



# Financed Emissions

## 2024 Report



# About This Report

This report presents **Emirates NBD – Egypt’s second** assessment of financed emissions with financial figures extracted as of year-end of 2024, focusing on carbon-intensive sectors within **corporate loans**. Following the methodologies established by the **Partnership for Carbon Accounting Financials (PCAF)** and the **GHG Protocol** developed by the World Resources Institute (WRI), this analysis adheres to the fundamental principles of **relevance, completeness, consistency, transparency, and accuracy**.

# Contents

# Abbreviations

<b>BAU</b>	Business As Usual
<b>BY</b>	Base Year
<b>CBE</b>	Central Bank of Egypt
<b>CFP</b>	Carbon Footprint
<b>CO<sub>2</sub></b>	Carbon Dioxide
<b>CO<sub>2</sub>e</b>	Carbon Dioxide Equivalent
<b>COP27</b>	The 27th Conference of the Parties
<b>EF</b>	Emission Factor
<b>EGP</b>	Egyptian Pound
<b>FRA</b>	Financial Regulatory Authority
<b>GHG</b>	Greenhouse Gases
<b>GtCO<sub>2</sub>e</b>	Giga Ton Carbon Dioxide Equivalent
<b>GWP</b>	Global Warming Potential
<b>IEA</b>	International Energy Agency
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>KPI</b>	Key Performance Indicator
<b>LED</b>	Light-emitting diode
<b>MSMEs</b>	Micro, Small, and Medium-sized Enterprises
<b>mtCO<sub>2</sub>e</b>	Metric Tons Carbon Dioxide Equivalent
<b>NBD</b>	National Bank of Dubai
<b>NDCs</b>	Nationally Determined Contributions
<b>NZE</b>	Net Zero Emissions
<b>PCAF</b>	Partnership for Carbon Accounting Financials
<b>T</b>	Tons
<b>TCFD</b>	Task Force on Climate-Related Financial Initiative
<b>WBCSD</b>	World Business Council for Sustainable Development
<b>WRI</b>	World Resources Institute
<b>\$M</b>	Million US Dollars

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# Executive Summary



# Executive Summary

Through strategic capital allocation, banks serve as pivotal intermediaries in the global economy, possessing the unique capacity to either facilitate or mitigate carbon-intensive activities. Because the climate impact of financial institutions far outweighs their direct operational footprints, **Emirates NBD – Egypt** views its role as a proactive catalyst for the green economy.

By quantifying our portfolio’s carbon footprint, we go beyond mere compliance to act as a strategic partner in our clients’ decarbonization journeys. Our commitment is to provide the advisory and financial solutions necessary to bridge the gap between current operations and a low-carbon future, ensuring both our portfolio and the broader Egyptian market remain resilient and competitive.

As climate change becomes a fundamental determinant of global financial stability, we continue to address our environmental responsibilities with urgency. This Financed Emissions Report serves as our **second assessment** of the greenhouse gas (GHG) emissions associated with our lending activities, based on financial data as of December 31, 2024.

This report specifically focuses on the Bank’s **corporate lending portfolio**, which represents **80% of the Bank’s total loan book**. By aligning our methodology with the **Partnership for Carbon Accounting Financials (PCAF)** and the **Global GHG Accounting and Reporting Standard for the Financial Industry**, we provide a transparent and standardized disclosure of our emissions data, reinforcing our commitment to climate-conscious banking.

The Bank has identified that **13% of its corporate lending portfolio** is concentrated in carbon-intensive sectors, specifically: **Oil & Gas, Power Generation, Iron & Steel, Aluminum, and Real Estate**. Collectively, these five industries account for nearly 100% of the Bank’s carbon-intensive exposure within the corporate division and are classified under the Business Loans asset class. To provide a rigorous and transparent assessment, the Bank has calculated **Scope 1, 2, and 3 emissions** for all clients within these priority sectors.

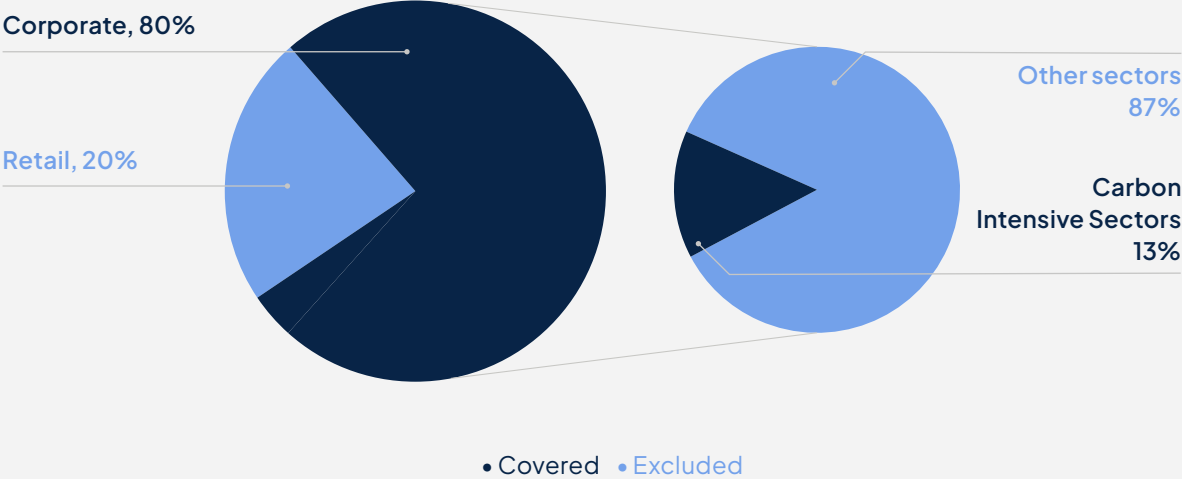
For the current reporting period, the Bank’s total absolute financed emissions amounted to **1,905,857 mtCO<sub>2e</sub>**, with the majority of emissions coming from the **Oil & Gas sector**, which contributes approximately **94%** of the total financed emissions. This dominance is consistent with international benchmarks regarding the sector’s high emission intensity.

The Bank recorded a **36% reduction in absolute financed emissions** compared to the 2023 baseline. This decrease was primarily driven by a **37% reduction in the total outstanding loan portfolio** (in USD terms) as of December 31, 2024. Additionally, the **devaluation of the Egyptian Pound** against the US Dollar significantly influenced the assessment. Since emissions are currently estimated based on USD-equivalent financial data, the currency conversion of EGP financials resulted in a lower absolute emissions figure.

To effectively manage and reduce financed emissions, **Emirates NBD – Egypt** has outlined key preliminary decarbonization measures, starting with stakeholder engagement and supporting clients in measuring, reporting, and mitigating their greenhouse gas emissions.



## 2024 Assessment Coverage



Total financed emissions 2024

**1,905,857 mtCO<sub>2</sub>e**

## Oil & Gas Sector

Scope 1 + 2 Intensity  
**119,114** mtCO<sub>2</sub>e/\$Mlent



## Power Generation

Scope 1 + 2 Intensity  
**1,829** mtCO<sub>2</sub>e/\$Mlent



## Iron & Steel Sector

Scope 1 + 2 Intensity  
**426** mtCO<sub>2</sub>e/\$Mlent



## Aluminium Sector

Scope 1 + 2 Intensity  
**52.82** mtCO<sub>2</sub>e/\$Mlent

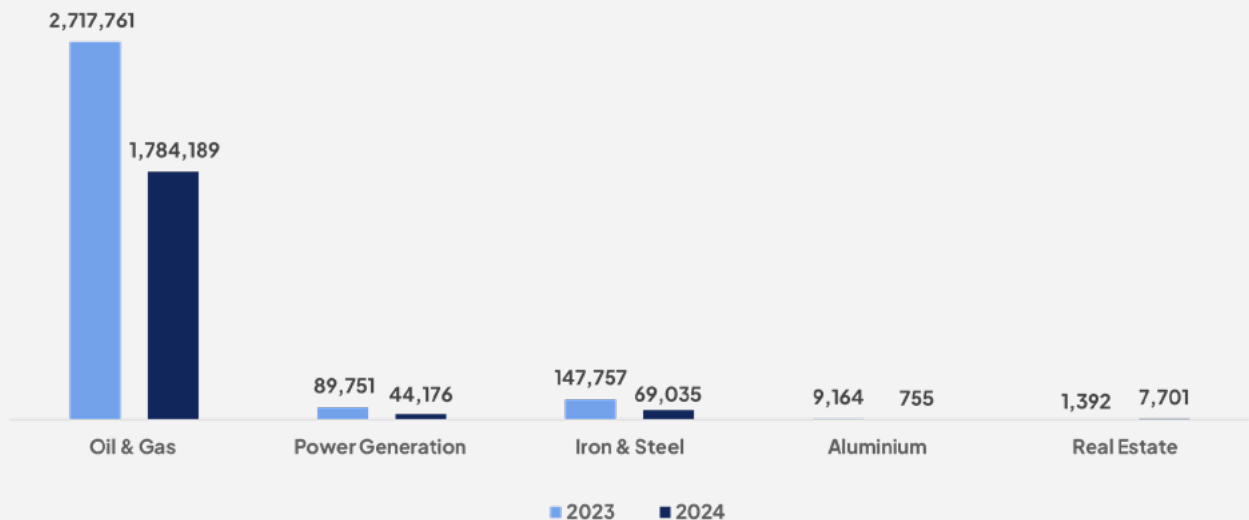


## Real Estate Sector

Scope 1 + 2 Intensity  
**14.94** mtCO<sub>2</sub>e/\$Mlent



Financed Emissions Per Sector (mtCO<sub>2</sub>e) | Over The Years





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# Introduction

# Introduction

In the global effort to mitigate the impacts of climate change, the role of financial institutions has evolved from passive observers to active catalysts for economic transition. At Emirates NBD - Egypt, we recognize that our most significant environmental influence resides not within our physical operations, but through the capital we deploy. Financed emissions—categorized as Scope 3, Category 15—typically represent the vast majority of a financial institution's total carbon footprint. By quantifying these emissions, we move beyond operational sustainability to address the core of our business model, identifying carbon-intensive “hotspots” and proactively managing transition risks.

This disclosure is part of our broader commitment to strategically align our corporate portfolio with the goals of the Paris Agreement and Egypt's National Climate Change Strategy 2050. Emirates NBD - Egypt views financed emissions reporting not merely as a compliance exercise, but as a strategic tool for value creation. Our objective is to serve as a partner to our clients, providing the advisory services and financial solutions necessary to facilitate their respective decarbonization journeys. As we continue to refine our data quality and expand our reporting boundaries, we remain steadfast in our commitment to fostering a resilient, low-carbon economy that ensures long-term prosperity for the Egyptian market.

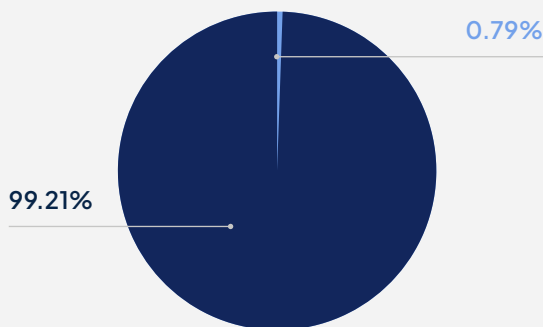
This report provides a comprehensive evaluation of Emirates NBD - Egypt's climate impact as derived from its primary lending activities. The assessment specifically focuses on the Bank's large corporate portfolio, with a granular analysis of five key carbon-intensive sectors:

- Oil & Gas
- Power Generation
- Iron & Steel
- Aluminum
- Real Estate

## Beyond Operations: The Bigger Picture of Financed Emissions

Based on Emirates NBD Egypt's 2024 results, financed emissions are approximately 125 times higher than the operational CFP. This highlights the critical importance of managing financed emissions in the banking sector.

### Total Emissions Profile for Emirates NBD Egypt 2024



• Operational CFP • Financed Emissions



Financed Emissions

X 125

Operational Emissions



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# Methodology & Approach

## Guidelines & Framework

Financed emissions are calculated according to the guidance provided by the Partnership for Carbon Accounting Financials (PCAF), which outlines how financial institutions should account for their Scope 3 emissions from category 15: investments. The Global GHG Accounting and Reporting Standard Part A for Financed Emissions presents the industry's foremost framework for calculating and reporting these emissions to investors.

Developed by the PCAF, the Standard aligns with the GHG Protocols requirements for the Corporate Value Chain (Scope 3) Accounting and Reporting Standard, as set forth by the World Resources Institute and the World Business Council for Sustainable Development. It specifies preferred methods for calculating the financed greenhouse gas emissions generated by an entity, as well as for tracking and reporting these emissions over time.

PCAF's guidance is dynamic, which means it may influence our methodology, assumptions, and calculation results as it evolves. The PCAF Standard encourages financial institutions to start reporting their emissions, even in the face of data limitations, recognizing that ideal reporting methods may not always be achievable, and estimated or proxy data may need to be utilized.

This assessment is guided by various frameworks, including but not limited to:

- PCAF (2022). The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition.
- Greenhouse Gas Protocol Guidelines.
- 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories (with 2019 Refinements).



## Calculation Approach

In adherence to the PCAF methodology and following the WBCSD/WRI GHG Protocol, the financed emissions assessment has incorporated all seven Kyoto Protocol greenhouse gases, whenever relevant and significant.

Global warming potentials (GWPs) serve as coefficients that quantify the radiative forcing impact of a specific greenhouse gas, such as methane, in comparison to an equivalent amount of carbon dioxide. These GWPs are employed in GHG accounting to standardize greenhouse gas emissions, expressing them in a common unit for easy comparison, known as carbon dioxide equivalent (CO<sub>2</sub>e).

In the course of this inventory, Emirates NBD - Egypt has applied 100-year GWPs to all emissions data to calculate the total emissions in metric tons of carbon dioxide equivalent (mtCO<sub>2</sub>e).

The emissions calculation approach is based on multiplying the attribution factor by the client's total emissions for the reporting year. The attribution factor determines the portion of emissions that the financial institution is responsible for, based on the loan amount provided to the client. As for the client's emissions, there are various methods for estimating it, including:

### 1. Reported Emissions

Uses emissions data directly reported by companies (e.g., carbon footprint reports) or verified third-party sources.

### 2. Physical Activity-Based Emissions

Estimates emissions using physical activity data (e.g., energy consumption, production levels) and applies verified emission factors.

### 3. Economic Activity-Based Emissions

Estimates emissions using financial data (e.g., revenue, sectoral assets) and applies statistical or input-output models for emission factors.



## General Approach

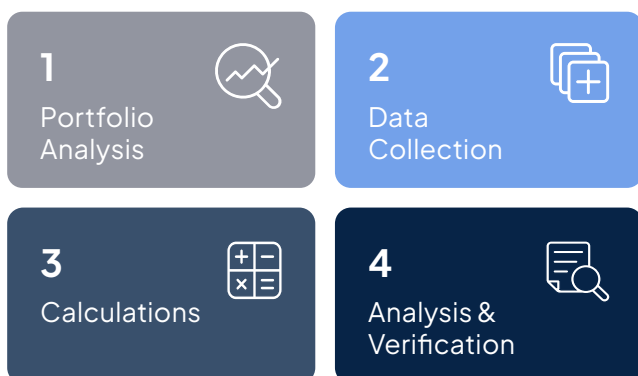
The assessment methodology follows four key steps. First, a comprehensive analysis of the Bank's total lending portfolio is conducted to define the scope of the assessment, including the lending divisions and the carbon-intensive sectors covered.

After this analysis, data collection is carried out using multiple sources. A detailed profile of borrowers, including industry classification, operational activities, and the Bank's exposure, is obtained from Emirates NBD Egypt's internal records. Clients' financial data, such as key items from the balance sheet and income statement, is retrieved from the Bank's internal credit rating system. Emission factors are sourced from the PCAF database.

All financial data are then converted from Egyptian Pounds (EGP) to US Dollars (USD) using the average exchange rates for the year 2024 and calculations are carried out accordingly.

Following the calculations, a detailed analysis is performed, including the presentation of results and the assignment of data quality scores in accordance with the PCAF Standard.

The Bank's outstanding exposure is measured in line with PCAF standard recommendations, considering on-balance loans as of year-end 2024, while off-balance loans are excluded from the assessment.



## Reporting Period & Base Year (BY)

This assessment covers financial figures extracted as of **year-end 2024**. This represents Emirates NBD - Egypt second financed emissions report, with **2023** serving as the **base year** and reference for all financed emissions results of **the five covered sectors**: Oil & Gas, Power Generation, Iron & steel, Aluminum and Construction & Real estate sectors.

## Assessment Boundaries

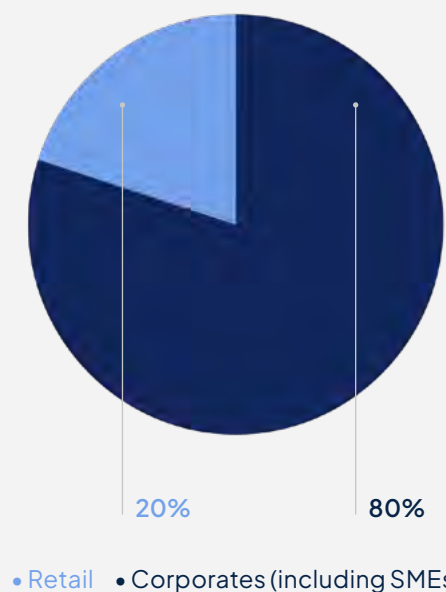
The bank's portfolio analysis identified the Corporate Division as the most substantial component of the lending portfolio, representing 80% of total exposure, with the remaining 20% allocated to Retail division. Given this concentration, further investigation focused on the Corporate segment.

Within the corporate loans portfolio, clients were assessed based on their involvement in **carbon-intensive** sectors to evaluate the bank's exposure in this area, which has been determined to be **13%** of the total large corporate loans portfolio. This assessment covers five key sectors (Oil & Gas, Power Generation, Iron & Steel, Aluminum, and Real Estate) which collectively represent nearly 100% of the bank's exposure to carbon-intensive industries.

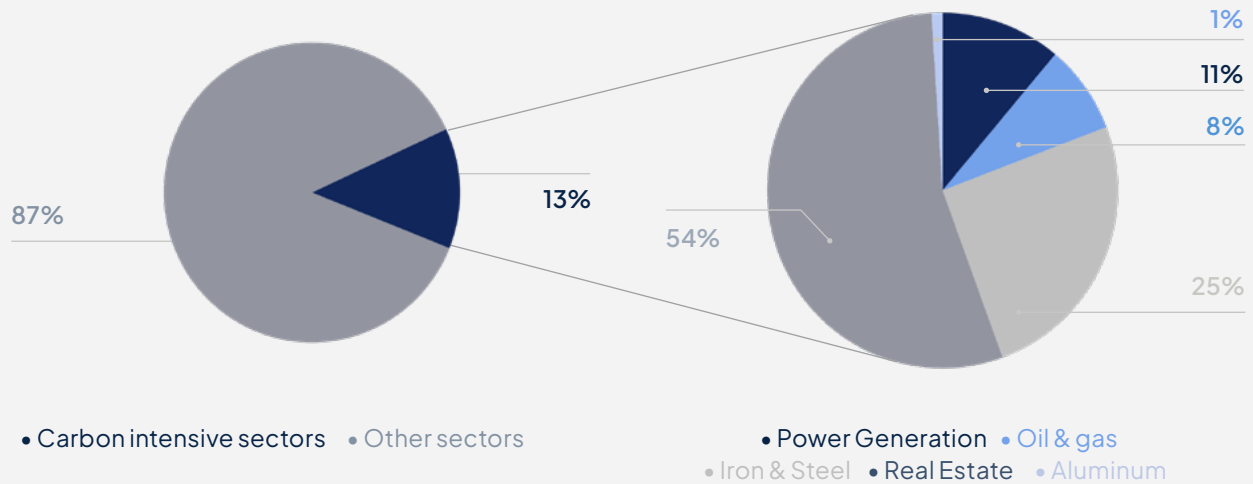
The disclosed emissions from this assessment are linked outstanding loans of **\$183.2 million** within the bank's large corporate lending portfolio, representing a **reduction** of around **37%** compared to 2023. Due to data limitations, Emirates NBD - Egypt has adopted the **Economic Activity-Based** methodology in this financed emissions assessment.

The calculations are based on outstanding loans as of December 2024 and account for Scope 1, 2, and 3 financed emissions. These emissions include the seven greenhouse gases defined by the Kyoto Protocol, expressed in mtCO<sub>2e</sub>.

Emirates NBD - Egypt Lending Portfolio per Division | 2024



## Exposure to Carbon-Intensive Sectors Emirates NBD - Egypt Large Corporate Lending Portfolio | 2024



## Outline for Assessment Boundaries Selection Process

To define the boundaries for the current assessment, a specific selection criterion has been applied, as illustrated in the diagram below.



## Data Challenges & Limitations

The availability and reliability of data remain major challenges in reporting financed emissions. As emphasized by PCAF, current estimation methodologies often depend on low-quality data, which may not accurately represent borrowers' actual emissions. Access to high-quality data (particularly direct emissions data from borrowers) is limited, especially in Egypt, where most companies are not yet required to measure or disclose their emissions.

Due to constraints in data availability, quality, and accuracy, as well as the limitations of the chosen methodology, achieving precision in financed emissions reporting is challenging. Despite this, Emirates NBD - Egypt has disclosed its financed emissions using the best available data to date.

At present, the Bank does not incorporate client-reported emissions in its calculations, as many clients have yet to disclose this information, and those that do often lack standardized reporting practices. As more clients begin to report emissions consistently and in a verifiable manner, the Bank will integrate this data into its assessments. Verified client-reported data is expected to provide the most accurate foundation for evaluating financed emissions.



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# Oil & Gas Sector



# Oil & Gas Sector

## Sector Insights and Trends<sup>1</sup>



The oil and gas sector is vital to the global economy but is also a major contributor to greenhouse gas (GHG) emissions, accounting for nearly 15% of global energy-related emissions in 2022. Half of these emissions come from flaring and methane leaks, while 40% result from the combustion of oil and gas products.

## Decarbonization Levers



Oil and gas companies can reduce emissions through two key strategies:

### 1. Energy Efficiency (Scope 1 & 2 Emissions)

- Cutting methane leaks and eliminating routine gas flaring.
- Optimizing energy use in extraction, refining, and logistics.

### 2. Diversification (Scope 3 Emissions)

- Expanding into **low-carbon energy solutions**, including biofuels, biogas, and clean hydrogen.
- Investing in **renewable power** (wind, solar) and distributed energy to align with electrification trends.
- Advancing **carbon capture technologies**, leveraging industry expertise and capital.

## National Context<sup>2</sup>



Egypt's decarbonization strategy focuses on flaring reduction, energy efficiency improvements, natural gas expansion, and the exploration of CCUS and hydrogen production. Egypt is working to balance their reliance on hydrocarbons with a transition to cleaner energy solutions, reflecting a shared commitment to sustainable development and climate action.

## Emissions Sources



Emissions in the oil and gas sector arise from various stages of the supply chain, including energy-intensive extraction, refining, and processing activities, as well as the transportation of crude oil, refined products, and natural gas over long distances.

## Scope & Boundaries



As of December 31, 2024, Emirates NBD Egypt's exposure to the oil and gas sector stood at **\$14.8 million**. This represents 8% of the bank's total outstanding loans to carbon-intensive industries within its large corporate lending portfolio. All clients in this category are classified under the business loans asset class, with emissions calculations encompassing Scopes 1, 2, and 3.

## Results



Financed emissions for this sector were calculated based on the specific economic activities of clients and attributed according to the Bank's financial exposure. This assessment identified total financed emissions of **1,784,189 mtCO<sub>2</sub>e** (encompassing Scopes 1, 2, and 3), representing a **34% reduction** against the 2023 baseline<sup>3</sup>. This decline was primarily driven by a **57% reduction** in total USD loan exposure within the sector.

**Scope 1 emissions** accounted for approximately **97%** of the total, largely attributed to energy consumption, flaring, and methane leaks during extraction processes.

<sup>1</sup> Information in this section are retrieved from: IEA, Emissions from Oil and Gas Operations in Net Zero Transitions.

<sup>2</sup> Information in this section are retrieved from: Egypt's Second Updated Nationally Determined Contributions.

<sup>3</sup> Financed emissions for 2023 were recalculated following the receipt of enhanced data in 2024. This restatement offers a more accurate reflection of the previous year's exposure based on refined client-level data.

Scope 1 **1,731,831** mtCO<sub>2</sub>e



Scope 2 **36,814** mtCO<sub>2</sub>e



Scope 3 **15,544** mtCO<sub>2</sub>e



Sector Total Emissions (Scope 1, 2 and 3) **1,784,189** mtCO<sub>2</sub>e



Scope 1+2 Intensity **119,114** mtCO<sub>2</sub>e/\$MInt



Data Quality Score  
as per the PCAF

**4.00**

### Oil & Gas Emissions per Scope (mtCO<sub>2</sub>e) | Over The Years





05

Power  
Generation  
Sector

# Power Generation Sector

## Sector Insights and Trends<sup>4</sup>



The power generation sector is a major contributor to global GHG emissions, accounting for approximately 40% of energy-related CO<sub>2</sub> emissions, according to the IEA's World Energy Outlook 2022.

Electrification is a key driver of the energy transition and will increasingly serve as the foundation of the energy systems, playing a crucial role in decarbonizing the transport, building, and industrial sectors. Thus, the IEA's NZE scenario forecasts global electricity generation to increase two-and-a-half-times from 2022 to 2050.

## Decarbonization Levers



Renewable energy technologies, such as solar and wind, are essential for reducing emissions in the electricity sector. In the IEA Net Zero Scenario, nearly 90% of global electricity generation by 2050 comes from renewable sources, with solar PV and wind contributing almost 70% combined.

In addition, the IEA's NZE scenario emphasizes expanding low-carbon generation through nuclear and hydropower, alongside developing storage capacity and modernizing infrastructure to support electrification, meet growing electricity demand, and maintain grid stability and flexibility.

## National Context



Egypt is advancing its renewable energy capacity through projects like the Benban Solar Park and wind farms in the Gulf of Suez, aiming to achieve 42% renewable energy by 2035. The country also utilizes hydropower from the Aswan High Dam and is transitioning to natural gas to replace more carbon-intensive fuels. Energy efficiency measures, including grid modernization and LED lighting programs, further support emissions reductions.

## Emissions Sources



Emissions in the power generation sector primarily come from fossil fuel combustion, fuel extraction, transmission losses, and end-use consumption.

## Scope & Boundaries



Total exposure to the power generation sector reached **\$20.7 million** at year-end 2024, accounting for **11% of the large corporate carbon-intensive lending portfolio**. These exposures are classified within the business loans asset class, and the reported figures include a comprehensive assessment of Scope 1, 2, and 3 emissions.

## Results



Financed emissions for the power generation sector were calculated using an economic activity-based estimation methodology and attributed according to the Bank's financial exposure. Total emissions were identified at **44,176 mtCO<sub>2</sub>e** (Scopes 1, 2, and 3), representing a **51% decrease** compared to the 2023 base year. This significant reduction is linked to the reduction witnessed in the total outstanding loans by 46% compared to the 2023 baseline. The **devaluation of the EGP** in 2024, which lowered the USD-equivalent exposure used in the emissions calculation, is another factor that affected the total financed emissions. Within the sector's emissions profile, Scope 1 sources accounted for approximately **75%** of the total, largely stemming from fuel combustion during the power generation process.

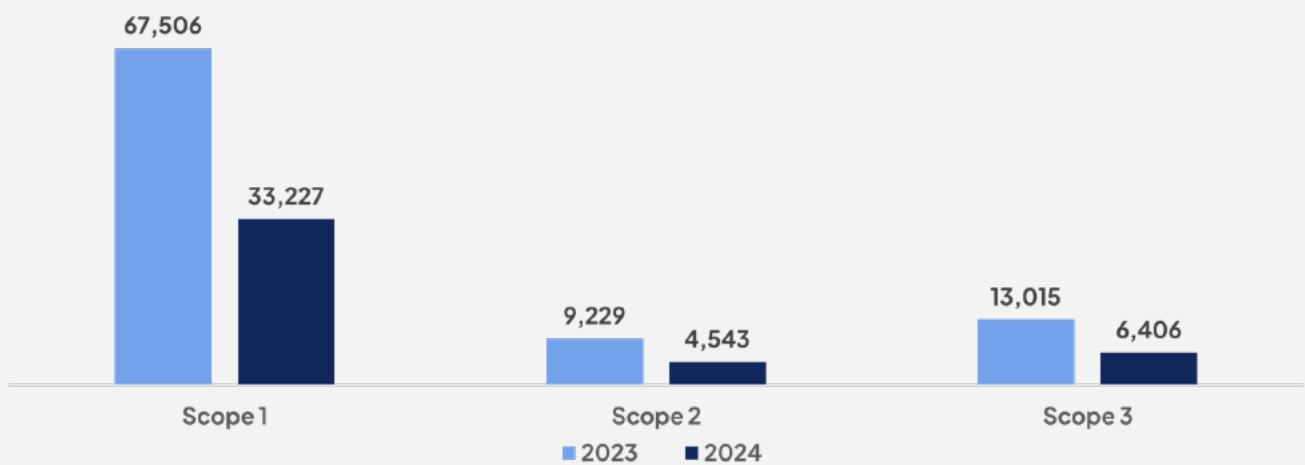
<sup>4</sup>Information in this section are retrieved from IEA, Net Zero by 2050: A Roadmap for the Global Energy Sector and IEA: Net Zero Roadmap: A Global Pathway to Keep the 1.5°C Goal in Reach.



Data Quality Score  
as per the PCAF

**4.00**

### Power Generation per Scope (mtCO<sub>2</sub>e) | Over The Years<sup>5</sup>



<sup>5</sup> In 2024, the 2023 baseline emissions for the power generation sector were recalculated following a more granular analysis of client activities. This adjustment ensures the portfolio strictly includes entities engaged in direct power generation.



06

# Iron & Steel Sector

# Iron & Steel Sector

## Sector Insights and Trends <sup>6</sup>



Steel is a critical resource across numerous industries, including construction, automotive, shipping, aviation, machinery, and consumer goods. The iron and steel sector currently accounts for approximately 8% of global final energy demand and 7% of energy-related CO<sub>2</sub> emissions, including process emissions. According to the IEA's NZE Scenario, the carbon intensity of the iron and steel sector must decrease by 24% by 2030, compared to 2022 levels, to align with global climate goals.

## Decarbonization Levers



The sector holds immense potential to reduce energy consumption and greenhouse gas emissions through innovation, the adoption of low-carbon technologies, and improved resource efficiency.

The IEA's decarbonization strategy emphasizes three actions to achieve net-zero emissions. First, improving material efficiency through smarter design and manufacturing processes. Second, the industry must fundamentally transform its production methods by shifting from coal-based blast furnaces to hydrogen-powered direct reduction systems, with primary steelmakers needing to adopt these new technologies at scale despite current commercial challenges. Third, carbon capture systems will be deployed selectively to address remaining emissions from traditional plants, though this represents a transitional rather than ultimate solution.

## National Context



The Egyptian government emphasizes the importance of transitioning to low-carbon steel production to maintain export competitiveness, especially in light of mechanisms like the European Union's Carbon Border Adjustment Mechanism (CBAM). The Ministry of Trade and Industry is collaborating with leading companies, research centers, and technology providers to explore innovative solutions, including electric arc furnaces and clean hydrogen, to support cleaner production methods.

## Emissions Sources



Steelmaking emissions are largely driven by fuel consumption and iron reduction processes. The industry employs three primary production routes, each with unique emission profiles. The Blast Furnace – Basic Oxygen Furnace (BF-BOF) relies on coal and coke for energy and processing. The Direct Reduced Iron – Electric Arc Furnace (DRI-EAF) utilizes natural gas, coal, and electricity. Lastly, the EAF-Scrap method, a secondary route, uses scrap metal as its input and operates entirely on electricity.

## Scope & Boundaries



As of December 31, 2024, Emirates NBD Egypt's exposure to the iron and steel sector stood at **\$46.1 million**, representing **25% of the bank's total outstanding loans** to carbon-intensive industries within its large corporate lending portfolio. All associated clients are categorized under the business loans asset class, with emissions reporting encompassing Scopes 1, 2, and 3.

## Results



Financed emissions for the iron and steel sector were calculated using an activity-based estimation methodology and attributed according to the Bank's financial exposure. Total emissions were estimated at **69,035 mtCO<sub>2</sub>e** (Scopes 1, 2, and 3), representing a **53.3% reduction** from the 2023 base year. This decrease is primarily attributable to two factors: a reduction in total outstanding loans in USD within the sector by **58%** and the significant devaluation of the EGP against the USD in 2024. Within the sector's emissions profile, Scope 3 sources accounted for approximately **72%** of the total emissions.

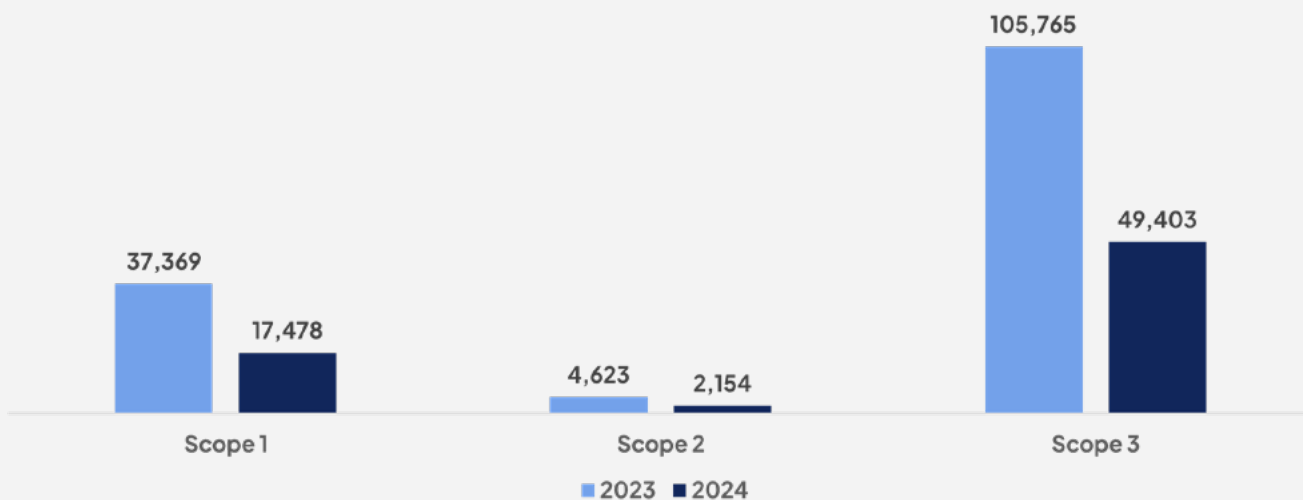
<sup>6</sup> Information in this section are retrieved from IEA, Net Zero by 2050: A Roadmap for the Global Energy Sector and IEA: Net Zero Roadmap: A Global Pathway to Keep the 1.5°C Goal in Reach.



Data Quality Score  
as per the PCAF

**4.00**

### Iron & Steel Emissions per Scope (mtCO<sub>2</sub>e) | Over The Years



The background of the page is a dark, monochromatic photograph of various aluminum mechanical components, such as bolts, nuts, and shafts, arranged in a way that creates a sense of depth and industrial precision. The lighting highlights the metallic textures and the circular forms of the parts.

07

# Aluminum Sector

# Aluminum Sector

## Sector Insights and Trends<sup>7</sup>



Aluminium is an energy-intensive material that is essential for the global energy transition. The IEA's NZE Scenario predicts a growing demand for aluminium to support low-carbon technologies, making the decarbonization of its production crucial for meeting climate goals. Aluminium is widely used across industries such as construction, transportation, power infrastructure, machinery, and packaging. It is also a key component in clean energy technologies, including solar PV, where it accounts for over 85% of materials, electric vehicles for lightweight design and battery storage, and electricity networks for infrastructure.

## Decarbonization Levers



In the aluminium sector, efforts will focus on increasing production efficiency and optimizing energy consumption through the adoption of alternative heat sources and improved process efficiency. The transition will also leverage low-carbon electricity to reduce emissions, alongside expanding the use of secondary metal capacity and scrap aluminium.

## National Context



Egypt is actively pursuing decarbonization of its aluminium sector by integrating large-scale renewable energy projects to reduce carbon emissions and comply with international environmental standards. This is driven by Egypt's export activities to Europe, which will be impacted by the Carbon Border Adjustment Mechanism (CBAM) guidelines. Thus, taking proactive measures to ensure the aluminium sector meets CBAM requirements has become a priority for Egypt.

## Emissions Sources



Aluminum manufacturing is a highly emissions-intensive process, with three primary sources of emissions: thermal energy consumption during refining, electricity use for electrolysis, and direct emissions from the electrolysis process caused by the breakdown of carbon-based anodes.

## Scope & Boundaries



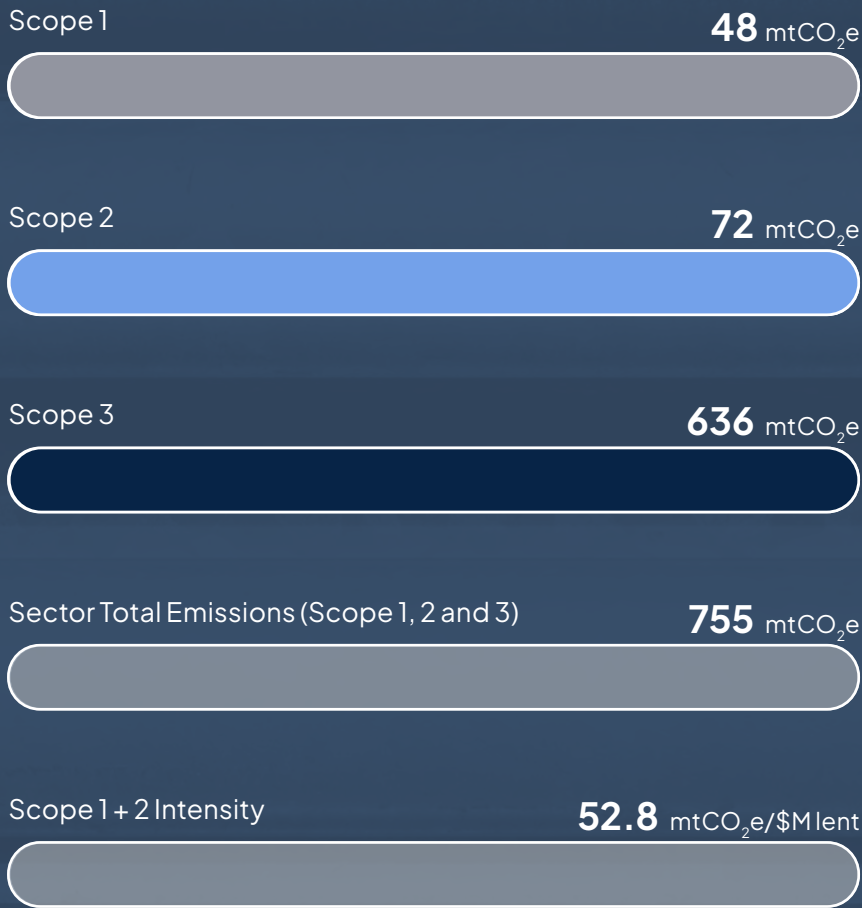
As of December 31, 2024, Emirates NBD Egypt's exposure to the aluminium sector stood at **\$2.3 million**, representing **1% of the bank's total outstanding loans** to carbon-intensive industries within its large corporate lending portfolio. All associated clients are categorized under the business loans asset class, with emissions reporting encompassing Scopes 1, 2, and 3.

## Results



Financed emissions for the aluminium sector were calculated using an activity-based estimation methodology and attributed according to the Bank's financial exposure. Total emissions were identified at **755 mtCO<sub>2</sub>e** (Scopes 1, 2, and 3), representing a significant **92% decrease** compared to the 2023 base year. This substantial reduction is primarily attributable to a major loan repayment that occurred in 2024, which notably reduced the Bank's exposure in this segment. Within the sector's emissions profile, Scope 3 sources accounted for approximately **84%** of the total impact, reflecting the high carbon intensity of the broader value chain.

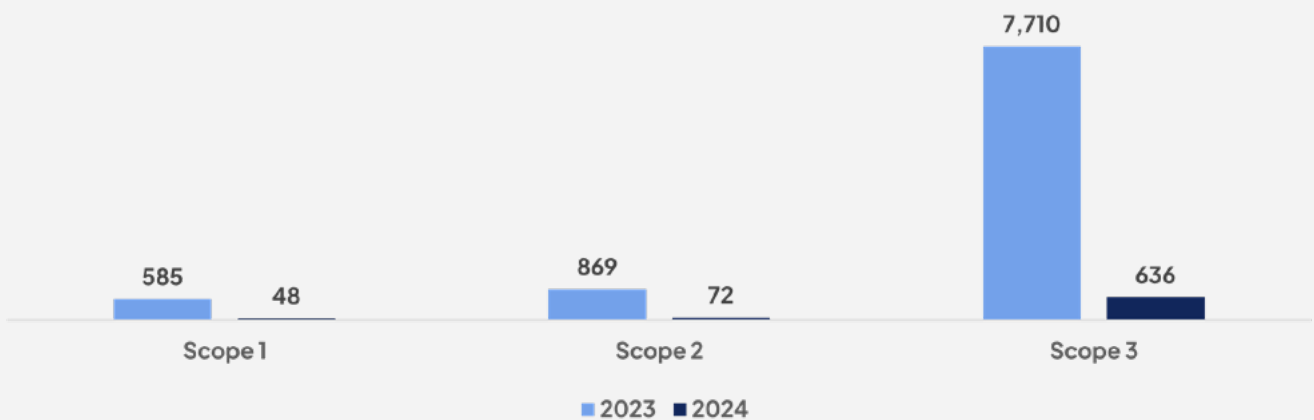
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Data Quality Score  
as per the PCAF

**4.00**

### Aluminum Emissions per Scope (mtCO<sub>2</sub>e) | Over The Years



08

# Real Estate Sector



# Real Estate Sector

## Sector Insights and Trends<sup>8</sup>



According to the IEA, buildings are responsible for 30% of global final energy consumption and 26% of global energy-related emissions. Of these emissions, 8% are direct emissions from buildings, while the remaining 18% result from the production of electricity and heat used within them.

## Emissions Sources



Approximately 80% of the building sector's emissions are operational, stemming from the use phase of buildings. The remaining 20-25% of emissions are embodied (Scope 3), generated during the production, maintenance, and disposal of building materials, contributing to a building's total life cycle emissions.

## Decarbonization Levers



The IEA's Net Zero Emissions scenario presents a comprehensive decarbonization pathway for the real estate sector, emphasizing energy efficiency, building electrification, and low-carbon construction. Central to this transformation is the large-scale retrofitting of existing buildings with high-performance insulation, smart HVAC systems, and energy-efficient appliances, alongside strict zero-energy standards for new constructions. The IEA's NZE target aims for all new buildings to be zero-carbon-ready by 2030, with 2.5% of existing buildings retrofitted to zero-carbon standards annually from 2030 onward. Green building certifications—such as LEED, EDGE, and others—play a vital role in supporting and validating these efforts.

## Scope & Boundaries



As of December 31, 2024, Emirates NBD – Egypt's exposure to the real estate sector was **\$99.3 million**. This sector accounts for **54%** of the bank's outstanding loans to carbon-intensive industries within its large corporate lending portfolio. Most of these clients are classified under the business loans asset class, while a few number is classified under the project finance asset class. The calculations encompass Scope 1, 2, and 3 emissions.

## National Context



Egypt's updated Nationally Determined Contributions (NDCs) emphasize the need to reduce carbon emissions in the real estate sector by prioritizing sustainability in both new and existing buildings. Key strategies include expanding renewable energy and energy efficiency measures, such as installing rooftop solar panels, promoting solar water heaters, and increasing the use of LED lighting in residential areas by 2030. Additionally, advancing green building initiatives—through stricter energy efficiency codes for new constructions, retrofitting existing buildings, and incentivizing sustainable technologies—will play a critical role in achieving a low-carbon real estate sector.

## Results



Financed emissions for the real estate sector were calculated using an activity-based estimation methodology and attributed according to the Bank's financial exposure. This assessment identified total emissions of **7,701 mtCO<sub>2</sub>e** (Scopes 1, 2, and 3), representing a **four-fold increase** compared to the 2023 base year. This significant variance is directly linked to expanded portfolio exposure, as outstanding loans to the sector increased by around **30%** in 2024. Within the sector's emissions profile, Scope 3 sources accounted for approximately **76%** of the total, reflecting the high embodied carbon and value-chain impact inherent in real estate activities.

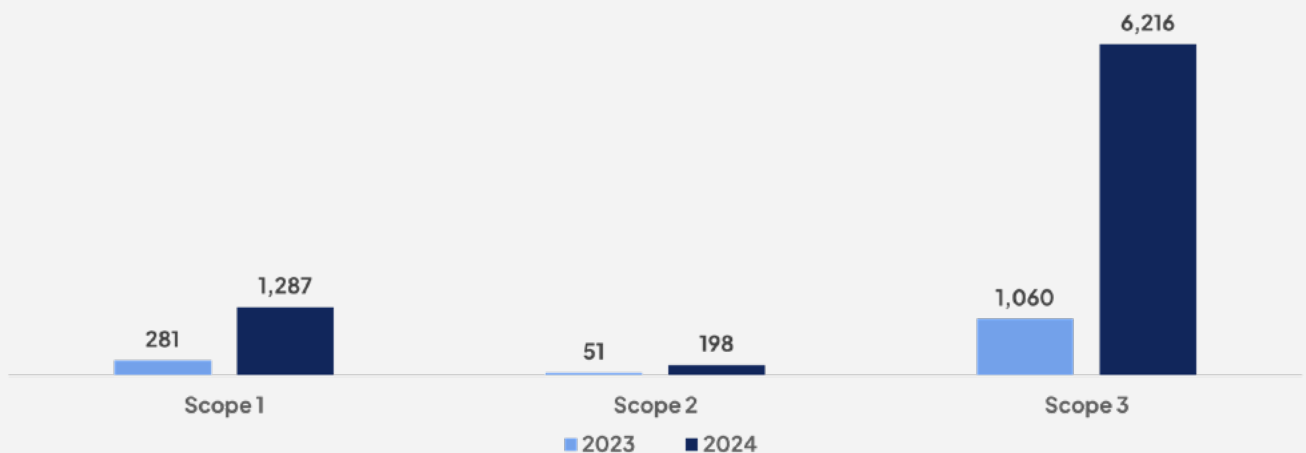
<sup>8</sup> Information in this section are retrieved from IEA, Net Zero by 2050: A Roadmap for the Global Energy Sector and IEA: Net Zero Roadmap: A Global Pathway to Keep the 1.5°C Goal in Reach.



Data Quality Score  
as per the PCAF

**4.02**

### Real Estate Emissions per Scope (mtCO<sub>2</sub>e) | Over The Years



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# Results Summary

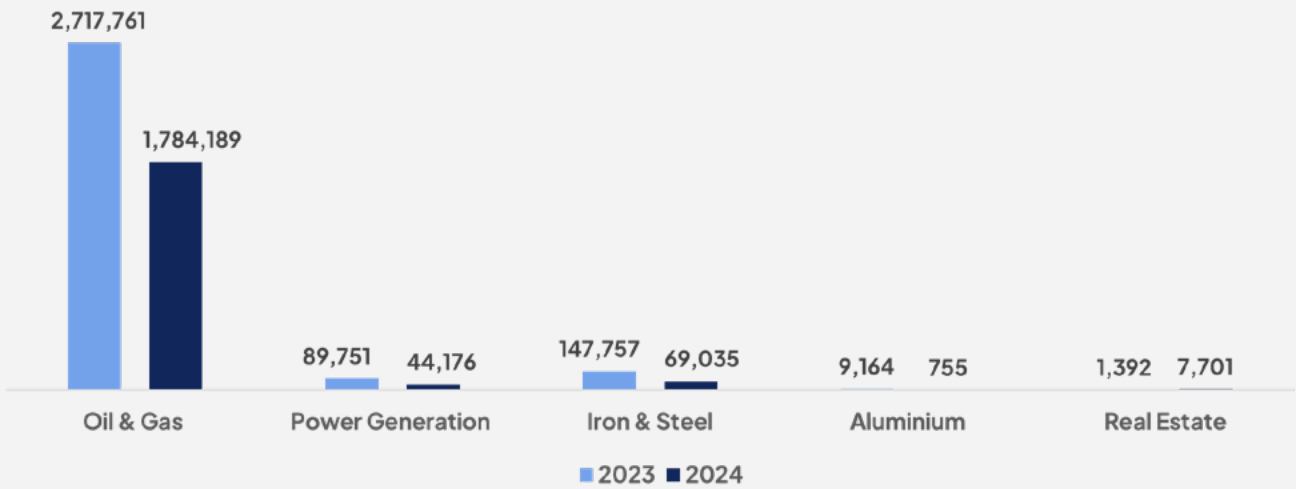


# Results

The oil and gas sector remains the largest contributor to the Bank's financed emissions, accounting for 94% of total financed emissions. The majority of these are classified as Scope 1, directly tied to the operational activities of our clients, specifically fuel combustion in extraction equipment, flaring, and methane leakage. Despite this concentration, financed emissions decreased across nearly all sectors compared to the 2023 base year, with the exception of the Real Estate sector. This downward trend was primarily driven by two factors: a decrease in outstanding USD loan balances as well as the significant devaluation of the EGP against the USD in 2024. As financed emissions are calculated using USD-equivalent values in line with the PCAF database, the currency devaluation led to a lower financial attribution of emissions, even where underlying operational emissions intensity may have remained unchanged.

	Oil & Gas	Power Generation	Iron & Steel	Aluminium	Real Estate
<b>Bank Exposure per sector</b>					
Outstanding loans (\$M)	14.8	20.7	46.1	2.3	99.3
Sector % from carbon intensive sectors in large corporate lending portfolio	8%	11%	25%	1%	54%
<b>2024 Results</b>					
Scope 1 (mtCO <sub>2</sub> e)	1,731,831	33,227	17,478	48	1,287
Scope 2 (mtCO <sub>2</sub> e)	36,814	4,543	2,154	72	198
Scope 3 (mtCO <sub>2</sub> e)	15,544	6,406	49,403	636	6,216
<b>Total Emissions (mtCO<sub>2</sub>e)</b>	<b>1,784,189</b>	<b>44,176</b>	<b>69,035</b>	<b>755</b>	<b>7,701</b>
<b>Scope 1 &amp; 2 Emissions Intensity (mtCO<sub>2</sub>e/\$M lent)</b>	<b>119,114</b>	<b>1,829</b>	<b>426</b>	<b>52.82</b>	<b>14.94</b>

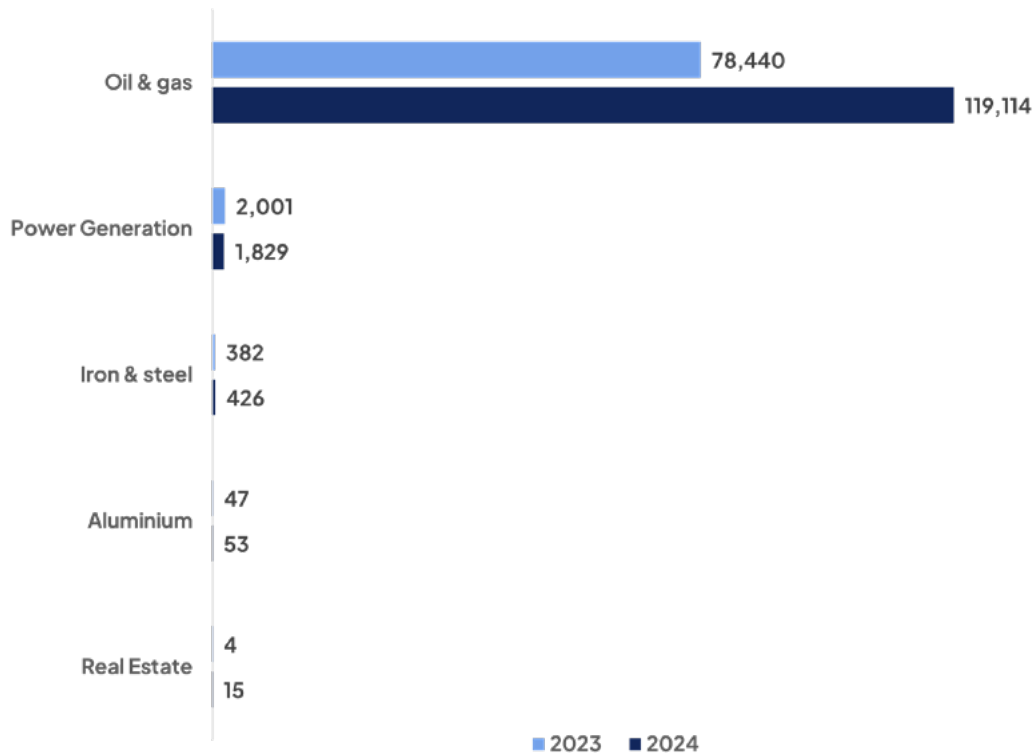
## Financed Emissions Per Sector (mtCO<sub>2</sub>e) | Over The Years



The oil and gas sector accounts for approximately **94%** of Emirates NBD Egypt's financed emissions, despite representing only **8%** of the outstanding loans within the bank's large corporate carbon-intensive portfolio. This significant disparity underscores the high carbon intensity inherent in the sector's operations compared to other industries.

## Financed Emissions Scope 1 and 2 Intensity Per Sector | 2024

(mtCO<sub>2</sub>e/\$M lent)





# 10 Way Forward

# Way Forward

As part of Emirates NBD - Egypt's ongoing commitment to sustainable finance, this preliminary plan explores potential pathways to address financed emissions across our portfolio. The proposed actions outline initial steps to enhance data collection, engage stakeholders, and consider financial incentives—laying the groundwork for a more comprehensive strategy as regulatory frameworks and client capabilities evolve.

## Key Actions

### Data Quality & Transparency



A crucial step in reducing emissions is enhancing the quality of emissions data collected from clients by obtaining actual reported figures. However, this remains a challenge, as many clients do not currently assess their GHG emissions. To bridge this gap, Emirates NBD - Egypt aims to support clients in measuring and reporting their emissions in line with established standards. This initiative will improve data accuracy, strengthening the reliability of our reported financed emissions.

### Stakeholder Engagement & Transition Support



Reducing financed emissions requires strong collaboration with stakeholders. We plan to actively support our clients in their transition to sustainability while also engaging with industry groups and regulators to enhance expertise, gain valuable insights, identify effective strategies, and promote best practices in decarbonization.

### Client Selection & Capital Allocation



Capital allocation should prioritize companies that show measurable progress in sustainability, evidenced by credible transition strategies and emissions reduction targets.

### Green Financing Incentives



Introducing preferential financial terms (e.g., reduced interest rates, extended tenors) for projects delivering decarbonization solutions, such as renewable energy installations, circular economy facilities, and other low-carbon technologies can serve as a powerful incentive for companies to pursue their decarbonization efforts.

### Risk Integration & Governance



Incorporating net-zero alignment metrics and climate risk indicators could strengthen our risk management systems. This enhanced framework will embed climate considerations at all decision levels, ensuring financial activities consistently advance our sustainable finance leadership.

The background of the page features a silhouette of a tree with dense foliage in the foreground, set against a sunset sky with warm orange and yellow tones. The sky transitions to a darker blue at the top right. The tree branches are dark and intricate, framing the central text.

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# Annex

# Annex

## Definitions & Terminology

<b>Absolute emissions</b>	Emissions attributed to a financial institution's lending and investing activity. (Expressed in tonnes CO <sub>2</sub> e.)
<b>Asset class</b>	A group of financial instruments that have similar financial characteristics.
<b>Attribution factor</b>	The share of total GHG emissions of the borrower or investee that are allocated to the loan or investments.
<b>Base year</b>	A base year is a reference year in the past with which current emissions can be compared. To maintain consistency and comparability with future carbon footprints, base year emissions need to be recalculated when structural changes occur in the company that change the inventory boundary (such as acquisitions or divestments). If no changes to the boundaries of the inventory happen, the base year is not adjusted.
<b>Business loans</b>	Loans and lines of credit for general corporate purposes (i.e., with unknown use of proceeds as defined by the GHG Protocol) to businesses, non-profits, and any other structure of organization that are not traded on a market and are on the balance sheet of the financial institution.
<b>Carbon footprint</b>	The amount of Carbon Dioxide that an individual, group, or organization lets into the atmosphere in a certain time frame.
<b>CO<sub>2</sub>e</b>	Carbon dioxide equivalent or CO <sub>2</sub> equivalent, abbreviated as CO <sub>2</sub> e, is a metric used to compare the emissions from various GHGs based on their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
<b>Emissions factors</b>	Specific value used to convert activity data into greenhouse gas emission values.
<b>Financed emissions</b>	GHG emissions that occur as a result of financing, including lending and investment activity. These activities fall within scope 3, category 15 of the GHG protocol.
<b>GHG protocol</b>	Greenhouse Gas Protocol is a uniform methodology used to calculate the carbon footprint of an organization.
<b>Greenhouse gases</b>	GHGs are atmospheric gases that absorb and emit radiation within the thermal infrared range and that contribute to global climate change. The seven gases include carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF <sub>6</sub> ), and nitrogen trifluoride (NF <sub>3</sub> ).
<b>Indirect emissions</b>	Greenhouse gas emissions from facilities/sources that are not owned or controlled by the reporting company, but for which the activities of the reporting company are responsible, e.g., purchasing of electricity.
<b>Kyoto protocol</b>	It operationalizes the United Nations Framework Convention on Climate Change by committing industrialized countries to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets.
<b>Scope 1</b>	Direct emissions from sources that are owned or controlled by the reporting entity (i.e., any owned or controlled activities that release emissions straight into the atmosphere).
<b>Scope 2</b>	Indirect emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by the company.
<b>Scope 3</b>	Indirect emissions resulting from other activities that are not covered in scope 1 and 2. This includes transport fuel used by air business travel, and employee-owned vehicles for commuting to and from work; emissions resulting from courier shipment; emissions from waste disposal, etc.

## Data Quality Score Table

Data Quality (Score 1 = highest: Score 5 = lowest data quality)	Options to Estimate the Financed Emissions		When to Use Each Option
Score 1	Option 1: Reported emissions	1a	Outstanding amount in the company and total company equity plus debt are known. Verified emissions of the company are available.
		1b	Outstanding amount in the company and total company equity plus debt are known. Unverified emissions calculated by the company are available.
Score 2	Option 2: Physical activity-based emissions	2a	Outstanding amount in the company and total company equity plus debt are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data for the company's energy consumption and emission factors specific to that primary data. Relevant process emissions are added.
		2b	Outstanding amount in the company and total company equity plus debt are known. Reported company emissions are not known. Emissions are calculated using primary physical activity data for the company's production and emission factors specific to that primary data.
Score 3			
Score 4	Option 3: Economic activity-based emissions	3a	Outstanding amount in the company, total company equity plus debt, and the company's revenue is known. Emission factors for the sector per unit of revenue are known (e.g., tCO <sub>2</sub> e per euro of revenue earned in a sector).
Score 5		3b	Outstanding amount in the company is known. Emission factors for the sector per unit of asset (e.g., tCO <sub>2</sub> e per euro of asset in a sector) are known
		3c	Outstanding amount in the company is known. Emission factors for the sector per unit of revenue (e.g., tCO <sub>2</sub> e per euro of revenue earned in a sector) and asset turnover ratios for the sector are known.

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# Quality Assurance statement



# Quality Assurance Statement

To Emirates NBD - Egypt Board of Directors,

We have been appointed by Emirates NBD - Egypt to conduct the financed emissions calculations pertaining to the bank's loans portfolio as of 31st of December 2024.

## AUDITORS' INDEPENDENCE AND QUALITY CONTROL

We adhere to integrity, objectivity, competence, due diligence, confidentiality, and professional behavior. We maintain a quality control system that includes policies and procedures regarding compliance with ethical requirements, professional standards, and applicable laws and regulations.

## AUDITORS' RESPONSIBILITY

In conducting the financed emissions calculations, we have adopted the Partnership for Carbon Accounting Financials (PCAF) (The Global GHG Accounting and Reporting Standard for the Financial Industry, 2022 "second edition"), and the Greenhouse Gas Protocol Guidelines.

It is our responsibility to express a conclusion about the quality and completeness of the primary data collected/ provided by Emirates NBD - Egypt. We have performed the following quality assurance/ quality control tasks:

- ◆ Several rounds of data requests were performed whenever the received information was not clear;
- ◆ All data presented in this report were provided by the reporting entity and revised and completed by our technical teams;
- ◆ For data outliers, meetings were held to investigate the accuracy of the data and new data was provided when requested;
- ◆ Any gaps, exclusions and/or assumptions have been clearly stated in the report.

## CONCLUSION

Based on the aforementioned procedures, nothing has come to our attention that would cause us to believe that Emirates NBD - Egypt raw data used in the financed emissions calculations have not been thoroughly collected, verified, and truly represent Emirates NBD - Egypt loans portfolio related to all priority sectors identified in this report. We do not assume and will not accept responsibility to anyone other than Emirates NBD - Egypt for the provided assurance and conclusion.

**Dr. Abdelhamid Beshara, Founder and Chief Executive Officer**

**MASADER, ENVIRONMENTAL & ENERGY SERVICES  
S.A.E CAIRO,**

March 2026



## About Masader

Masader is an innovative interdisciplinary consulting, design and engineering sustainability firm based in Cairo, aiming at leveraging positive impact across the MENA region and globally. It specializes in Resource Efficiency, Sustainable Management of Natural Resources and Integrated Sustainability Solutions. Since 2015, Masader has led 100+ projects across the areas of energy, environment, climate change & carbon footprint, circular economy, green building (LEED), as well as corporate sustainability strategies, reporting and certification.



157 Baehler's Mansions Building, 2nd Floor, 26th of July Street, Zamalek, Cairo, Egypt



+202 2735 4033



info@be-masader.com



<https://www.be-masader.com>

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# Disclaimer



# Disclaimer

Please note that the analysis and estimation of financed emissions are ongoing processes. The estimates presented in this report are based on internal bank data and non-financial metrics from external sources, which Emirates NBD - Egypt does not independently verify. These estimates involve inherent risks and uncertainties that may cause actual outcomes to differ significantly from expectations. Factors such as financial market fluctuations, economic conditions in Egypt and globally, market volatility, national policies, and our clients' actions may impact the final results.



## Data Quality

The indicators presented in this report are derived from a combination of internal and external data sources, all of which are subject to measurement uncertainties. At present, climate-related data remains incomplete, inconsistent, and lacks universally accepted global standards. However, as more clients adopt climate disclosure frameworks and reporting practices, we anticipate an improvement in the accessibility and reliability of external emissions data. Despite ongoing enhancements, data collection, verification challenges, and the absence of standardized industry-wide measurement techniques continue to pose obstacles to data consistency. Addressing these limitations remains a priority for stakeholders striving for greater transparency.



## Methodology

Current emissions calculation methodologies present challenges in terms of consistency, industry-wide adoption, and cross-sector replicability. Regulatory guidance and reporting requirements for climate-related disclosures have evolved in recent years, but these frameworks are still developing and expected to stabilize over time. As methodologies improve and data quality advances, Emirates NBD - Egypt will continue to assess their impact on reported baselines, which may result in refinements to calculations over time.



بنك الإمارات دبي الوطني  
Emirates NBD