alBaraka
CARBON FOOTPRINT REPORT 2021

alBaraka

ABOUT THIS REPORT

This report details the carbon footprint generated by alBaraka bank's headquarters in 2021 and covers Scope 1, 2 and 3 emissions. As it is the first assessment of greenhouse gas (GHG) emissions, the year 2021 is considered the base year (BY) to which all upcoming years will be referenced.

All the data collected and analyzed within this report follow the World Resources Institute (WRI) Greenhouse Gas Protocol principles of relevance, completeness, consistency, transparency, and accuracy.

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS

CFP	Carbon Footprint
CH_4	Methane
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
COP	Conference of the Parties
DEFRA	Department for Environment, Food & Rural Affairs
EF	Emission Factor
ERA	Egypt Electricity Regulatory authority
FTE	Full-time Equivalent
GHG	Greenhouse Gases
GWP	Global Warming Potential
HCWW	Holding Company for Water and Wastewater
HFCs	Hydrofluorocarbons
HVAC	Heating, ventilation, and air conditioning
IPCC	Intergovernmental Panel on Climate Change
ISO	International Standard Organization
kWh	Kilowatt Hour
m^2	Square Meter
m^3	Cubic Meter
$mtCO_2e$	Metric tons Carbon Dioxide Equivalent
N_2O	Nitrous oxide
NF_3	Nitrogen trifluoride
p.km	Passenger kilometers
PFCs	Perfluorocarbons
Scp	Scope
SF_6	Sulphur hexafluoride
WBCSD	World Business Council for Sustainable Development
WRI	World Resources Institute
WTT	Well-to-Tank

EXECUTIVE SUMMARY

Climate change is one of the key challenges facing the world and financial institutions are uniquely positioned to push transformation toward a climate-resilient future. alBaraka bank recognizes the importance of working to conserve the environment while satisfying the needs of current and future generations. Thus, it is choosing to assess its carbon footprint and disclosing the overall emissions related to its operations. alBaraka bank is hereby presenting their first Carbon Footprint (CFP) assessment.

alBaraka bank was founded in 1979. Throughout its long history it managed to establish itself as a pioneer Islamic institution with new and unprecedented retail financing programs in the Egyptian market that satisfy the requirements of the different brackets of the community.

This report details the carbon footprint generated by alBaraka bank's headquarters in New Cairo, for the reporting period 2021. It includes direct GHG emissions from alBaraka bank's owned assets (Scope 1); indirect GHG emissions from the consumption of purchased electricity and chilled water (Scope 2); and selected indirect emissions from other activities not covered in Scope 1 and 2 (Scope 3).

BOUNDARIES AND CFP RESULTS

16,396 m^2

357 FTE

The absolute carbon emissions are used to keep track of the yearly emissions. They are calculated per Scope and further broken down by activity in the report.

195 $mtCO_2e$

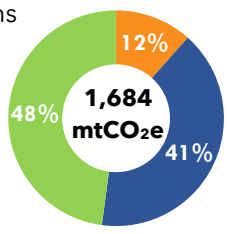
Scope 1 (Direct Emissions)
- Stationary combustion
- Mobile combustion
- Fugitive emissions

682 $mtCO_2e$

Scope 2 (Indirect Emissions)
- Purchased electricity
- Purchased chilled water

806 $mtCO_2e$

Scope 3 (Indirect Emissions)
- Purchased good and services (office supplies)
- Fuel and energy related activities (not included in Scope 1 and 2)
- Waste generated in operations
- Employee commuting + WTT

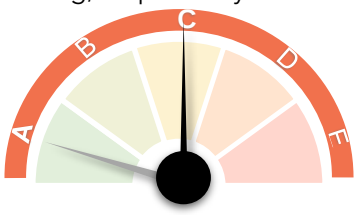


TOTAL EMISSIONS
1,684 $mtCO_2e$

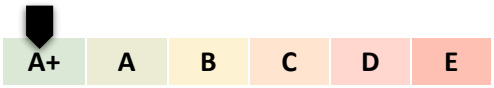
The analysis and calculations of this assessment followed protocols & standards specially developed for accounting and reporting carbon footprint including The Greenhouse Gas Protocol Guidelines, the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories (with 2019 Refinements) and the ISO 14064-1:2019 Standards.

PERFORMANCE EVALUATION

To assess the efficiency level of alBaraka bank's resource consumption, carbon intensity-based metrics were calculated per unit of area and FTE. For the reporting period 2021, alBaraka bank emission intensities were **2.46 $mtCO_2e$/FTE**, equivalent to **0.05 $mtCO_2e/m^2$** for Scope 1 and 2 emissions with a C and an A scoring, respectively.



On an international scale, in terms of energy consumption, alBaraka bank headquarters attained an A+ score, corresponding to an electricity consumption of **98 kWh/m^2**.



Benchmarking allowed alBaraka bank to determine industry best practices and identify further opportunities for improvement.

With the results of this assessment and through a carbon audit of its headquarters, alBaraka bank was able to develop a decarbonization plan to reduce its overall carbon emissions. alBaraka Bank is already utilizing renewable energy within its premises. The total amount of avoided emissions in 2021 is **111 $mtCO_2e$**, reflected by the generation of **259,200 kWh** of electricity by the installed PV panels.

* Full-time equivalents (FTE) include full time employees, such as managers, staff, and custodial staff

AVOIDED EMISSIONS
111 $mtCO_2e$

INTRODUCTION

At the current global rate of consumption, humans are consuming natural resources of the planet at a higher rate than it is regenerated. We would need 2 Earths to satisfy our needs by 2030. In order to preserve resources, it is crucial that we reduce the carbon emissions. As one of the major and leading commercial banks in Egypt, alBaraka bank understands its responsibilities. Included in them are the continued leadership in the local banking market by conducting business from a sustainable perspective through the creation of progressive policies and procedures.

ABOUT THE BANK

alBaraka bank was established in 1979. Throughout its long history, the Bank's functions and roles have continually developed and the bank is always keen to deliver top-quality and cutting-edge banking services and products to its customers. In this concern, it is worth mentioning that the Bank launches numerous new and unprecedented retail financing programs in the Egyptian market that satisfy the requirements of the different brackets of the community.

alBaraka Bank was able - as a pioneer Islamic institution - within several years to impose itself strongly in the banking markets arena in Egypt in view of the advanced and numerous services and products that it provides and its issuance of saving and investment pools that suits all categories and brackets of the community.
In continuation to the pioneering role of the Bank as an Islamic banking institution that represents the investment arm in Egypt of Al Baraka Banking Group (the major investor in the Bank), the Bank contributes to the finance of small and medium enterprises which directly contributes to consolidating the national economy.

On the other hand, the Bank did not ignore its strong commitment to its social responsibilities, where it has carried out several activities in this field through Charity Donation, among which was establishing three new medical units to provide free medical services to the poor and the needy in addition to the contribution of our Bank to "Hospital 57357 ", as well as developing slums. The number of the Bank's branches currently amounts to 32 branches distributed over Egyptian governorates.

EGYPT VISION 2030

Egypt has developed its own Sustainable Development Strategy (SDS) , Egypt Vision 2030, to address the country's unique requirements and challenges. The vision comprises three dimensions: social, environmental, and economic, each with its own set of pillars, for a total of ten. This calculation of alBaraka bank's CFP serves a variety of these pillars.

COP27

In November 2022, the United Nations Climate Change Conference, more commonly referred to as COP27, will be held in Sharm el-Sheikh, Egypt. The 27th United Nations Climate Change conference is highlighting the urgent risk of climate change. The Egyptian government has encouraged all local companies and organizations to implement green concepts in its operations including increased efficiency and initiatives towards a circular economy. As a step in the global climate actions, alBaraka has decided to conduct its first carbon footprint assessment for the year 2021.

CBE MANDATE

In support of the government's Sustainable Development Strategy (Egypt Vision 2030), The Central Bank of Egypt (CBE) has encouraged all banks to take steps towards assessing banks' impact on the environment starting with calculating their Scope 1 and 2 emissions.

INVENTORY BOUNDARIES

REPORTING PERIOD

The reporting period for the carbon footprint assessment of Al Baraka is from the 1st of January 2021 to the 31st of December 2021. This is considered Al Baraka's base year on which all future years will be referenced. The BY is subject to alteration if any boundaries change in the future.

Organizational Boundaries

For the purpose of accounting and reporting GHG emissions, the organizational boundary defines the businesses and operations that constitute the company. Companies can choose to report either the emissions from operations over which they have financial or operational control (the control approach) or from operations according to their share of equity in the operation (the equity share approach). alBaraka uses the operational control approach to calculate and report its GHG emissions.

Operational Boundaries

Operational boundaries determine the approach of incorporating the business' emitting activities of the reporting bank, in terms of the activities that should be included in the calculations and how the activities should be classified (i.e., direct or indirect emissions). GHG emissions fall under different Scopes; Scope 1: direct emissions resulting from owned or controlled equipment and assets, Scope 2: indirect emissions resulting from purchased electricity and chilled water; and Scope 3: other significant indirect emissions resulting from the bank's operations.

FIFTH SETTLEMENT
NEW CAIRO

16,396 m^2

357 employees

SCOPE 1

Stationary Combustion
Fuel burning on-site: Diesel

Mobile Combustion
Fuel Burning: Owned Vehicles

Fugitive Emissions
Refrigerants Leakage

SCOPE 2

Scope 2

Purchased Energy
Purchased Electricity
Purchased Chilled Water

SCOPE 3

Purchased goods and services
- Office Supplies

Fuel and energy-related activities (not included in Scope 1 and 2):
- Fuel Burning On Site: Diesel (WTT)
- Fuel Burning: Owned Vehicles (WTT)
- Water Usage and Wastewater Treatment

Waste Generated in Operations

Employee Commuting + WTT

OVERALL METHODOLOGY

Followed Protocols & Standards

The carbon footprint assessment is conducted based on several international and widely applied standards, protocols, and guidelines specially developed for GHG accounting and reporting, including but not limited to the following:

The Greenhouse Gas Protocol Guidelines which include, but not limited to:

- A Corporate Accounting and Reporting Standard
- Corporate Value Chain (Scope 3) Accounting and Reporting Standard

ISO 14064-1:2019, Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories(with 2019 Refinements).

CALCULATION APPROACH

As required by best practice in organizational GHG accounting and the chosen WBCSD/WRI GHG Protocol, all seven Kyoto Protocol greenhouse gases have been included in the assessment where applicable and material.

Global warming potentials (GWPs) are factors describing the radiative forcing impact of one unit of a specific greenhouse gas (e.g., methane) relative to one unit of carbon dioxide. They are used in GHG accounting to convert individual greenhouse gas emissions to a standardized unit for comparison; carbon dioxide equivalent (CO_2e). alBaraka bank applied 100-year GWPs to all emissions data in this inventory in order to calculate total emissions, in metric tons carbon dioxide equivalent ($mtCO_2e$).

Global warming potential values were sourced from the Intergovernmental Panel on Climate Change's (IPCC) sixth Assessment Report (AR6 2021), the most recent IPCC report available at the time of assessment. The Kyoto Protocol GHGs and their respective GWPs are listed in the table below.

Greenhouse Gas	Chemical Formula	100-Year GWP
Carbon dioxide	CO_2	1
Methane	CH_4	27
Nitrous oxide	N_2O	273
Hydrofluorocarbons (HFCs)	Various	Various
Perfluorocarbons (PFCs)	Various	Various
Nitrogen trifluoride	NF_3	17,400
Sulphur hexafluoride	SF_6	25,200

The general calculation approach for the emissions, counted in $mtCO_2e$, is multiplying the activity with its corresponding emission factor. When doing this, a unit analysis is performed in order to make sure the results of the emissions are obtained in the desired unit $mtCO_2e$. The general formula for calculating the emissions for each activity is according to the below equation.

The unit of the GHG Emissions is metric tons carbon dioxide equivalent ($mtCO_2e$). The unit CO_2e refers to an amount of a GHG, whose atmospheric impact has been standardized to that one-unit mass of carbon dioxide (CO_2), based on the global warming potential (GWP) of the gas.

The general formula could be applied for each activity to obtain its emissions. Activities included in the current assessment were calculated for the year, 2021. Thus, the emissions accounted for, were those of the total value for each activity in a single year.

Activity [Unit] | **Emission Factor [$mtCO_2e$/unit]** | **GHG Emissions [$mtCO_2e$]**

Emission Factors

Emission factors (EF) represent the quantity of GHGs released to the atmosphere caused by a certain activity. The emission factor is usually expressed as the carbon dioxide equivalent (CO_2e) emissions generated by a unit weight, volume, distance, or distance of the activity, e.g., CO_2e /liter fuel consumed, CO_2e /km or CO_2e /kWh of purchased electricity etc. The emission factors were retrieved from:

- **DEFRA:** Department for Environment, Food & Rural Affairs UK 2021
- **IPCC (Intergovernmental Panel on Climate Change):** Guidelines for Greenhouse Gas Inventories (with 2019 Refinements).
- **Country Specific Emission Factors:** Emission factor calculated specifically for Egypt

As regards to the country specific grid electricity emission factor, the emission factor is derived based on the Egyptian Electric Utility and Consumer Protection Regulatory Agency (Egypt ERA) published reports of monthly data of the grid electricity, where the emission factor is based on Egypt's actual fuel mix and power generation.

The emission factor for water supply and wastewater treatment is calculated using a conversion formula, provided by the Holding Company for Water and Wastewater (HCWW). Based on the amount of energy consumed in each process, the corresponding emission factor could be obtained.

CARBON FOOTPRINT RESULTS

Total Scope 1 & 2 Emissions ($mtCO_2e$)	**878**
Scope 1 & 2 Carbon intensity ($mtCO_2e$/FTE)	**2.46**
Scope 1 & 2 Carbon intensity ($mtCO_2e/m^2$)	**0.05**
Total Scope 1, 2 & 3 Emissions ($mtCO_2e$)	**1,684**

EMISSIONS SUMMARY

Stationary combustion

0.58

$mtCO_2e$

Purchased Goods and Services (Office supplies)

56

$mtCO_2e$

Mobile combustion

165

$mtCO_2e$

Fuel burning (WTT)

43

$mtCO_2e$

Fugitive emissions

29

$mtCO_2e$

Water usage & wastewater treatment

2

$mtCO_2e$

Purchased electricity

673

$mtCO_2e$

Waste generated in operations

17

$mtCO_2e$

Purchased Chilled Water

9

$mtCO_2e$

Employee commuting

689

$mtCO_2e$

Scope 1: Direct Emissions

STATIONARY COMBUSTION

Fuel Burning: Diesel

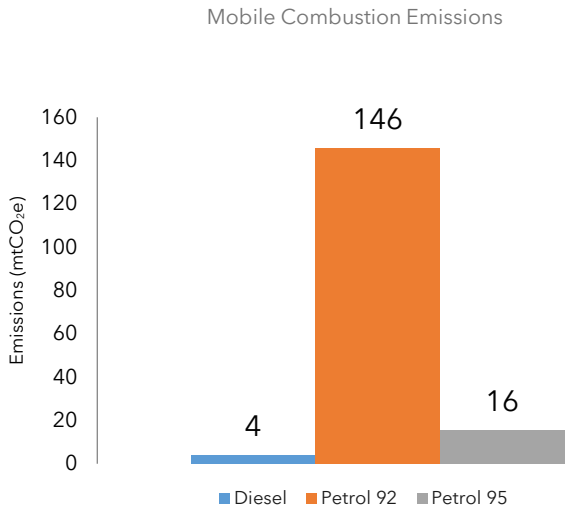
During the reporting period, the headquarters consumed **216 liters** of diesel in its generators, which resulted in **0.58 mtCO₂e** of direct emissions.

MOBILE COMBUSTION

Fuel Burning: Owned Vehicles

This activity includes fuel burned in cars and vehicles owned by the bank's headquarters. alBaraka bank uses three different fuel types in its owned vehicles.

- *Diesel:* with a consumption amount of **1,455 liters** which resulted in **4 mtCO₂e** of emissions.
- *Petrol 92:* with a consumption of **62,350 liters** resulting in **146 mtCO₂e**.
- *Petrol 95:* with a consumption of **6,655 liters**, which correspond to **16 mtCO₂e** emissions.



FUGITIVE EMISSIONS

Refrigerant Leakage

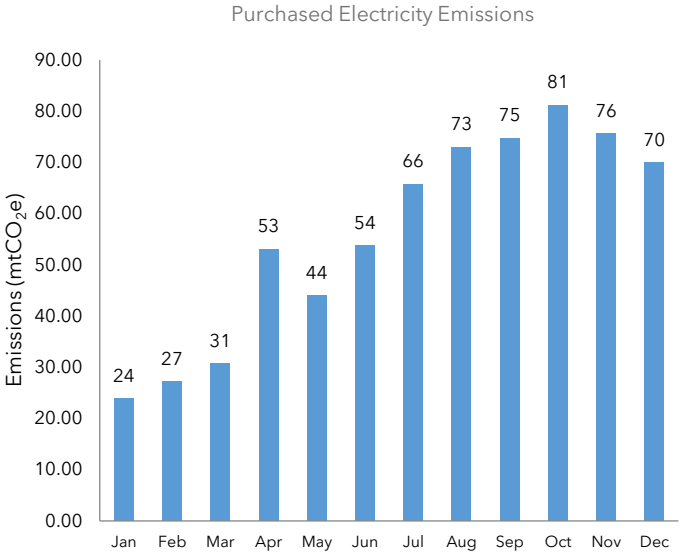
Cooling the facility requires refrigerant fluids. The emissions corresponding to refrigerant fluid leakage were accounted for under Scope 1. Total refrigerants used during the reporting period were **8 kg** and **7 kg** of R-22 and R-410A refrigerant, respectively. This resulted in a total emission of **29 mtCO₂e**.

Scope 2: Indirect Emissions

Scope 2 emissions accounted for **58%** of total emissions in 2021 and was the highest emitting activity.

PURCHASED ELECTRICITY

alBaraka bank's electricity consumption for the reporting period of 2021 was **1,578,635 kWh**, resulting in a total of **673 mtCO₂e**.



PURCHASED CHILLED WATER

alBaraka bank consumed **22,048 kWh** of electricity related to chilled water, which resulted in a total of **9 mtCO₂e**.

Scope 3: Indirect Emissions

PURCHASED GOODS AND SERVICES

Office Supplies

alBaraka bank's headquarters consumed **21,475** A4 paper packs and **770** A3 paper packs weighing **53,580 kg** and **3,850 kg,** respectively. This resulted in total emissions of **53 $mtCO_2e$.** alBaraka bank also consumed **770 cartridges** of ink resulting in total emissions of **4 $mtCO_2e$**

FUEL AND ENERGY-RELATED ACTIVITIES (NOT INCLUDED IN SCOPE 1 AND 2)

Fuel Burning on Site: Diesel (WTT)

WTT emissions resulting from the consumption of diesel in owned generators during the reporting period are **0.14 $mtCO_2e$**.

Fuel Burning: Owned Vehicles (WTT)

WTT emissions resulting from diesel, petrol 92 and petrol 95 used in owned vehicles are as follows; **0.91 $mtCO_2e$, 38 $mtCO_2e$** and **4 $mtCO_2e$**, respectively.

Water Usage and Wastewater Treatment

In the reporting period of 2021, alBaraka bank's headquarters consumed a total of **9,822 m^3** of water, resulting in **1.47 $mtCO_2e$** attributed to water usage and **0.28 $mtCO_2e$** attributed to wastewater treatment.

SOLID WASTE DISPOSAL

Throughout the reporting period of 2021, alBaraka bank generated a total of **36,150 kg** of solid waste, which correspond to emissions of **17 $mtCO_2e$**. The headquarters also had a total of **15,665 kg** of shredded paper which resulted in **0.001 $mtCO_2e$** emissions.

EMPLOYEES COMMUTING

Throughout the reporting period rented coasters were used for commuting the employees to and from the headquarters.
A total distance of **4,960,800 p.km** was traveled by employees during 2021, resulting in **551 $mtCO_2e$** and **138 $mtCO_2e$** in WTT.

Avoided Emissions

RENEWABLE ENERGY

The installation of PV panels at alBaraka headquarters generated **259,200 kWh** of clean energy, avoiding **111 $mtCO_2e$.**

Emission summary

SCOPE 1 – DIRECT EMISSIONS ($mtCO_2e$)			2021	
Stationary Combustion	Fuel Burning – Diesel	**0.58**	**0.3%**	**12%**
	Fuel Burning – Owned vehicles - Diesel	**4**	**2%**	
Mobile Combustion	Fuel Burning – Owned vehicles - Petrol 92	**146**	**75%**	
	Fuel Burning – Owned vehicles - Petrol 95	**16**	**8%**	
Fugitive Emissions	Refrigerant Leakage	**29**	**15%**	
	Total Scope 1 ($mtCO_2e$)	**195**		

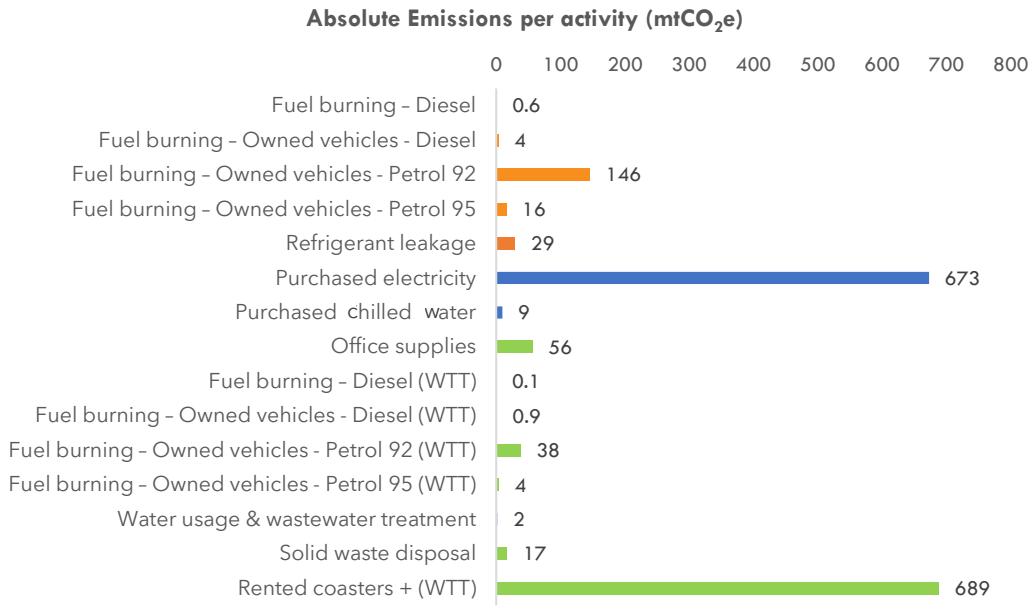
SCOPE 2 – INDIRECT EMISSIONS ($mtCO_2e$)			2021	
Purchased Energy	Purchased Electricity	**673**	**99%**	**41%**
	Purchased Chilled Water	**9**	**1%**	
	Total Scope 2 ($mtCO_2e$)	**682**		

Total Scope 1 & 2 Emissions ($mtCO_2e$)	**878**	
Scope 1 & 2 Carbon intensity ($mtCO_2e$/FTE)	**2.46**	
Scope 1 & 2 Carbon intensity ($mtCO_2e/m^2$)	**0.05**	

SCOPE 3 – INDIRECT EMISSIONS ($mtCO_2e$)			2021	
Purchased Goods and Services	Office Supplies	**56**	**7%**	**48%**
	Fuel Burning – Diesel (WTT)	**0.14**	**0.02%**	
Fuel and Energy-related activities (not included in Scope 1 and 2)	Fuel Burning – Owned vehicles - Diesel (WTT)	**0.91**	**0.11%**	
	Fuel Burning – Owned vehicles - Petrol 92 (WTT)	**38**	**5%**	
	Fuel Burning – Owned vehicles - Petrol 95 (WTT)	**4**	**0.50%**	
	Water Usage & Wastewater Treatment	**2**	**0.22%**	
Waste Generated in Operations	Solid Waste Disposal	**17**	**2%**	
Employee Commuting	Rented coasters + (WTT)	**689**	**85%**	
	Total Scope 3 ($mtCO_2e$)	**806**		

Total Scope 1, 2 & 3 Emissions ($mtCO_2e$)	**1,684**	**$mtCO_2e$**

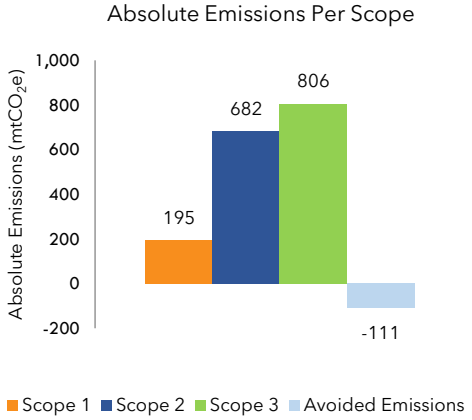
AVOIDED EMISSIONS ($mtCO_2e$)			
Renewable Energy	Installed PV panels	**111**	$mtCO_2e$



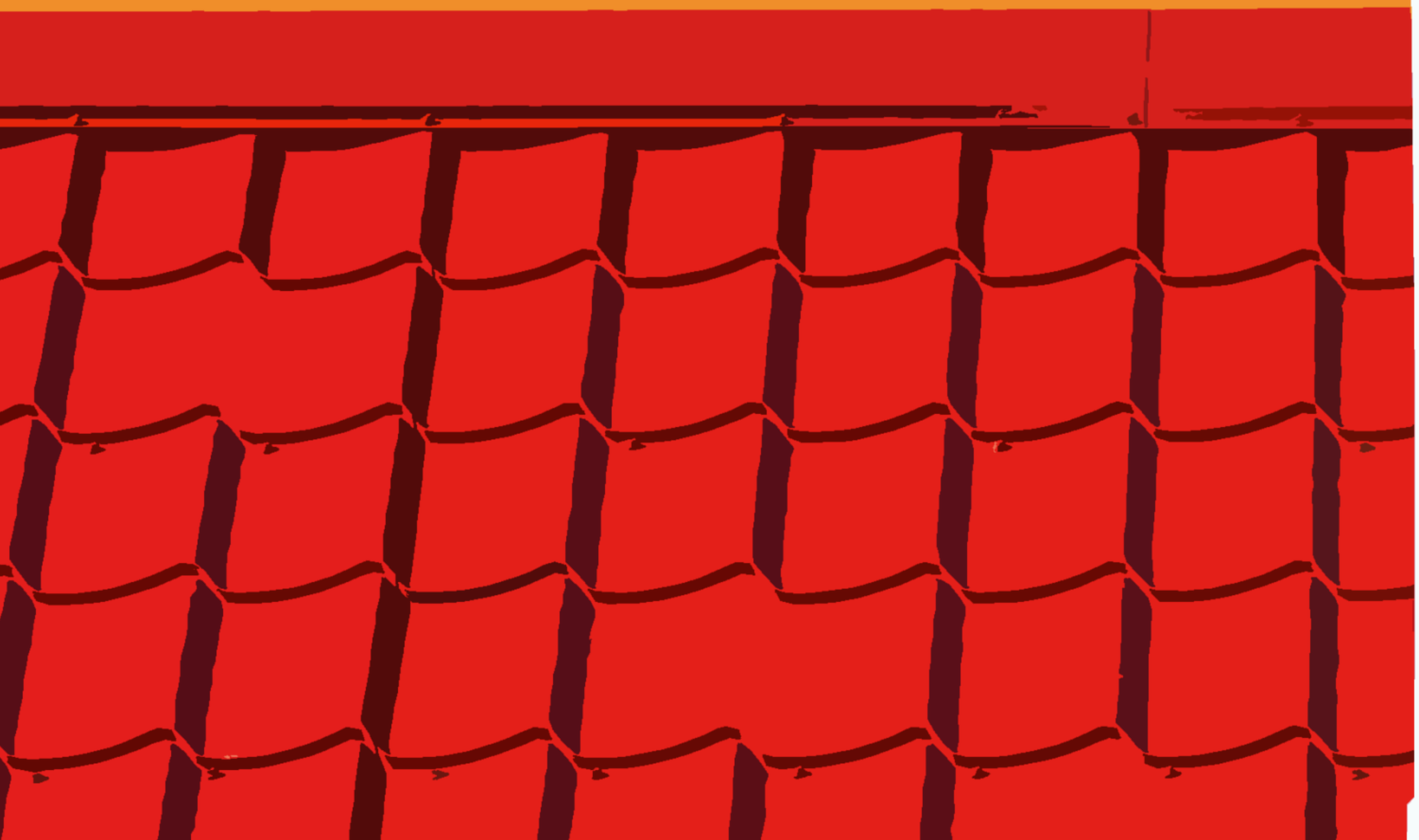
Scope 1: petrol combustion reported the largest share of GHG emissions in Scope 1, accounting to around 83% of total Scope 1 emissions.

Scope 2: Purchased energy accounts for 41% of total emissions.

Scope 3: Rented coasters + (WTT) emissions result in around 85% of total Scope 3 emissions. It also accounts to 48% of all emissions.



PERFORMANCE EVALUATION

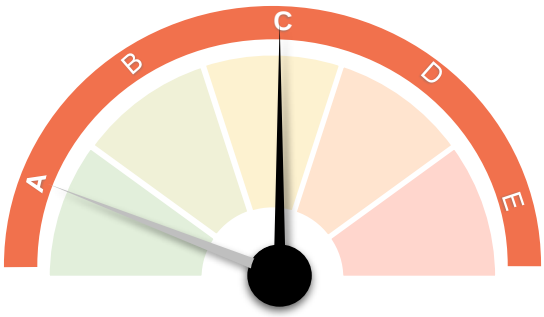


BENCHMARKING

Benchmarking is used to assess the performance of a certain organization over time and compare it against others within the same industry. In addition, benchmarking allows organizations to determine industry best practices, and identify further opportunities for improvement. Scope 1 & 2 carbon emission intensities (per FTE and per m^2) are used herein to benchmark the performance of alBaraka bank nationally, while electricity intensity per m^2 is used to assess it on a wider international level.

National Benchmarking for Scope 1 and 2 Emissions

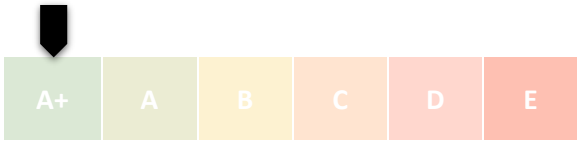
Published and unpublished data of a 20+ banks' headquarters were used to calculate the national average emission intensity (per FTE and m^2). Accordingly, a methodology for the national rating has been developed. The below table shows alBaraka bank's national rate compared to other headquarters in Egypt. alBaraka bank has an emission intensity for the year 2021 of **2.46 $mtCO_2e$/FTE** equivalent to **0.05 $mtCO_2e/m^2$** with a C and an A scoring, respectively.



Score	Emissions Intensity ($mtCO_2e$/FTE)	Emissions Intensity ($mtCO_2e/m^2$)
A	<1	<0.2
B	1-2	0.2 - 0.4
C	2-3	0.4 - 0.6
D	3-4	0.6 - 0.8
E	>4	>0.8

International Benchmarking for Electricity Performance

One of the most common type of intensities metrics used for international benchmarking is the electricity intensity. Based on extensive research conducted on international banks and offices, a performance assessment criterion has been developed, as indicated in the below table. alBaraka bank has an electricity intensity of **98 kWh/m^2**, which gives it an A+ scoring.



Score	Electricity Intensity (kWh/m^2)
A+	<128
A	128 - 148
B	148 - 168
C	168 - 195
D	195 - 218
E	>218

Decarbonization Plan

The knowledge of our impact obtained from this assessment helps us develop more sustainable business scenarios and evaluate our future policies with a series of projects with different levels of complexity to implement. The decarbonization plan aims to reduce the energy consumption of an organization's buildings in pursuit of reducing its overall carbon footprint. To develop a customized decarbonization plan, a carbon audit visit has been conducted to inspect the building's environmental performance. This audit mainly assesses five categories which are shown in the below table.

Category	Description
Building Fabric	Building components (such as walls, roofs, windows, and doors) in relation to levels of heat gain/loss
Heating, Ventilation & Air Conditioning (HVAC)	Heating and cooling systems
Lighting	Loads related to lighting
Plugs	Plug loads resulting from various equipment and appliances
Water	Indirect energy sources related to water usage, waste, and treatment

Areas of improvement have been identified throughout the carbon audit visit. Subsequently, the below customized decarbonization list of actions is presented in the table below.

In the future feasibility of selected projects will be studied, and its critical aspects will be analyzed to determine its viability; according to which the necessary steps further will be taken.

Project	Description	Benefits
Maintenance of Transport fleet 	Ensure regular maintenance of all vehicles and equipment on a regular basis, with proper controls and maintenance. Install GPS for all vehicles for shortest routes. Utilize a tracking system for the vehicles and equipment to identify any defects	– Reduced indirect costs/Increased profit – Less pollution and enhanced air quality – Increased safety of drivers and workers utilizing the equipment – Possible time savings and well-being of drivers
Green Building Guidelines 	Develop and adopt green building guidelines including refurbishment of building such as insulation, draught proofing, efficient lighting and lighting control, HVAC operational parameters and control, external shading optimization, daylight and occupancy sensors and building energy and water efficiency and management.	– Improved health and well-being of employees and customers – Improved customer satisfaction – Increased employee fulfillment – Enhanced building performance with longer lifetime and less maintenance
Sustainability Policies 	Introduce and adopt sustainability policies for alBaraka bank business & activities, with commitment to practices and standards to promote environmentally and socially responsible operations, incl. developing low-carbon business travel policy.	Enhanced sustainability performance with reduced environmental impacts
Capacity Building 	Educating employees about climate change, decarbonization and climate resilience.	Enhanced capacity building of all employees and workers
Reduction Targets 	Set specific carbon emission reduction targets with deadlines.	Reduced long-term and short-term carbon footprint
Enhance the Efficiency of the Lighting System 	Install occupancy and daylight sensors for the lighting system. Use more efficient lighting systems such as LED in basements.	Reduced electricity consumption and cost
Waste Management 	Adopt and implement a waste management system (In accordance with International best practices such as ISO 14001).	– Material circularity – Waste reduction and allowing for segregation, accurate quantification, and reuse/ recycling/ recovery

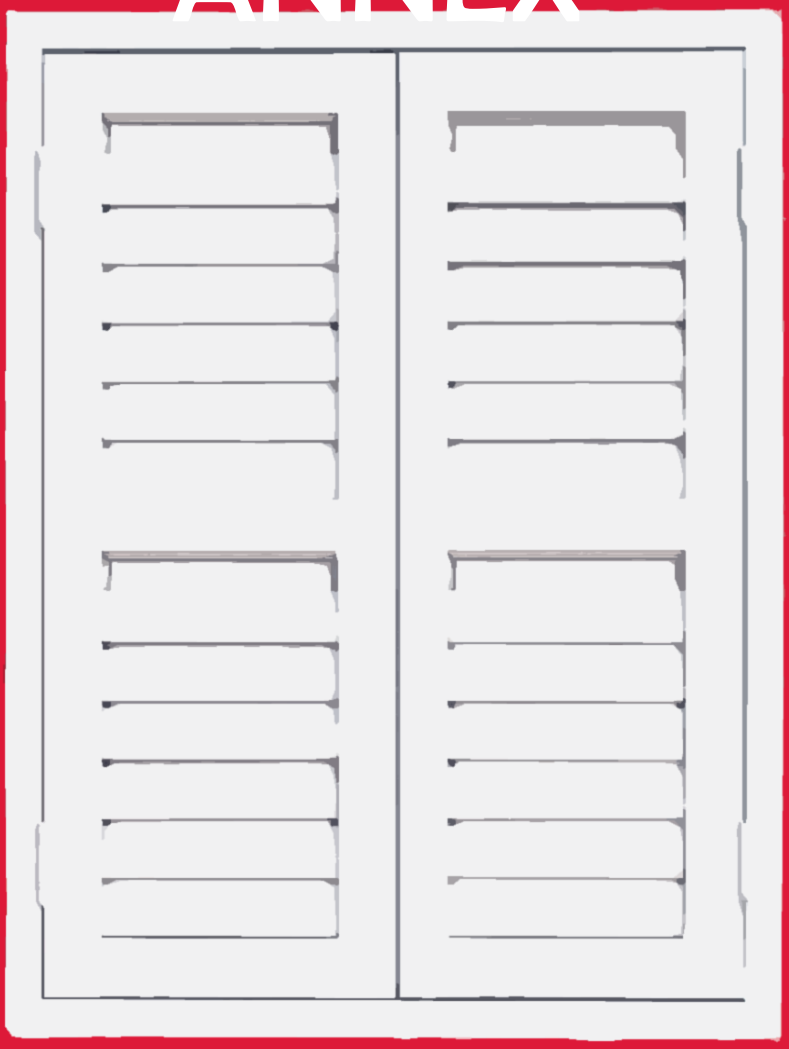
	Bank cards 	Design an innovative system in which expired banks cards are collected, and its plastic components are recycled.	– Material Circularity – Waste reduction and allowing for segregation, accurate quantification, and reuse/recycling/recovery – Value recovery
	Green supply chain 	Design Green Supply Chain policies by setting a criterion for new supplier selection, suppliers' monitoring, and auditing programs, minimizing waste and improve environmental footprint values. The traditional supply chain could be converted to a green one by taking environmental considerations into account at all stages, from product development and manufacturing to distribution and end customers.	– Compliance with international guidelines – Potential for both short-term and long-term carbon footprint reduction
	Electric Vehicles 	Study the feasibility of electric and hybrid vehicles for alBaraka bank transport fleet.	Less pollution & enhanced air quality

Hard: High cost & time to implement

Average: Medium cost & time to implement

Easy: Low cost & time to implement

ANNEX



Definitions

Base year	A base year is a reference year in the past with which current emissions can be compared. In order to maintain the 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.
Carbon Footprint	The amount of Carbon Dioxide that an individual, group, or organization lets into the atmosphere in a certain time frame.
CO_2e	Carbon dioxide equivalent or CO_2 equivalent, abbreviated as CO_2e, is a metric used to compare the emissions from various GHGs on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.
Direct Emissions	Greenhouse gas emissions from facilities/sources owned or controlled by a reporting company, e.g. generators, blowers, vehicle fleets.
Emission Factors	Specific value used to convert activity data into greenhouse gas emission values.
Fugitive Emissions	Fugitive emissions are emissions of gases or vapors from pressurized equipment due to leaks and other unintended or irregular releases of gases, mostly from industrial activities. Besides the economic cost of lost commodities, fugitive emissions contribute to air pollution and climate change.
GHG Protocol	Greenhouse Gas Protocol is a uniform methodology used to calculate the carbon footprint of an organization.
GWP	Global Warming Potential is an indication of the global warming effect of a greenhouse gas in comparison to the same weight of carbon dioxide.
HVAC	HVAC (heating, ventilating, and air conditioning) is the technology of indoor and vehicular environmental comfort. Its goal is to provide thermal comfort and acceptable indoor air quality.
Indirect Emissions	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.
Kyoto protocol	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.
Operational boundary	Determination of which facilities or sources of emissions will be included in a carbon footprint calculation.
Organizational boundary	Determination of which business units of an organization will be included in a carbon footprint calculation.
Refrigerant	A refrigerant is a substance or mixture, usually a fluid, used in a heat pump and refrigeration cycle.
Renewable Energy	Energy from a source that is not depleted when used, such as wind or solar power.
Scope 1	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).
Scope 2	Indirect emissions associated with the consumption of purchased electricity, heat or steam from a source that is not owned or controlled by the company.
Scope 3	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 Sources and Quality

All the information used to compute the carbon footprint comes from alBaraka bank's database. The data quality has been evaluated and presented below. The most used types of data are:

- **Primary data**: data taken from documents that are directly linked to the assessment, such as electricity invoices, to calculate emissions caused due to electricity.
- **Secondary data**: such as databases, studies, and reports.
- **Assumptions**: assumptions made based on internationally recognized standards and studies.

	Scp	Activities	Data	Resolution
	1	Fuel burning - Diesel	216 Liters	Average monthly consumption data were used
	1	Fuel burning - Owned vehicles - Diesel	1,455 Liters	Consumption data were recorded on a monthly basis
	1	Fuel burning - Owned vehicles - Petrol 92	62,350 Liters	Consumption data were recorded on a monthly basis
	1	Fuel burning - Owned vehicles - Petrol 95	6,655 Liters	Consumption data were recorded on a monthly basis
	1	Refrigerant leakage R22	8 kg	Data on the number and sizes of cylinders were recorded on a yearly basis
	1	Refrigerant leakage R134a	7 kg	Data on the number and sizes of cylinders were recorded on a yearly basis
	2	Purchased electricity	1,578,635 kWh	Consumption data were recorded on a monthly basis
	2	Chilled water consumption	22,048 kWh	Average monthly consumption data were used
	3	Paper consumption	57,430 kg	Data on the quantity of paper packs were recorded on a yearly basis
	3	Other supplies (Ink)	770 cartridges	Data on the number of cartridges were recorded on a yearly basis
	3	Water usage & wastewater treatment	9,822 m^3	Average monthly consumption data were used
	3	Office solid waste disposal	36,150 kg	Daily sample was used to estimate the total amount of waste generated annually
	3	Shredded paper waste disposal	15,665 kg	Daily sample was used to estimate the total amount of waste generated annually
	3	Employee commuting + (WTT)	4,960,800 p.km	Average monthly data for employees commuting in rented coasters have been used
		Installed PV	259,200 kWh	Monthly generation data were used

Good - No changes recommended

Satisfactory - Could be improved

Relevancy And Exclusions

The following section describes the GHG emission sources that were excluded from alBaraka bank's GHG inventory due to data not being available, or not technically feasible to obtain or for data whose emission quantification is beyond alBaraka bank's operation and control, which were under Scope 3 emissions. The exclusion rationale per category has also been specified.

#	Activity	Description	Emissions ($mtCO_2e$)	Status
1	Purchased goods and services	Contains only purchased paper and ink. We aim to include other purchased goods in the upcoming reporting periods.	56	Relevant, calculated
2	Capital goods	Emissions from embodied carbon in the properties owned by alBaraka bank, such as buildings, cars, etc.	N/A	Relevant, not yet calculated
3	Fuel and energy-related activities (not included in Scope 1 and 2)	Includes WTT from fuel burning and transportation, as well as energy consumed to supply municipal water and treat it (Diesel WTT, Owned Cars WTT, Municipal Water usage, Wastewater Treatment)	44.39	Relevant, calculated
4	Upstream transportation and distribution	Transportation from alBaraka bank's internal courier shipment and upstream supply chain.	N/A	Relevant, not yet calculated
5	Waste generated in operations	Includes emissions from the transportation of Solid waste and the landfill emissions from the disposed waste	17	Relevant, calculated
6	Business travel	Emissions from air travel and hotel stays are included under this category.	N/A	Relevant, not yet calculated
7	Employee commuting	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned or operated by the reporting company)	689	Relevant, calculated
8	Upstream leased assets	This category is not relevant to alBaraka bank's business and therefore has been excluded.	N/A	Not relevant, explanation provided
9	Downstream transportation	alBaraka bank's downstream transportation emissions include external courier shipment in addition to the cash-in transit related emissions.	N/A	Relevant, not yet calculated
10	Processing of sold products	Includes emissions occurring due to bank issued cards and other products.	N/A	Relevant, not yet calculated
11	Use of sold products	This should include emissions from the use of internet banking and other sold products.	N/A	Relevant, not yet calculated
12	End of life treatment of sold products	This category is not yet embraced in the calculations but could include end of life treatment of credit cards distributed to the customers.	N/A	Relevant, not yet calculated
13	Downstream leased assets	Emissions resulting from ATM transactions are measured as the power used during active and inactive ATM hours.	N/A	Relevant, not yet calculated
14	Franchises	This category is not relevant to alBaraka bank's business and has therefore been excluded.	N/A	Not relevant, explanation provided
15	Investments	Operation of investments (including equity and debt investments and project finance).	N/A	Relevant, not yet calculated

Carbon Footprint Equations

Scope 1: DIRECT EMISSIONS

Stationary Combustion

Fuel Burning: Diesel

Average monthly diesel consumption in alBaraka bank's reporting headquarters (in Liters) was used to calculate annual diesel emissions.

Fuel burning: Diesel emissions ($mtCO_2e$) = Fuel consumption (L) x EF ($mtCO_2e$/ L)

Mobile Combustion

Fuel Burning: Owned Vehicles

For alBaraka bank's owned vehicles, the database was used to determine fuel type and fuel consumption in liters. These data were used to calculate the emissions using the below equation.

Fuel burning: Owned vehicles emissions ($mtCO_2e$) = Fuel consumption (L) x EF ($mtCO_2e$/ L)

Fugitive Emissions

Refrigerant Leakage

Refrigeration fluids are fluids which are used to cool a space in refrigeration cycles. Each year, refrigerants are used to re-charge the cooling systems to compensate for the leakage that happened during the operating year. alBaraka bank's headquarters used R-22 and R134a refrigerants during the reporting year.

Refrigerants leakage emissions ($mtCO_2e$) = Refrigerant leakage (kg) x EF ($mtCO_2e$/kg)

SCOPE 2: INDIRECT EMISSIONS

Purchased Electricity

Emissions from purchased electricity are the product of the national grid emission factor and the annual electricity consumption. The electricity consumption in alBaraka bank was obtained from the database in kWh. The total electricity consumption of the year was calculated using the formula below:

Purchased Electricity Emissions ($mtCO_2e$) = Electricity Consumption (kWh) x EF ($mtCO_2e$/kWh)

Purchased Chilled Water

Emissions from energy consumption due to chilled water consumption are the product of the national grid emission factor and the annual electricity consumption. The annual chilled water consumption of alBaraka bank was retrieved from their database.

Chilled Water Emissions ($mtCO_2e$) = Electricity Consumption (kWh) × EF ($mtCO_2e$/kWh)

SCOPE 3: INDIRECT EMISSIONS

Purchased Goods and Services

Office Supplies

Purchased goods are the commodities used by the different sectors. For alBaraka bank's reporting head office, this includes only paper and ink consumption. The yearly amounts of purchased goods per type have been retrieved from the internal data recordings. The emissions were obtained by multiplying the emission factor per unit by the weight or the number of items.

Paper emissions ($mtCO_2e$) = Weight of paper (kg) x EF ($mtCO_2e$/kg)

Ink emissions ($mtCO_2e$) = Number of cartridges (units) x EF of each cartridge ($mtCO_2e$/unit)

Fuel and Energy-related Activities (not included in Scope 1 and 2)

Well-to-Tank (WTT)

WTT emissions are those that result from the production of a fuel, including resource extraction, initial processing, transportation, fuel production, distribution and marketing, and delivery into a consumer vehicle's fuel tank. WTT emissions were taken into consideration in order to reflect the full range of climatic impacts from fuel-burning activities. All fuel burning activities, including diesel & petrol consumed by alBaraka bank's head office were included in WTT emissions. For each amount and type of fuel burned, the general formula was applied to determine the relevant emissions.

WTT Emissions ($mtCO_2e$) = Fuel Consumption (unit) x WTT EF ($mtCO_2e$/unit)

Water Usage & Wastewater Treatment

The emission factor for water supply and wastewater treatment is calculated by using a conversion formula, provided by The Holding Company for Water and Wastewater (HCWW). The emissions are based on the amount of energy consumed in each process. The emission factors for water supply and wastewater treatment are accordingly calculated by multiplying the conversion factor by the electricity emission factor. At the same time, a unit analysis is performed to make sure the units are conforming.

Energy consumption (Wh) = Water supply/ Wastewater (m^3) x Conversion formula (Wh/m^3)

Water supply & treatment ($mtCO_2e$) = Energy consumption (kWh) x EF ($mtCO_2e$/kWh)

Waste Generated in Operations

Solid waste disposal

Emissions from solid waste disposal are the product of the emission factor for each waste type and the quantity of waste for each type in addition to the waste fate. (i.e., the transportation to the landfill and the landfilling procedure were included in the emission factor of the landfilled waste).

Shredded paper waste

Paper that is no longer needed gets shredded annually at alBaraka bank's archive. To ensure that the bank's operations are circular, the paper is sold and recycled. The tons of paper that are shredded are documented on a quarterly basis and using emissions data from closed-loop paper waste disposal, the annual emissions have been computed.

Solid Waste Emissions/ Shredded Paper ($mtCO_2e$) = Quantity of waste/type (tons) x EF/ type of waste ($mtCO_2e$/tons)

Employee Commuting

Commuting & WTT

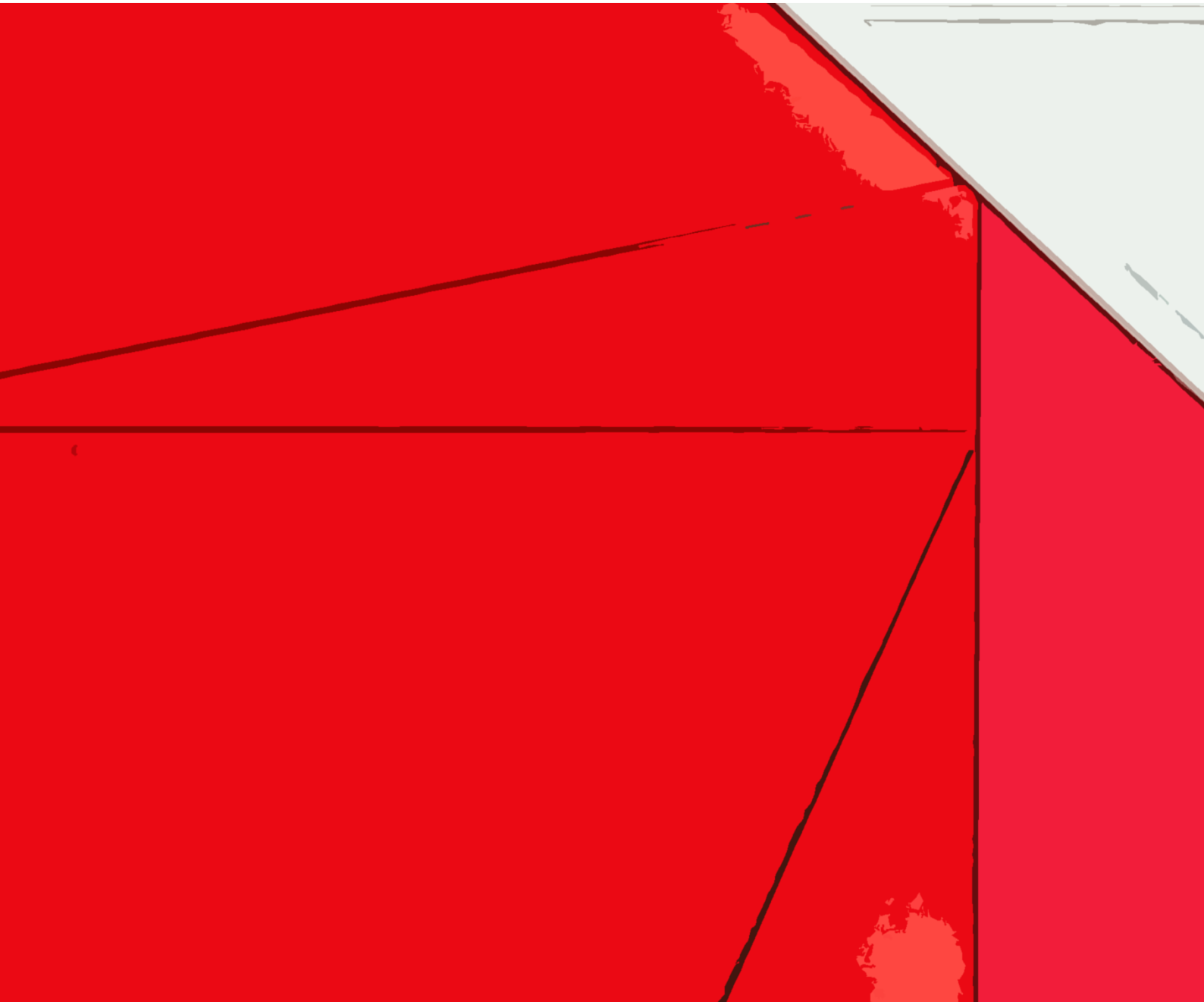
Average monthly distance traveled by rented coasters to commute employees to and from alBaraka bank's reporting headquarters and number of passengers per each coaster were used to calculate the total employee commuting emissions per year.

Employees commuting emissions ($mtCO_2e$) = Travelled distance (p.km) x EF ($mtCO_2e$/ p.km)

AVOIDED EMISSIONS

The electricity generated by the installed PV per month was retrieved from alBaraka bank's database. This value was used to calculate the emissions that alBaraka bank avoided by installing these PV panels.

Avoided Emissions ($mtCO_2e$) = Annual renewable energy generation (kWh) x EF ($mtCO_2e$/kWh)



Quality Assurance

To the Bank's Board of Directors',

We have been appointed by the Bank to conduct carbon footprint calculations pertaining to the Bank's operational activities for the period from 1st of January 2021 to the 31st of December 2021.

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 carbon footprint calculations, we have adopted the Greenhouse Gas Protocol Guidelines, IPCC Guidelines for Greenhouse Gas Inventories, and ISO 14064-1:2019 specification with guidance at the organization level for quantification and reporting of GHG emissions and removals.

It is our responsibility to express a conclusion about the quality and completeness of the primary data collected/ provided by the Bank. 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 the Bank's raw data used in the carbon footprint calculations have not been thoroughly collected, verified and truly represent the Bank's resource consumption in the reporting period related to all categories/aspects identified in this report. We do not assume and will not accept responsibility to anyone other than the Bank for the provided assurance and conclusion.

Dr. Abdelhamid Beshara, Founder and Chief Executive Officer
MASADER, ENVIRONMENTAL & ENERGY SERVICES S.A.E CAIRO,
October 2022

ENVIRONMENTAL AND ENERGY SERVICES
MASADER

environmental & energy services masader

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

Tel/Fax: +202 2735 4033
Email: info@be-masader.com
Website: https://www.be-masader.com

CDP ACCREDITED PROVIDER 2022 Accredited Climate Change Consultancy

GRI COMMUNITY MEMBER 2022

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES


albaraka