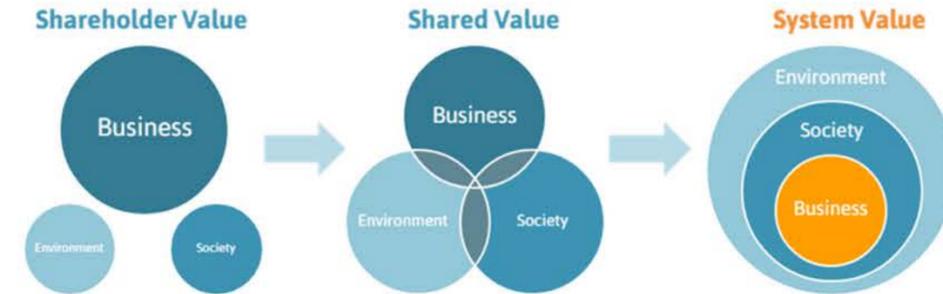
- Internally, we have implemented responsible consumption & production approach, energy-efficient technologies, strengthened emissions monitoring, and enhanced resource management practices to reduce the carbon footprint of the holding company’s own operations.
- Externally, Qalaa’s subsidiaries contribute to climate action by providing solutions and products that mitigate emissions across energy, agrifood, transportation, manufacturing, and waste management sectors. This dual approach ensures that our sustainability commitment drives tangible impact both within and beyond the holding company.

Through these efforts, we are avoiding & reducing emissions while creating a benchmark for responsible operations. Our initiatives support national energy security, promote clean and

efficient technologies, and contribute to broader climate objectives aligned with Egypt’s Vision 2030 and the global 1.5°C ambition.

### Foundations for Continuous Improvement

At Qalaa Holdings, we continuously reassess what “value” means in a changing world, moving beyond a narrow focus on shareholder returns toward shared value that benefits business and society, and ultimately toward system value, where our strategy creates resilient outcomes by addressing economic, social, and environmental priorities in an integrated way.



By improving emissions measurement, enhancing governance, and establishing robust reporting systems, we are laying the groundwork for:

- Future Group-level carbon accounting covering all subsidiaries
- Targeted mitigation strategies informed by reliable, high-quality data
- Integration of climate considerations into investment, capital allocation, and risk management

This ensures that our transition toward Net Zero by 2050 is measurable, disciplined, and aligned with both national and global climate goals, in line with our early commitment as a signatory to the Business Ambition for 1.5°C Campaign.

### Looking Forward

This report is the first step in a journey toward carbon transparency and decarbonization across Qalaa’s ecosystem. By building capacity, and expanding the reach of our climate policies, we are preparing the holding company and eventually the Group to take deliberate, accountable action that advances our vision: Building Businesses Sustainably and Responsibly, Adding Value To The Economies and Societies We Do Business In, and Leading By Example In Climate Action.

### Ghada Hammouda

Group Chief Sustainability Officer, Qalaa Holdings

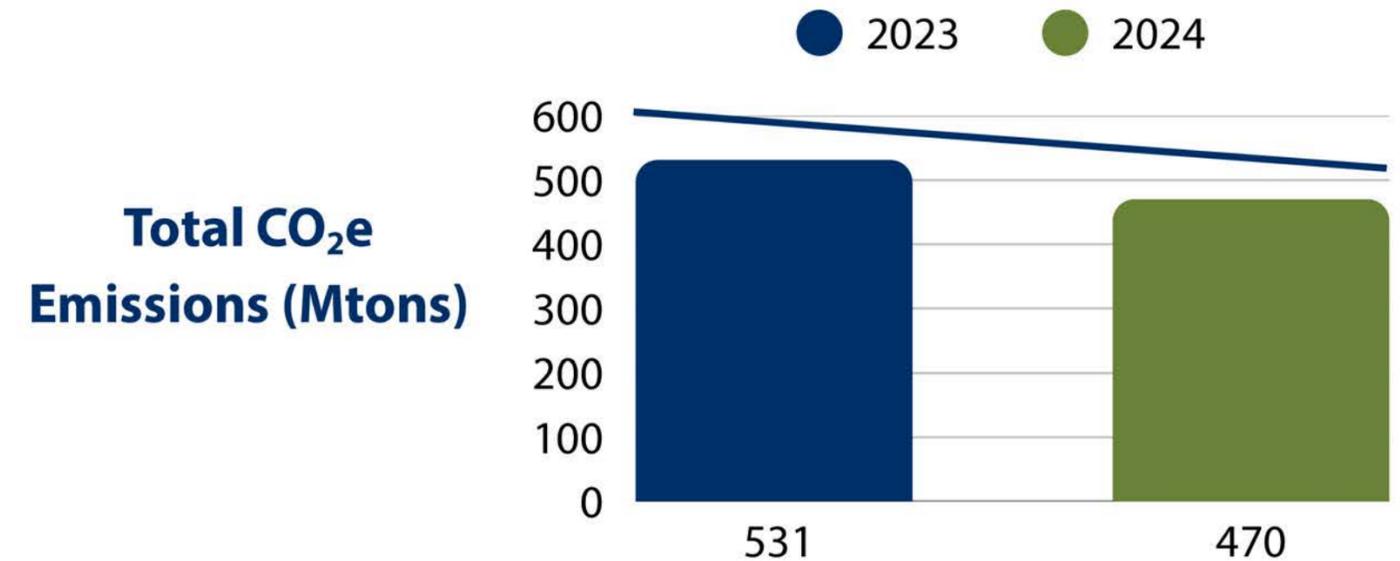
# Executive Summary

Qalaa Holdings is publishing its **first holding-level carbon footprint** to translate climate ambition into operational discipline and to lead by example across the Group. As a financial investment company with a strong footprint in energy and infrastructure, Qalaa recognizes that long-term competitiveness and energy security increasingly depend on efficiency, resilient operations, and credible climate performance. This report is therefore a **foundational** step in strengthening **climate governance**, enhancing transparency, and supporting Qalaa’s broader commitment to a **net-zero future** by 2050 across its operations.

Methodologically, the inventory was prepared in accordance with **ISO 14064-1:2018** and aligned with the **GHG Protocol & IPCC Guidelines for National Greenhouse Gas Inventories**, implementing consistent calculation approaches and documentation to ensure year-on-year comparability. The GHG calculations were conducted by **ASEC Engineering** technical team, using a structured process for data selection and collection (including internal and external documentation, interviews with key personnel and service suppliers, and source data). Where primary data was not available, conservative methods were applied to avoid understating emissions.

The current reporting **boundary** focuses on Qalaa Holdings’ **internal operations** in Cairo (**Headquarters and Extension** offices) and, at this stage, does not include Categories 5 and 6 (Scope 3) due to data availability, an intentional first step that prioritizes **measurement quality** and builds a **scalable model** for future expansion.

Results show a clear **year-on-year improvement**. Total quantified emissions decreased from **531.16 tCO<sub>2</sub>e in 2023** (base year) to **470.107 tCO<sub>2</sub>e in 2024** (progress year), a reduction of 61.053 tCO<sub>2</sub>e, equivalent to **~11.5% year-on-year**. In both years, emissions are highly concentrated, with cooling energy and staff commuting together accounting for more than 85% of the footprint, clearly signaling where the largest abatement opportunities sit.



Strategically, this report is positioned as Qalaa’s **“first practical blueprint”** for decarbonization: it translates climate commitments into measurable baselines, identifies priority hotspots, and strengthens MRV practices to support transparent disclosure. Qalaa intends to **monitor, verify, and disclose** this footprint on an annual basis and progressively scale the same approach, methodology, governance, and data systems across the Group as readiness improves, enabling consistent decarbonization planning and performance management over time.



# Qalaa At A Glance



YEARS BUILDING BUSINESSES

Est. 2004

GROWTH. IMPACT. RESILIENCE.



# Introduction

## Qalaa at a Glance

Founded in 2004 as one of the region’s first private equity firms, what began as a two-person entrepreneurial venture rapidly grew into one of the largest in Egypt and Africa. In 2013, it evolved into Qalaa Holdings, a leading African investment holding company that has been driving responsible growth and transformation across strategic sectors for over 20 years.



### Balancing Impact:

#### Advancing EESG Priorities

Qalaa Holdings’ mission is to balance its impact and advance its economic, environmental, social, and governance (EESG) priorities by building and developing sustainable businesses for its investors, employees, and communities while generating long-term value and prosperity for all stakeholders.



### Regional Footprint

We invest in high-growth market economies across Africa and the Middle East. With landmark investments in 15 countries, Qalaa Holdings is a leading regional energy and infrastructure investor beyond our home market of Egypt.



# 18%

of Qalaa’s Board Members are Women

### We are dedicated to promoting diversity and inclusiveness

Qalaa Holdings prides itself on the strength of its diverse management team. Our highly inclusive work environment promotes female leaders across our subsidiaries, and our female CEOs, division heads, and investment professionals are regionally and locally recognized for their valuable contributions.



### Transformative Investments

With a laser focus vision to drive sustainable economic growth and create long-term value across Egypt and Africa, Qalaa Holdings is committed to strengthening its subsidiaries with incremental capital deployment. We take it upon ourselves to enhance cash flows, optimize financial performance, and reinforce our financial resilience.

In light of our forward-looking strategy, we are actively assessing medium-sized, export-oriented green investments with a strong focus on sustainability and high local value-added components. Such targeted investments align with our commitment to fostering economic diversification, enhancing shareholder value, and positioning Qalaa as a leader in responsible and impactful investing.



# 20+ Years

Drawing on our roots as Africa’s leading private equity firm and then a holding company, we have worked since 2004 to build world-class businesses that cater to the needs of more than 1.3 billion consumers across our footprint in Egypt and Africa.



# 17,500+

Employees



# 40,000

Jobs Created



# 80+

Businesses Founded & Developed

# Our Sustainability Strategy Framework

Qalaa Holdings is dedicated to building businesses that add value to the economies and societies in which it operates, sustainably and responsibly, prioritizing the well-being of our employees and the communities we serve. Our sustainability strategy underscores our belief that sustainability is a business imperative and opportunity, a risk mitigant, and an essential aspect of our core values of being a responsible investor. Additionally, we are dedicated to integrating economic, environmental, social, and governance (EESG) considerations into every facet of our policies, operations, and investment decisions.

Furthermore, our strategy aligns closely with the United Nations Sustainable Development Goals (SDGs) and the UN Global Compact's Ten Principles, reflecting our commitment to advancing global sustainability objectives and promoting ethical business practices on a global scale.



Integral to our approach are eight areas of focus:



Qalaa Holdings has identified 11 SDG goals which it managed to focus on achieving:



# Our Climate Policy

Qalaa Holdings is dedicated to leading the transition to a low-carbon, sustainable future. As a model for responsible business practices, we recognize the urgent need to address climate change. Our climate policy aligns our operations and investments with global climate action goals, aiming to mitigate environmental impacts, enhance resilience, and contribute to a sustainable economy.

We strictly comply with all national environmental legal obligations and international voluntary commitments. As a member of the United Nations Global Compact (UNGC), Global Impact Investing Network (GIIN), and a signatory of the 1.5°C Business Ambition and Africa Business Leader Coalition (ABLC), we incorporate these principles into our climate strategy.

Qalaa and its subsidiaries are committed to finding sustainable solutions to today's climate challenges. Thus, Qalaa has developed and evolved its Climate Strategy Policy, Goals, and Commitments in alignment with the below UN Sustainable Development Goals (SDGs):



To do this, we have developed a rigorous climate policy that covers the full breadth of our operations. The objective of this policy is to bring leading practice in integrating climate change related risks into Qalaa's day-to-day operations and investment practices. This will enable Qalaa to sustain its position as a pioneering responsible investor which leads by example by maintaining the highest standard of care in its investment approach.

## Climate Policy - Guiding Principles:



## Priority Areas of Action

- Achieve **net-zero carbon emissions** across our operations, in line with global climate goals.
- Integrate climate **risk assessments** into all business decision-making processes.
- Promote **innovation** and technology to drive sustainable **solutions**.
- Engage with policymakers and industry peers to **advocate** for stronger climate **policies**.
- Ensure the availability of **information** and resources to meet our goals, and report regularly and **transparently** on our progress toward those goals
- Achieve **operational excellence** through:
  - Carbon Footprint Management: Measuring, reporting, and reducing our carbon footprint across all subsidiaries.
  - Renewable Energy Transition: Diversifying our portfolio investments to expand in renewable clean energy sources such as solar and wind power, incorporating innovative solutions like mobile CNG waste management, and becoming environmentally responsible in consumption, production, and waste management, reaffirming our goals to expand in renewable energy.
  - Waste Reduction: Implementing circular economy principles to minimize waste and enhance resource efficiency.

## Compliance:

**Compliance with Legislation**

We ensure compliance with all relevant legislation and regulations while advocating for public policies that support a low-carbon economy and mitigate climate and human health risks.

**Transparency**

Publicly disclose climate-related data and initiatives, ensuring stakeholder trust and compliance with all relevant regulations.

**Reporting**

Measure, quantify, and report on GHG emissions at a pace and scale to limit global warming in accordance with the Business Ambition 1.5°C reduction targets.

**Continuous Improvement**

Publicly disclose climate-related data and initiatives, ensuring stakeholder trust and compliance with all relevant regulations.

# Our Climate Journey

## Driving Responsible Growth



# Our Memberships

To reinforce our commitment to **leading by example** in advancing sustainability. Qalaa Holdings has been an active member of several global and regional coalitions, including:



# Our Environmental Stewardship

For 20 years, Qalaa has pioneered **sustainability-driven transformations** across the energy, agrifoods, logistics, and manufacturing sectors, while addressing national and regional challenges.



## Environmental Responsibility

- Mitigate the environmental impacts of all operational activities.
- Optimize **resource utilization** and **waste management** across all subsidiaries.
- Enhance energy efficiency, accelerate decarbonization, and conserve natural resources.
- Lead initiatives that **reduce greenhouse gas emissions** (GHG), including the deployment of dual-fuel trucks, electric vehicles, river transport, and other clean energy solutions.

## Decarbonization and Carbon Neutrality

- Establish comprehensive **climate policies** covering both operations and supply chains, while integrating them into business practices.
- Invest in green projects, clean energy, and waste recycling to reduce the Group's overall carbon footprint.
- Report annual carbon emissions at the subsidiary level to ensure transparency and accountability.
- TAQA Arabia has installed solar plants, **6 MW at Dina Farms** and **7 MWh at ASCOM**, and continues to expand PV and EV-ready infrastructure across Egypt.
- Each PV installation offsets approximately **25% of total energy consumption** at Dina Farms and **16% at ASCOM**, marking significant progress toward energy self-sufficiency and carbon neutrality.
- The Egyptian Refining Company (ERC) has advanced its decarbonization efforts through a 34 kW solar power station generating 68,301 kWh annually, upgrading to energy-efficient systems, enhancing flare gas recovery, and adopting advanced production technologies—collectively **reducing over 110,000 tons** of CO<sub>2</sub> equivalent and **186,000 tons** of sulfur emissions each year.

## Climate Risk Management

- Proactively identify and mitigate climate-related risks across the agriculture, energy, and industrial sectors.
- Invest in **renewable energy, cross-border replication**, and expertise-sharing initiatives in cooperation with government and international entities.
- As an early signatory to the **Business Ambition for 1.5°C**, Qalaa remains committed to achieving net-zero emissions by 2050, advancing green hydrogen projects, expanding wind and solar capacity, and deploying innovative decarbonization solutions across its portfolio.

## Solar PV Cover



Total Energy Consumption



Total Energy Consumption



## Reduces

110,000  
MtCO<sub>2</sub> /Year

186,000  
TONS OF SO<sub>2</sub> /YEAR





# tawazeon

**500,000**

Tons of agricultural waste are being processed annually

**100-130K**

Tons of organic compost are being processed annually



## Governance & Transparency

- Adhere to international environmental and governance standards, including **IFC guidelines**.
- Collaborate with development finance institutions (DFIs) to **strengthen compliance** and **disclosure frameworks**, ensuring regular reporting to DFIs and annual ESG submissions to the FRA, EGX, and UNGC.
- Implement **robust accountability mechanisms** and **self-regulation practices** to build trust and ensure transparency, integrity, and regulatory compliance.
- Develop an integrated system of policies and procedures to monitor and manage ESG activities across subsidiaries.
- Enforce a continuously evolving **Code of Conduct** to guide all stakeholder interactions and reinforce ethical business practices.



## Responsible Consumption and Production

- Adopt circular economy principles to maximize resource efficiency and minimize waste.
- Launch innovative products and solutions dedicated to clean energy, food security, and sustainable urban development.
- Continue investments in ERC, TAQA Arabia, and Tawazon to expand renewable and alternative energy capacity and strengthen Egypt's energy security.
- Promote **eco-friendly urban solutions** through ASCOM's GlassRock Insulation Solutions, which reduce energy consumption by 40%.
- Increase **green investments across all sectors** to reinforce Qalaa's leadership in sustainable industrial development.
- ERC operates a **closed-loop water recycling system**, while Dina Farms utilizes advanced drip irrigation, conserving water resources and improving agricultural yields.
- Dina Farms has adopted modern **irrigation techniques**, including **49 pivot irrigation devices** and **drip irrigation systems**, to conserve water while ensuring high-yield crop production.



## Waste Management and Recycling

- Provide circular economy solutions in waste management, recycling, and waste-to-energy conversion through Tawazon.
- Converts waste into cleaner, recycled alternative solid fuels, such as **Biomass-Derived Fuel (BDF)**, **Refuse-Derived Fuel (RDF)**, and **Solid Recovered Fuel (SRF)**, which are supplied to heavy energy consumers as a sustainable source of thermal energy.
- Through ECARU and ENTAG, process over **500,000 tons** of agricultural waste annually, converting it into biomass and RDF, displacing fossil fuels in energy-intensive industries, particularly cement, thereby lowering emissions and advancing Egypt's circular economy.
- ECARU also processes **100,000–130,000 tons of organic compost** annually from **Dina Farms' manure feedstock**, replenishing soil nutrients and organic matter, effectively closing the loop and sustaining agricultural ecosystems.

# Our Methodology



# Carbon Footprint Methodology

## Methodological Framework, Standards, and Verification Readiness

This greenhouse gas (GHG) inventory was prepared in accordance with the GHG Protocol Corporate Accounting and Reporting Standard and aligned with ISO 14064-1:2018, which sets organization-level requirements for quantification, reporting, and verification readiness of GHG inventories.

In the context of Qalaa Holdings' initial formalization of institutional emissions data collection, underlying data sources may vary in format and granularity. Accordingly, the inventory standardizes and consolidates available data and transparently documents assumptions and estimation approaches where needed, consistent with ISO 14064-1.

## Reporting Period

This Carbon Footprint Report covers calendar year 2023 (1 January 2023 to 31 December 2023) as the base year and calendar year 2024 (1 January 2024 to 31 December 2024) as the first progress (reporting) year, enabling consistent tracking of performance over time in line with the GHG Protocol Corporate Standard and ISO 14064-1:2018 reporting expectations.

## GHG Reporting Principles

In preparing this report, Qalaa Holdings followed the five ISO 14064-1:2018 reporting principles to ensure GHG-related information is true, fair, and decision-useful:



Where uncertainty or data gaps existed, reasonable assumptions were applied based on accessible information, with the intent to support verification readiness under a materiality threshold of 15% for limited assurance.

## Organizational Boundary and Geographic Scope

Qalaa Holdings calculates its carbon footprint using the operational control approach, covering emissions from operations over which the company has direct physical or operational control (not necessarily financial control). Under this approach, the inventory includes Qalaa Holdings' Headquarters Office and Extension Office in Cairo, and excludes subsidiaries in the current reporting cycle.

## Reporting Boundary and Included Emission Categories

Reporting boundaries for this inventory include emissions from the head office and extension office, corporate vehicles, staff commuting and business travel, and emissions associated with the use of certain purchased products. The boundary does not encompass Qalaa Holdings' investment projects or their upstream/downstream emissions, which are managed and disclosed through other initiatives.

Emission sources were identified and categorized in accordance with ISO 14064-1:2018, which classifies emissions into six categories that correspond to the GHG Protocol scopes. This report covers Categories 1–4, while Categories 5 and 6 are excluded due to unavailable data in this cycle and are explicitly stated as exclusions.

## Data Collection and Source Hierarchy

The footprint was compiled using internal and external documentation, inputs from key Qalaa Holdings personnel and service suppliers, and available data systems. Source selection prioritized traceable and auditable records (e.g., bills, procurement and fuel records) supplemented by structured estimation approaches where required.

Primary data sources and methods included, as applicable: fuel and utility billing records, procurement records, and staff commuting surveys supported by mapping tools for distance estimation.

## Significance and Materiality Assessment

Qalaa Holdings assessed emission sources for significance and materiality based on factors including: emission size, data availability, organizational influence, validity of quantification approaches, risks and opportunities, and staff engagement potential.

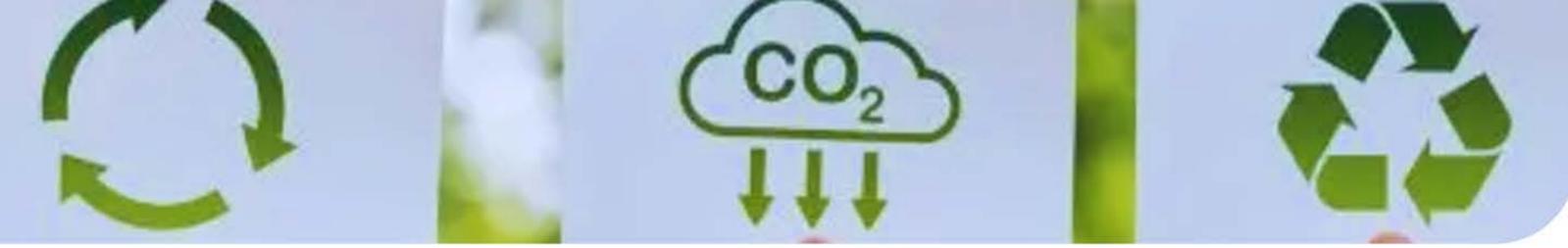
Identified sources were scored and categorized as significant ( $\geq 20$ ), medium (11–19), or insignificant ( $\leq 10$ ). All significant and medium sources within the defined boundaries are reported in this inventory; insignificant sources are not included in the quantified footprint in this cycle and are addressed as part of the inventory's limitations and roadmap.

## Significance Score of Direct and Indirect Emissions Sources (2023 & 2024)

	Subcategory	Emission Sources	Quantitative Method	Emission Factor Availability	Influence	Risk		Opportunity	Sectoral Guidance Availability	Outsourcing	Staff Engagement	Total	Summary
						Possibility	Impact						
Category 1: Direct Greenhouse Gas (GHG) Emissions and Removals													
1.1	Stationary Combustion	Natural Gas	3	3	1	1	1	1	3	1	1	15	Medium
1.2	Mobile Combustion	Gasoline for Corporate Fleet	2	3	1	1	1	1	3	1	1	14	Medium
1.3	Industrial Process	Not applicable within the reporting scope											
1.4	Fugitive	Not applicable within the reporting scope											
1.5	Land Use, Land Use Change and Forestry	Not applicable within the reporting scope											
Category 2: Indirect GHG Emissions from Imported Energy													
2.1	Indirect GHG Emissions from Imported Electricity	Electricity from Grid	2	2	2	2	2	2	3	1	2	18	Medium
2.2	Indirect Emissions from Imported Energy	Cooling	1	2	3	2	3	3	3	3	2	22	Significant
Category 3: Indirect GHG Emissions from Transportation													
3.1	Emissions from Upstream Transport and Distribution of Goods	Not applicable within the reporting scope											
3.2	Emissions from Downstream Transport and Distribution of Goods	Not applicable within the reporting scope											
3.3	Emissions from Employee Commuting	Staff Commuting	2	3	3	3	3	1	2	3	3	18	Medium
3.4	Emissions from Client and Visitor Transport	Not applicable within the reporting scope											
3.5	Business Travel	Business Travel- Flight	3	3	2	2	2	1	2	3	3	21	Significant



	Subcategory	Emission Sources	Quantitative Method	Emission Factor Availability	Influence	Risk		Opportunity	Sectoral Guidance Availability	Outsourcing	Staff Engagement	Total	Summary
						Possibility	Impact						
Category 4: Indirect GHG Emissions from Products Used by the Organization													
4.1.	Purchased Goods	Tap Water	1	2	1	1	1	1	1	1	2	11	Medium
		Drinking Water	2	2	1	1	1	1	1	1	2	12	Medium
		Printing Paper	2	2	1	1	1	1	1	1	2	12	Medium
		Tissue	2	2	1	1	1	1	1	1	2	12	Medium
4.2	Emissions from Capital Goods	Not applicable within the reporting scope											
4.3	Emissions from Disposal of Solid and Liquid	Not applicable within the reporting scope											
4.4	Emissions from Use of Assets	Not applicable within the reporting scope											
Category 5: Indirect GHG Emissions Associated with the Use of the Organization's Products													
5.1	Emissions or Removals from the Use / Storage of the Product	Not applicable within the reporting scope											
5.2	Emissions from Downstream leased Assets	Not applicable within the reporting scope											
5.3	Emissions from End-of-life Storage of the Product	Not applicable within the reporting scope											
5.4	Emissions from Investments	Not applicable within the reporting scope											
Category 6: Indirect GHG Emissions from Other Sources													
6.1	Indirect GHG Emissions from other sources	Not applicable within the reporting scope											



## Quantification Approach and Calculation Methods

Emissions were quantified using the activity-data approach:

$$\text{Emissions (tCO2e)} = \text{Activity Data} \times \text{Emission Factor} \times (\text{Unit Conversions, as applicable}).$$

Documented calculation equations were applied per source category (e.g., direct emissions from mobile and stationary combustion; indirect emissions from purchased electricity and cooling energy; commuting, flights, and purchased goods). Examples include fuel consumption for the corporate fleet captured through procurement records and electricity consumption captured through billing records, with calculations supported by IPCC-aligned methodologies where relevant.

## Calculation of Greenhouse Gas Emissions

### Mobile combustion (Gasoline for corporate fleet)

Gasoline is exclusively used in Qalaa Holdings corporate vehicles. Consumption data is recorded in the procurement records. The GHG emission factors of gasoline are calculated using the IPCC methodology; the following equation is applied:

#### Equation 1: Direct emissions from mobile sources (tonnes CO2e)

$$\text{Direct emissions from mobile sources (tonnes CO2e)} = \text{Quantity of fuel} \times \text{CO2e emission factor} \times \text{Oxidized carbon fraction} / 1000$$

### Electricity from grid

Indirect emissions from electricity purchased by Qalaa Holdings have been included as Scope 2 emissions. To calculate CO2e emissions, the following equation is applied:

#### Equation 2: Indirect emissions from purchased electricity (tonnes CO2e)

$$\text{Indirect emissions from purchased electricity (tonnes CO2e)} = \text{Electricity purchased (kWh)} \times \text{CO2e emission factor (g CO2e/kWh)} / 1,000,000$$

### Cooling energy

Indirect emissions from energy purchased for cooling by Qalaa Holdings have been included as Scope 2 emissions. To calculate CO2e emissions, the following equation is applied:

#### Equation 3: Indirect emissions from purchased electricity for cooling (tonnes CO2e)

$$\text{Indirect emissions from purchased electricity for cooling (tonnes CO2e)} = \text{Electricity consumption for cooling (kWh)} \times \text{CO2e emission factor (g CO2e/kWh)} / 1,000,000$$

### Staff commuting

Staff commuting is estimated based on staff survey inputs and distance information derived using GPS.

#### Equation 4: Indirect emissions from staff commuting (tonnes CO2e)

$$\text{Indirect emissions from staff commuting (tonnes CO2e)} = \sum (\text{km travelled} \times \text{CO2e emission factor}) / 1000$$

### Business travel – flight

Emissions from flights have been calculated through a service provider.

#### Equation 5: Indirect emissions from business travel – flight (tonnes CO2e)

$$\text{Indirect emissions from business travel – flight (tonnes CO2e)} = \sum (\text{km travelled} \times \text{CO2e emission factor}) / 1000$$

### Purchased goods (Tap water)

Emissions from water consumption have been calculated through a service provider.

#### Equation 6: Indirect emissions from purchased goods (Tap water) (tonnes CO2e)

$$\text{Indirect emissions from purchased goods (Tap water) (tonnes CO2e)} = \text{Quantity of water (m}^3\text{)} \times \text{CO2e emission factor (kg CO2e/m}^3\text{)} / 1000$$



### Purchased goods (Drinking water)

Emissions from drinking water consumption have been calculated using company data.

#### Equation 7: Indirect emissions from purchased goods (Drinking water) (tonnes CO2e)

$$\text{Indirect emissions from purchased goods (Drinking water) (tonnes CO2e)} = [\text{Quantity of water (m}^3\text{)} \times \text{CO2e emission factor (kg CO2e/m}^3\text{)} / 1000] + [\text{Quantity of PET (ton)} \times \text{CO2e emission factor (kg CO2e/ton)} / 1000]$$

### Purchased goods (Printing paper)

Emissions from paper consumption have been calculated using company data.

#### Equation 8: Indirect emissions from purchased goods (Printing paper) (tonnes CO2e)

$$\text{Indirect emissions from purchased goods (Printing paper) (tonnes CO2e)} = \text{Quantity of paper (ton)} \times \text{CO2e emission factor (kg CO2e/ton)} / 1000$$

### Purchased goods (Tissue)

Emissions from tissue consumption have been calculated using company data.

#### Equation 9: Indirect emissions from purchased goods (Tissue) (tonnes CO2e)

$$\text{Indirect emissions from purchased goods (Tissue) (tonnes CO2e)} = \text{Quantity of tissue (ton)} \times \text{CO2e emission factor (kg CO2e/ton)} / 1000$$

### Stationary combustion (Natural gas)

Emissions from natural gas consumption have been calculated through a service provider.

#### Equation 10: Direct emissions from stationary combustion (Natural gas) (tonnes CO2e)

$$\text{Direct emissions from stationary combustion (Natural gas) (tonnes CO2e)} = \text{Quantity of fuel} \times \text{CO2e emission factor} \times \text{Oxidized carbon fraction} / 1000$$

## Emission Factors and Global Warming Potentials (GWPs)

Where possible, the inventory prioritizes regional factors over international defaults and references recognized technical sources. In practice, the inventory uses an Egyptian grid electricity factor and applies UK Government (DEFRA) conversion factors for selected activity types such as commuting, flights, water, and paper.

All results are reported in tCO2e using 100-year GWPs from IPCC AR6, covering gases required under ISO 14064-1 (e.g., CO2, CH4, N2O, HFCs, PFCs, SF6, NF3).

### Global warming potentials (100-year) used for conversion to CO2e (IPCC AR6).

Gas / Refrigerant	GWP (100-year)
Carbon Dioxide (CO2)	1
Methane (CH4)	27.9
Nitrous Oxide (N2O)	273
Nitrogen Tri-flouride (NF3)	17,400
Sulfur Hexa-flouride (SF6)	25,200
R125	3,740
R143a	5,810
R134a	1,530
R152a	164
R32	771
R23	14,600
R404a	4,728
R407c	1,985
R410a	2,255.50
Hepta-fluoro-propane	3,600

## Quality Management, Sensitivity, and Uncertainty

Qalaa Holdings maintains records used for data collection and quantification to support transparency, internal review, and verification readiness.

To evaluate robustness, the report includes sensitivity and uncertainty analysis. For the 2024 reporting year, a +/-10% variation was applied to main emission sources to test sensitivity, and uncertainty analysis was used to characterize confidence in the reported footprint.

## Exclusions and Limitations

This cycle excludes certain Scope 3 sources and other items where data is not yet available or where calculation is not currently viable, including (as applicable) emissions from client/visitor transport, certain local business travel modes, broader procurement categories, and emissions from investments. These exclusions are documented transparently and intended to be addressed through the inventory expansion roadmap as data maturity improves.

## Emission Factors

Emission Source	Emission Factor	Source of E.F.
<b>Category 1</b>		
Stationary Combustion (Natural Gas)	2.045 (Kg CO2e/m3)	DEFRA 2024
Mobile Combustion	2.307 (Kg CO2/L)	TCR 2024
<b>Category 2</b>		
Electricity from Grid	0.377 (Kg CO2/kwh)	Egyptian Electricity
Cooling Energy	0.377 (Kg CO2/kwh)	Egyptian Electricity
<b>Category 3</b>		
Staff Commuting	0.183 (kg CO2/km)	DEFRA 2024
Business Travel-Flight	0.230 (kg CO2/km)	DEFRA 2024
<b>Category 4</b>		
Purchased Goods (Tap Water)	0.153 (Kg CO2e/m3)	DEFRA 2024
Purchased Goods (Drinking Water)	0.185 (Kg CO2e/m3) / 2204.92 (Kg CO2e/PET ton)	DEFRA 2024
Purchased Goods (Printing Paper)	1339.32 (Kg CO2e/ton)	DEFRA 2024
Purchased Goods (Tissue)	1339.32 (Kg CO2e/ton)	DEFRA 2024



# Quantified Results & Emissions Inventory

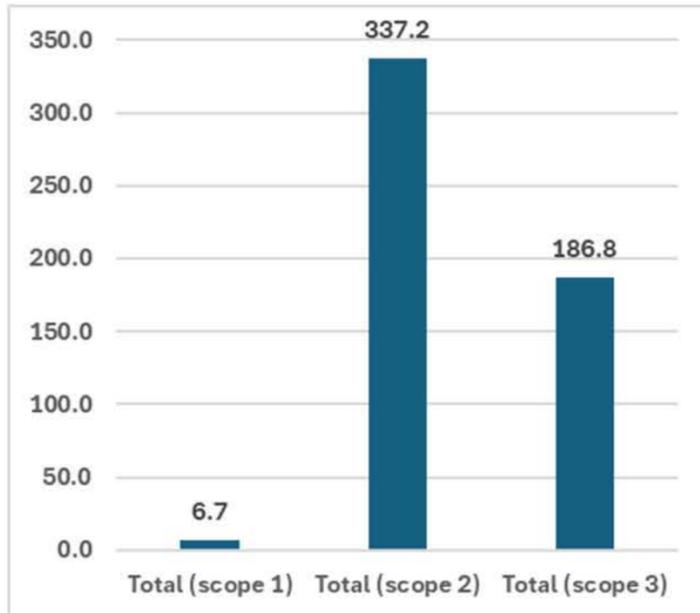
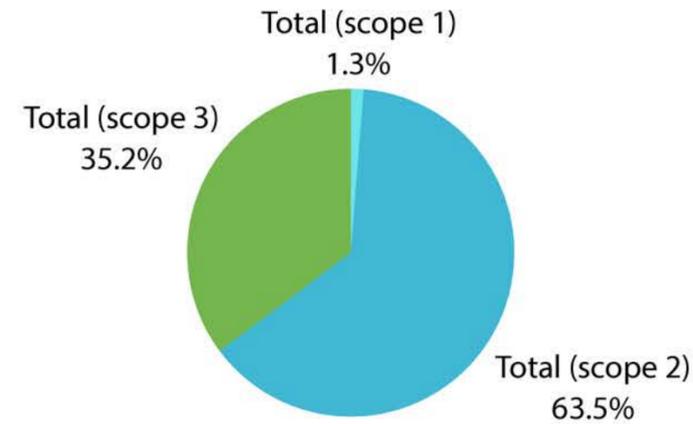


# Results - 2023 (Base Year)

The following results reflect the consolidated GHG emissions inventory for the reporting period, prepared in alignment with the GHG Protocol Corporate Standard and ISO 14064-1:2018, as described in the Methodology section. Emissions are reported in tCO<sub>2</sub>e and include a total emissions summary, scope-based reporting (Scopes 1 and 2, and included Scope 3 categories), and category-level breakdowns. Data limitations, estimation approaches, and material assumptions that affect interpretation are transparently referenced to maintain auditability and support future verification readiness.

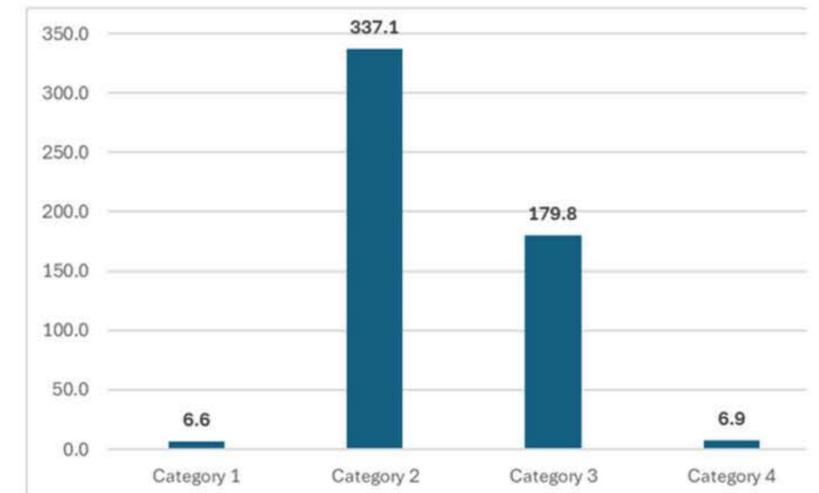
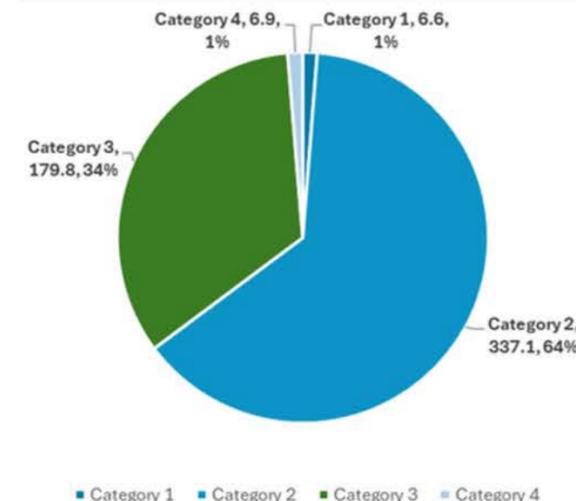
## Emissions Per Activity – 2023 (Base Year)

Scope 1 - Direct Emissions (MtCO <sub>2</sub> e)	
Stationary Combustion (Natural Gas)	0
Mobile Combustion	6.6
<b>Total (scope 1)</b>	<b>6.7</b>
Scope 2 - Indirect Emissions (MtCO <sub>2</sub> e)	
Electricity from Grid	25
Cooling Energy	312.2
<b>Total (scope 2)</b>	<b>337.2</b>
Scope 3 - Indirect Emissions (MtCO <sub>2</sub> e)	
Staff Commuting	140.6
Business Travel – Flight	39.2
Purchased Goods (Tap Water)	1.3
Purchased Goods (Drinking Water)	1.6
Purchased Goods (Printing Paper)	2.8
Purchased Goods (Tissue)	1.2
<b>Total (scope 3)</b>	<b>186.8</b>
<b>Total CO<sub>2</sub>e Emissions</b>	<b>531</b>



## Emissions Per Category – 2023 (Base Year)

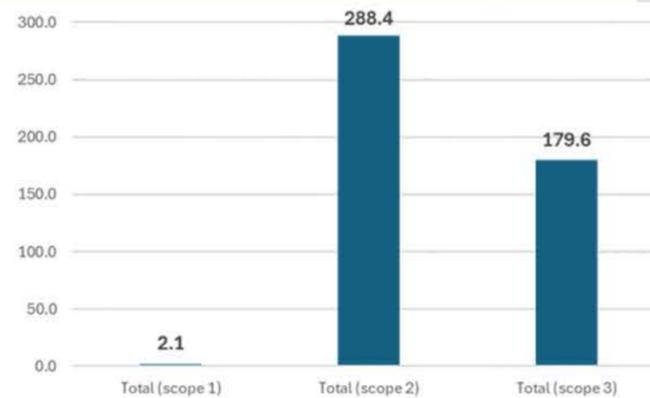
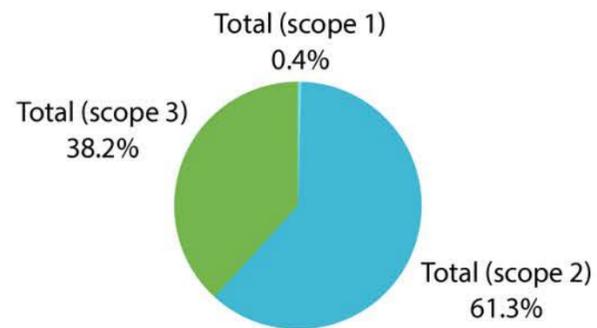
<b>Category 1</b>	<b>6.6</b>
Stationary Combustion (Natural Gas)	0
Mobile Combustion	6.6
<b>Category 2</b>	<b>337.1</b>
Electricity from Grid	25
Cooling Energy	312.2
<b>Category 3</b>	<b>179.8</b>
Staff Commuting	140.6
Business Travel-Flight	39.2
<b>Category 4</b>	<b>6.9</b>
Purchased Goods (Tap Water)	1.3
Purchased Goods (Drinking Water)	1.6
Purchased Goods (Printing Paper)	2.8
Purchased Goods (Tissue)	1.2
<b>Total Emission Category (1&amp;2&amp;3&amp;4)</b>	<b>531</b>



# Results - 2024

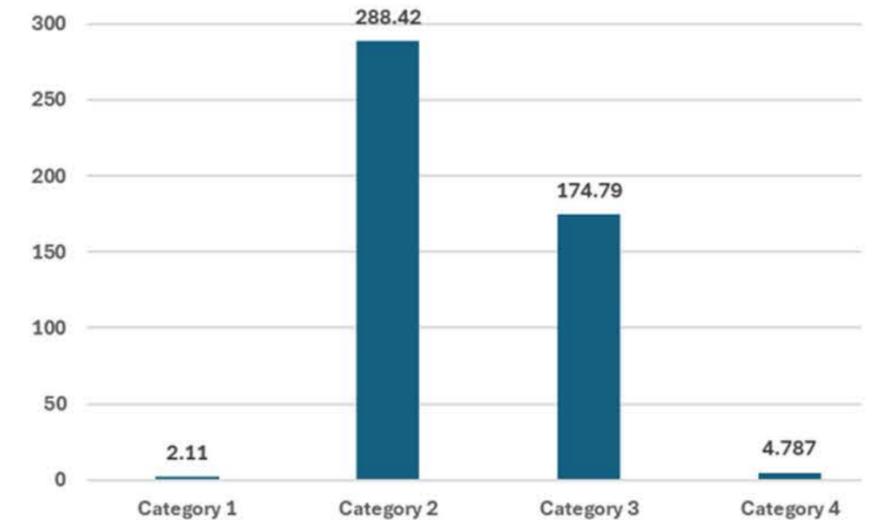
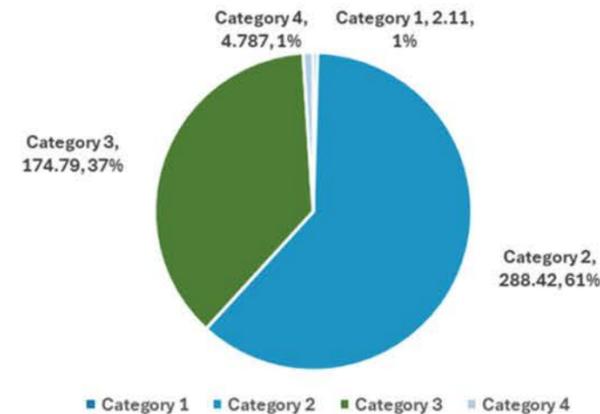
## Emissions Per Activity – 2024

Scope 1 - Direct Emissions (MtCO2e)	
Stationary Combustion (Natural Gas)	0
Mobile Combustion	2.1
<b>Total (scope 1)</b>	<b>2.1</b>
Scope 2 - Indirect Emissions (MtCO2e)	
Electricity from Grid	27.6
Cooling Energy	260.8
<b>Total (scope 2)</b>	<b>288.4</b>
Scope 3 - Indirect Emissions (MtCO2e)	
Staff Commuting	139.8
Business Travel – Flight	35
Purchased Goods (Tap Water)	1.2
Purchased Goods (Drinking Water)	0.8
Purchased Goods (Printing Paper)	1.5
Purchased Goods (Tissue)	1.3
<b>Total (scope 3)</b>	<b>179.6</b>
<b>Total CO2e Emissions</b>	<b>470</b>



## Emissions Per Category – 2024

<b>Category 1</b>	<b>2.1</b>
Stationary Combustion (Natural Gas)	0
Mobile Combustion	2.1
<b>Category 2</b>	<b>288.4</b>
Electricity from Grid	27.6
Cooling Energy	260.8
<b>Category 3</b>	<b>174.7</b>
Staff Commuting	139.8
Business Travel-Flight	35
<b>Category 4</b>	<b>4.7</b>
Purchased Goods (Tap Water)	1.2
Purchased Goods (Drinking Water)	0.8
Purchased Goods (Printing Paper)	1.5
Purchased Goods (Tissue)	1.3
<b>Total Emission Category (1&amp;2&amp;3&amp;4)</b>	<b>470</b>



# Year-on-Year Progress: (2023 “base year” vs 2024)

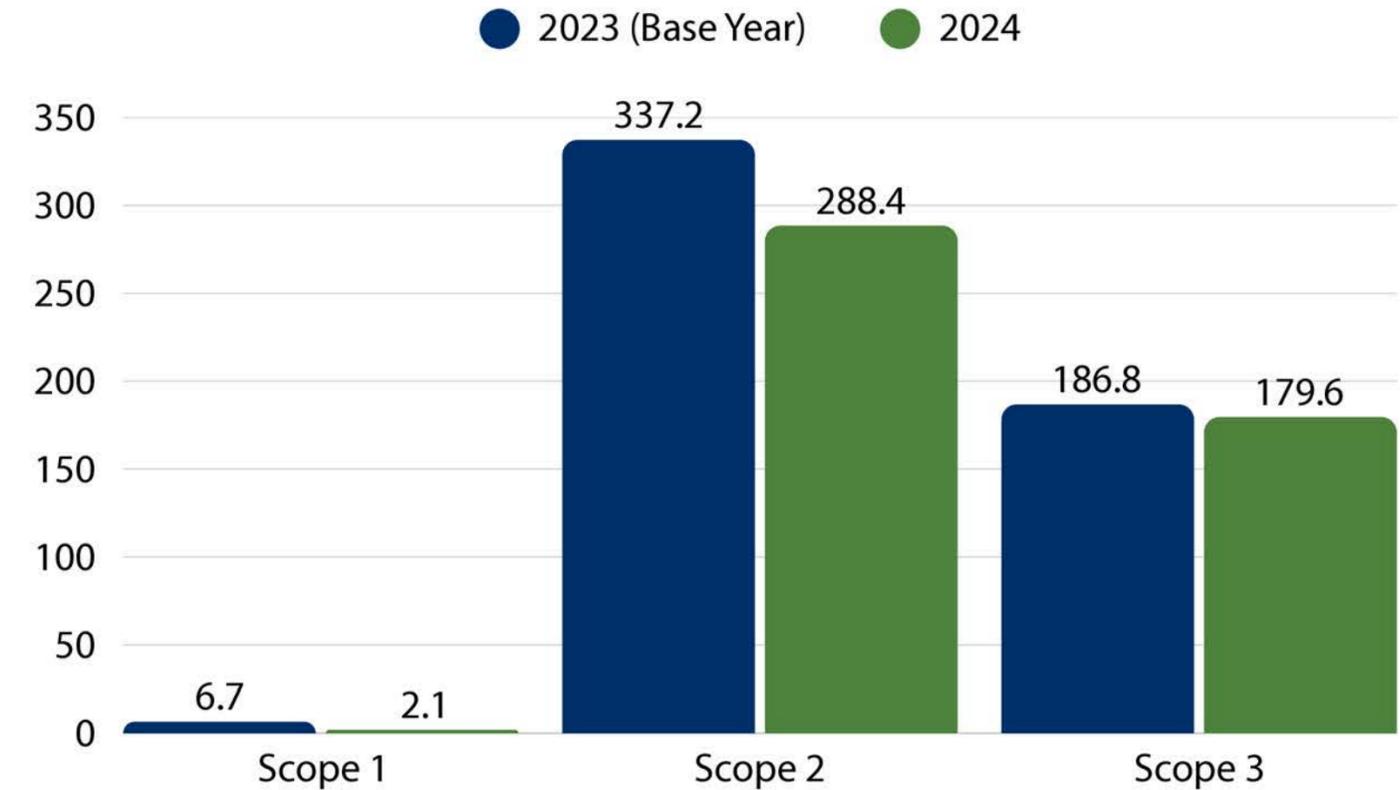
Compared to the 2023 base year, the 2024 inventory indicates a clear year-on-year improvement in total GHG emissions. Total emissions decreased by 11.5% in 2024 versus 2023 (from 531 tCO<sub>2</sub>e to 470 MtCO<sub>2</sub>e), reflecting early momentum from operational improvements and better control of key emission drivers within the reporting boundary.

The reduction is primarily explained by changes in the inventory’s largest emission sources, including improvements in energy consumption patterns and operational efficiencies across the included entities and activities. The scope-level breakdown (Scopes 1 and 2, and included Scope 3 categories) confirms that the overall decline is not isolated to a single source, but rather reflects combined performance across multiple categories.

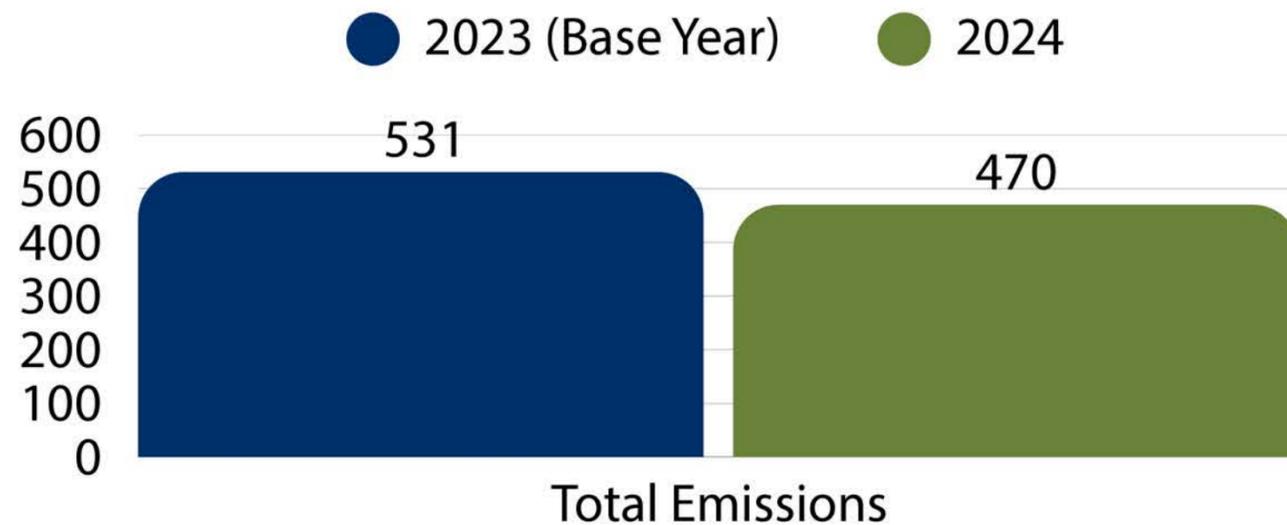
## Progress Per Activity (2023 “base year” vs 2024)

	2023 (Base Year)	2024
Scope 1	6.7	2.1
Scope 2	337.2	288.4
Scope 3	186.8	179.6
<b>Total Emissions</b>	<b>531</b>	<b>470</b>

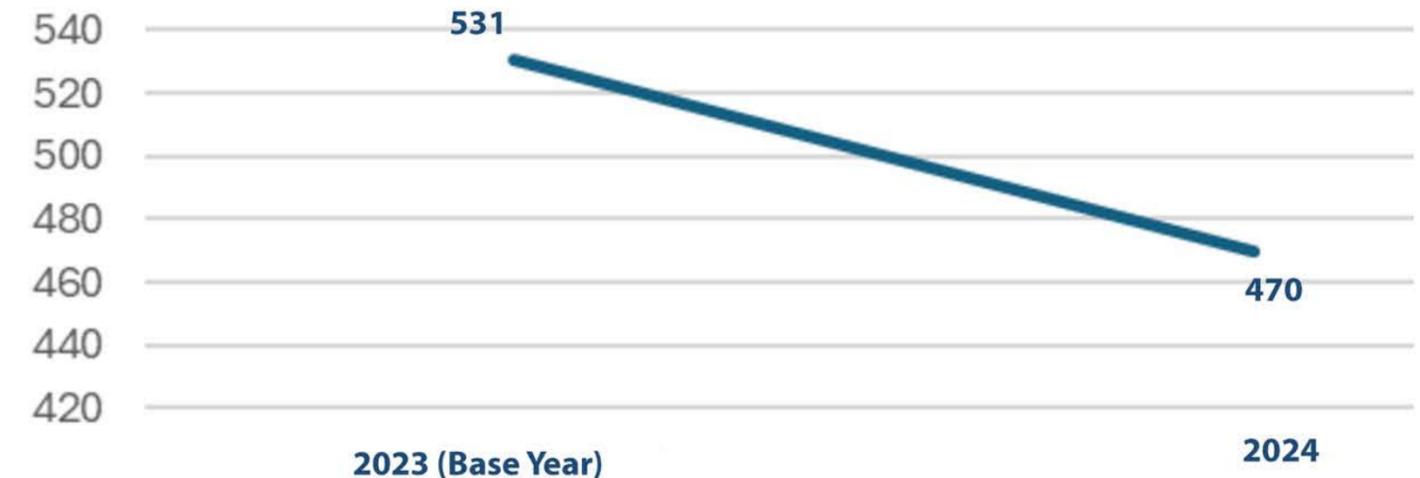
## Progress Per Activity (2023 “base year” vs 2024)



## Total Emissions (2023 “base year” vs 2024)



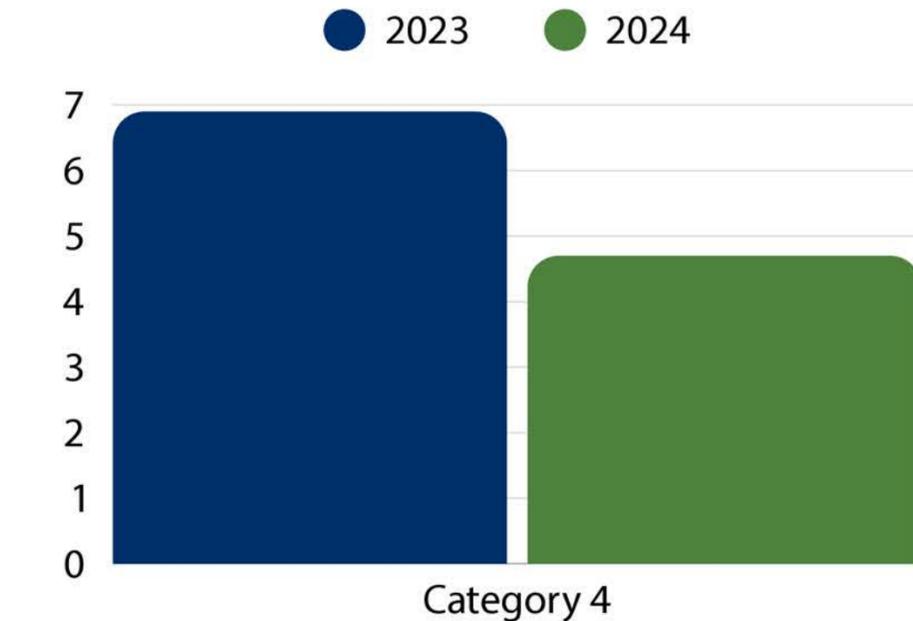
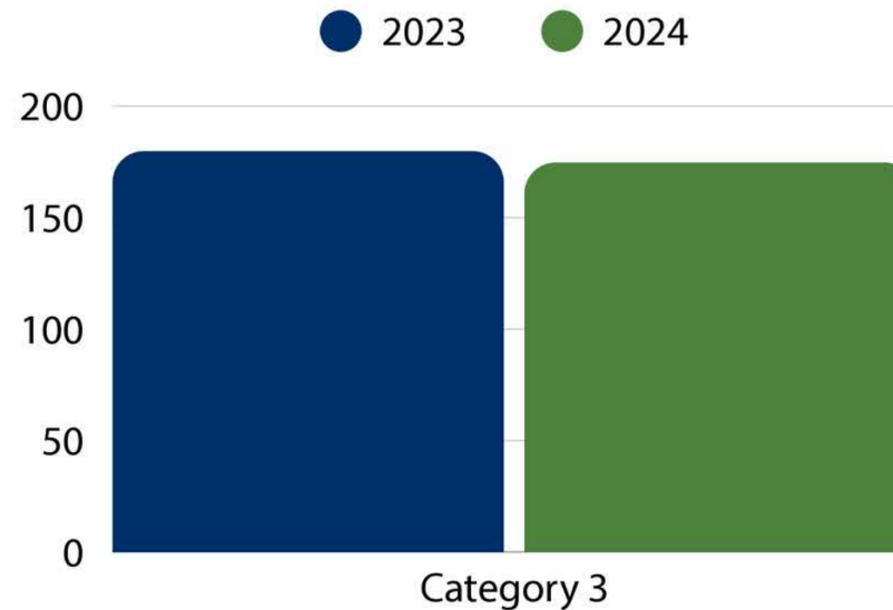
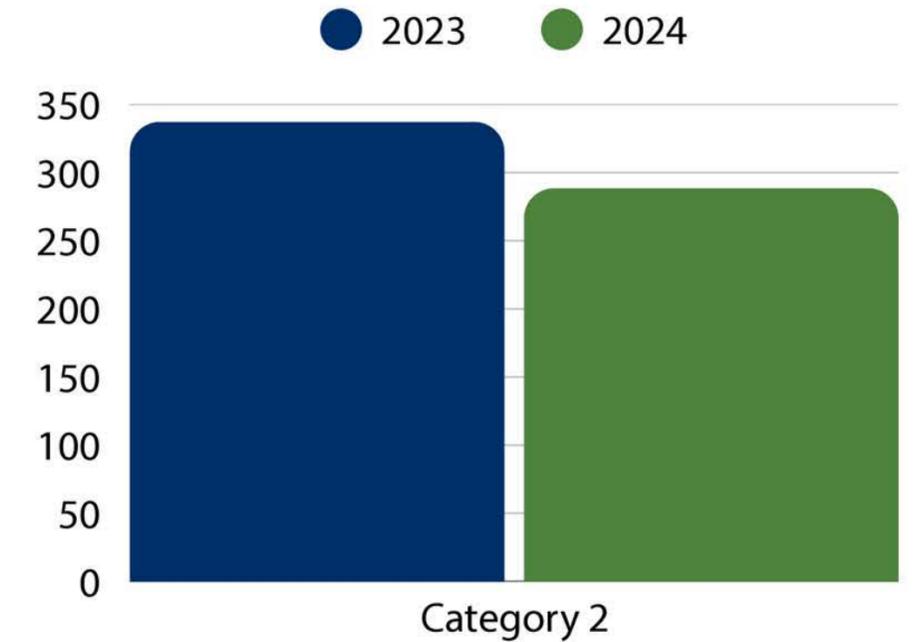
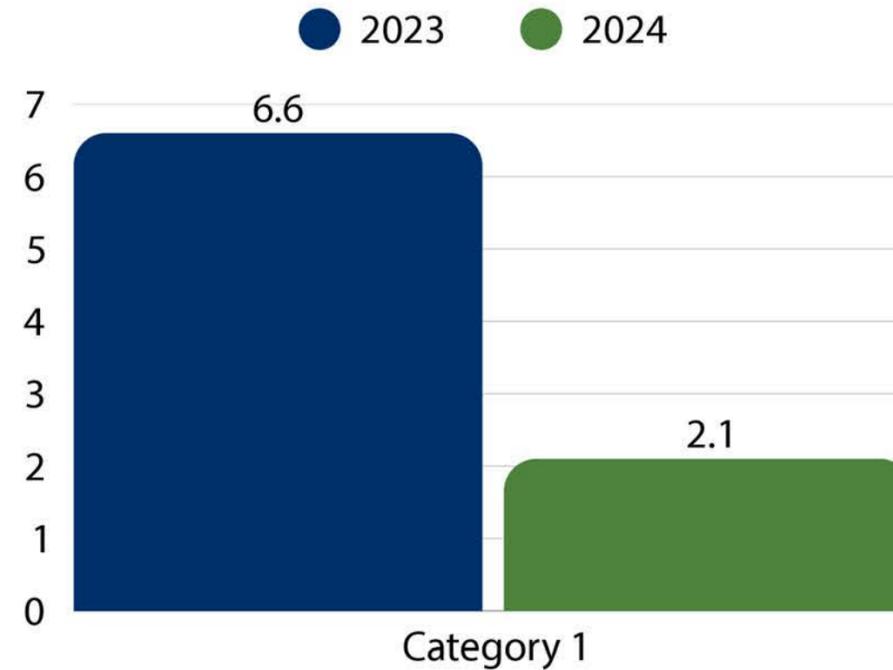
## Total Emissions (2023 “base year” vs 2024)



# Year-on-Year Progress: 2024 vs. 2023

Progress Per Category (2023 "base year" vs 2024)

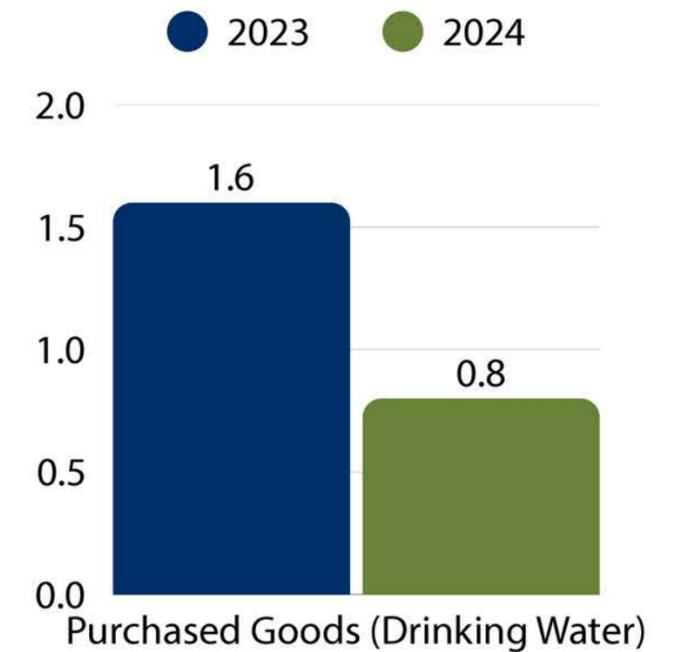
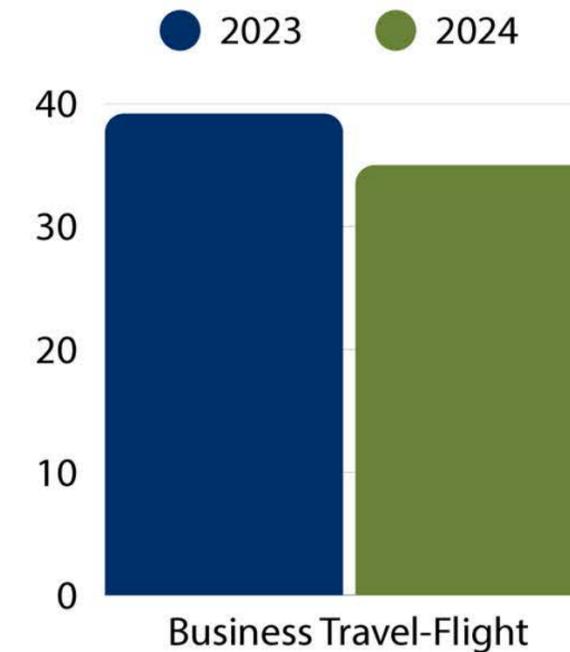
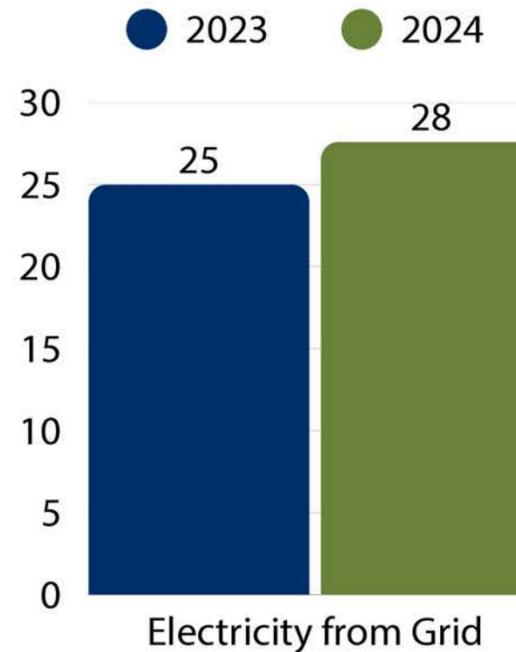
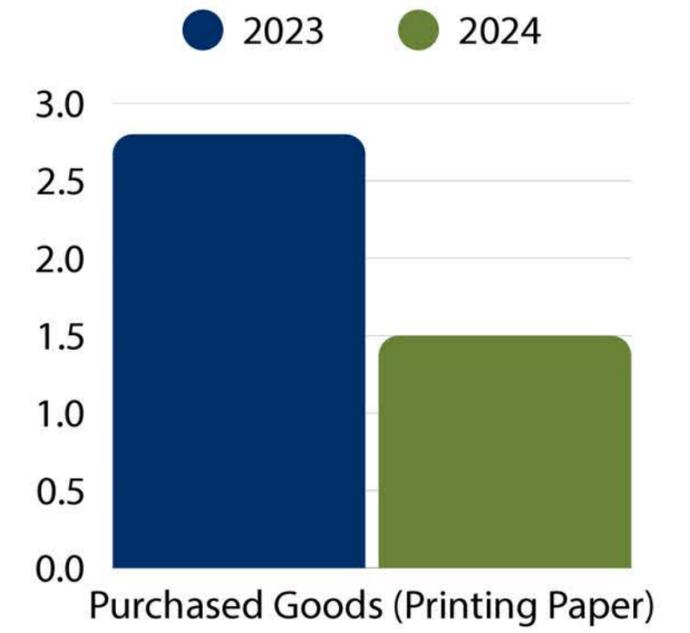
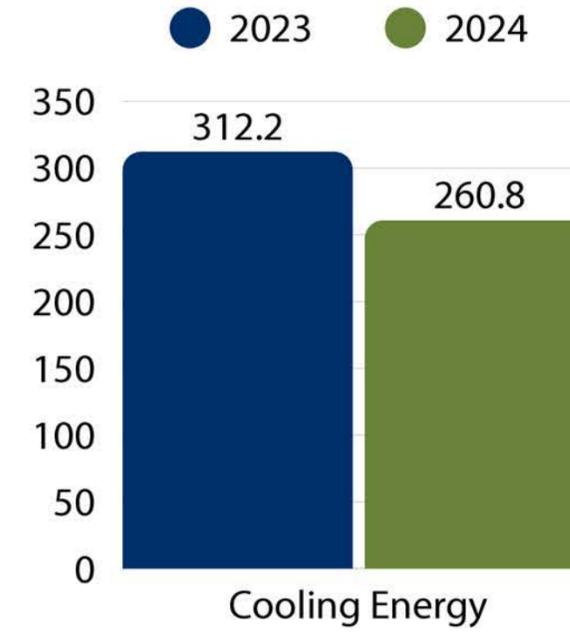
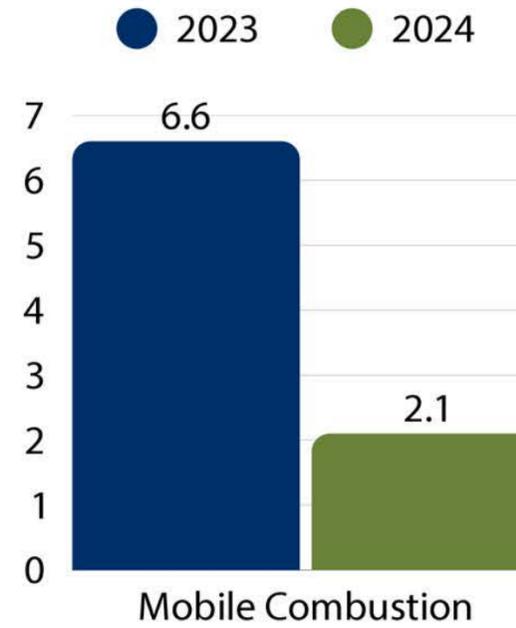
	2023	2024
<b>Category 1</b>	<b>6.6</b>	<b>2.1</b>
Stationary Combustion (Natural Gas)	0	0
Mobile Combustion	6.6	2.1
<b>Category 2</b>	<b>337.1</b>	<b>288.4</b>
Electricity from Grid	25	27.6
Cooling Energy	312.2	260.8
<b>Category 3</b>	<b>179.8</b>	<b>174.7</b>
Staff Commuting	140.6	139.8
Business Travel-Flight	39.2	35
<b>Category 4</b>	<b>6.9</b>	<b>4.7</b>
Purchased Goods (Tap Water)	1.3	1.2
Purchased Goods (Drinking Water)	1.6	0.8
Purchased Goods (Printing Paper)	2.8	1.5
Purchased Goods (Tissue)	1.2	1.3
<b>Total Emission Category (1&amp;2&amp;3&amp;4)</b>	<b>531</b>	<b>470</b>



# Year-on-Year Progress: 2024 vs. 2023

## Progress Per Category (2023 "base year" vs 2024)

	2023	2024
<b>Category 1</b>	<b>6.6</b>	<b>2.1</b>
Stationary Combustion (Natural Gas)	0	0
Mobile Combustion	6.6	2.1
<b>Category 2</b>	<b>337.1</b>	<b>288.4</b>
Electricity from Grid	25	27.6
Cooling Energy	312.2	260.8
<b>Category 3</b>	<b>179.8</b>	<b>174.7</b>
Staff Commuting	140.6	139.8
Business Travel-Flight	39.2	35
<b>Category 4</b>	<b>6.9</b>	<b>4.7</b>
Purchased Goods (Tap Water)	1.3	1.2
Purchased Goods (Drinking Water)	1.6	0.8
Purchased Goods (Printing Paper)	2.8	1.5
Purchased Goods (Tissue)	1.2	1.3
<b>Total Emission Category (1&amp;2&amp;3&amp;4)</b>	<b>531</b>	<b>470</b>



# Our Way Forward



Building on the 2023 baseline and the methodological and data-quality improvements achieved in 2024, the next phase focuses on institutionalizing carbon management at Qalaa Holdings as a structured, repeatable business process, integrated into core operational and governance frameworks rather than a periodic, ad hoc data-collection exercise. This will be supported by strengthened governance arrangements, standardized and systematic monthly data capture across entities, and the maintenance of consistent organizational boundaries and documentation, ensuring comparability over time and verification readiness in alignment with the GHG Protocol Corporate Standard and ISO 14064-1:2018.

Operationally, Qalaa Holdings will focus on high-impact emissions reduction levers, combining energy-efficiency initiatives with the progressive integration of cleaner energy solutions where feasible. For purchased electricity and cooling energy, reporting will continue to apply Scope 2 accounting approaches consistent with the GHG Protocol Scope 2 Guidance, including consistent treatment of location-based and, where applicable, market-based reporting.

Over time, Qalaa Holdings aims to broaden the adoption of carbon footprint reporting across its subsidiaries. This approach will support the eventual consolidation of emissions data at the holding level, further enhancing transparency, comparability, and data-driven climate management. As carbon management processes mature, Qalaa Holdings will continue to strengthen Scope 3 data quality, engage priority suppliers, and expand coverage of material categories while maintaining methodological consistency year-on-year.

Through these measures, Qalaa Holdings seeks to progressively embed robust emissions governance, operational discipline, and sustainability-conscious decision-making, laying the foundation for ongoing improvements in climate transparency and accountability.





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