



# Qatar National Bank ALAHLI (QNB ALAHLI)

Carbon Footprint Report (Based on Year 2021  
QNB ALAHLI Head Quarter's Operations)

## About this Report

This report details the carbon footprint generated by the operations of QNB ALAHLI's headquarters building in 2021 and covers Scope 1, 2 and selected activities from Scope 3. As it is the first assessment of greenhouse gas (GHG) emissions, the year 2021 is considered the current base year (BY). All the data collected and analyzed within this report follow the Greenhouse Gas Protocol outlined by the World Resources Institute (WRI) and adhere to its principles of relevance, completeness, consistency, transparency, and accuracy.



## Abbreviations & Acronyms

<b>CBE</b>	Central Bank of Egypt
<b>CFP</b>	Carbon Footprint
<b>CH4</b>	Methane
<b>CO2</b>	Carbon Dioxide
<b>CO2e</b>	Carbon Dioxide Equivalent
<b>DEFRA</b>	Department for Environment, Food & Rural Affairs
<b>EF</b>	Emission Factor
<b>ERA</b>	Egypt Electricity Regulatory Authority
<b>FTE</b>	Full-time Equivalent
<b>GHG</b>	Greenhouse Gas
<b>GRI</b>	Global Reporting Initiative
<b>GWP</b>	Global Warming Potential
<b>HCWW</b>	Holding Company for Water and Wastewater
<b>HVAC</b>	Heating, Ventilating, and Air Conditioning
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>ISO</b>	International Standard Organization
<b>kWh</b>	Kilowatt Hour
<b>L</b>	Liter
<b>m<sup>2</sup></b>	Square Meter
<b>m<sup>3</sup></b>	Cubic Meter
<b>mtCO2e</b>	Metric tons Carbon Dioxide Equivalent
<b>QNB</b>	Qatar National Bank
<b>Scp</b>	Scope
<b>WBCSD</b>	World Business Council for Sustainable Development
<b>WRI</b>	World Resources Institute
<b>WTT</b>	Well-to-Tank

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Boundaries & Methodology

Carbon Footprint Results

## Executive Summary

- Boundaries & Methodology
- Carbon Footprint Results



## Executive Summary

Climate change is undoubtedly one of the major challenges facing our nations, governments, businesses, and citizens in the present and future. It has major implications on both humans and the environment. Without climate action, there will be considerable changes in the available resources. Accordingly, initiatives are being developed and implemented to minimize greenhouse gas (GHG) emissions and concentrations in the Earth’s atmosphere. Such initiatives rely on the preemptive quantification and reporting of GHG emissions to work towards their reduction. QNB ALAHLI is hereby presenting their first carbon footprint (CFP) assessment. This assessment is considered the first step towards a more environmentally sustainable future for the bank.

In pursuit of a greener Egypt, QNB ALAHLI aims to be in alignment with the country's existing visions. Therefore, the goals of this assessment are in accordance with not only the Central Bank of Egypt (CBE) mandate, but also the goals of Egypt Vision 2030.

With the reporting period from the 1st of January 2021 to the 31st of December 2021, the year 2021 is serving as the base year (BY) against which all upcoming years will be compared unless a significance threshold is reached.

### Boundaries & Methodology

Inventory boundaries are divided into organizational and operational. An organizational boundary refers to the businesses and operations that constitute a company, which in the current reporting period is QNB ALAHLI’s head office building in Cairo. The HQ’s gross floor area is 16,653 m<sup>2</sup> and a total of 661 employees work there daily.

The operational boundaries are the activities that lead to emissions whether they are direct or indirect. They include direct GHG emissions (Scope 1), indirect GHG emissions from the consumption of purchased electricity (Scope 2), and other indirect GHG emissions not included in Scope 1 and 2, in addition to Well-To-Tank (WTT) emissions from fuel consumption (Scope 3).

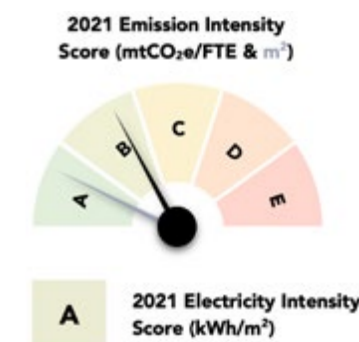
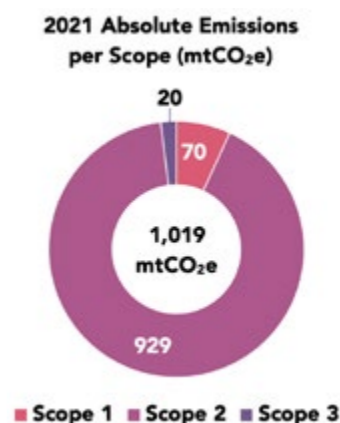
The analysis and calculations of this assessment followed protocols & standards specially developed for accounting and reporting carbon footprint including the Greenhouse Gas Protocol Guidelines, the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for Greenhouse Gas Inventories (with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

### Carbon Footprint Results

A summary of the CFP results is illustrated in the adjacent chart. The absolute emissions are used to keep track of the yearly emissions. They are calculated per scope and further broken down by activity in the report.

Benchmarking allows organizations to determine industry best practices, and identify further opportunities for improvement. The knowledge of QNB ALAHLI’s impact obtained from this assessment enabled the bank to conduct benchmarking; both national and international. Emission intensities are a measurement of the emissions of activities based on certain factors. The most common types of emission intensities are emissions per full-time equivalent (FTE) and per area (m<sup>2</sup>).

QNB ALAHLI has an emissions intensity for the year 2021 of **1.51 mtCO<sub>2</sub>e/FTE** equivalent to **0.06 mtCO<sub>2</sub>e/m<sup>2</sup>**, with a “B” and an “A” scoring, respectively. Nationally, QNB ALAHLI’s HQ emits less emissions per FTE and m<sup>2</sup> than the average. QNB ALAHLI’s HQ also has an electricity intensity of **131 kWh/m<sup>2</sup>**, which corresponds to an “A” score. Accordingly, it stands within the least electricity consuming buildings per area internationally. With the results of this assessment and through a carbon audit of its headquarters, QNB ALAHLI was able to develop a decarbonization plan to reduce its overall carbon emissions.



## Introduction

- Climate Change & Carbon Footprint
- About the Bank
- Egypt Vision 2030
- CBE Mandate



## Climate Change and Carbon Footprint

The Earth continuously attempts to maintain a balance between the incoming and outgoing solar radiation, which is a natural phenomenon that keeps our Earth warm and makes its temperature suitable for living. Greenhouse gases (GHGs) are responsible for this phenomenon as they keep radiation trapped in the Earth's atmosphere. With the industrial revolution, industrial activities started to release more GHGs which led to a disruption in the balance, a warming of the globe and ultimately climate change. Additionally, humans are consuming the natural resources of the planet at a faster rate than it is regenerated. To minimize global warming and preserve resources, it is crucial that we reduce the GHG emissions. Thus, QNB ALAHLI is hereby presenting its first carbon footprint assessment to quantify and assess its GHG emitting business activities from the period of January 1st, 2021, to December 31st, 2021.

## About the Bank

Qatar International Bank ALAHLI (QNB) is one of the leading financial institutions in Egypt established in April 1978 and ranked as the second largest private bank in Egypt. In 2013 QNB Group acquired the majority stake of NSGB Bank that was founded in Egypt in 1978 and its name was changed to QNB ALAHLI and since then it has been expanding its activities to provide impeccable banking services to individuals and corporate clients. QNB ALAHLI provides its services for more than 1,358,410 clients served by 6,991 banking professionals with a network of 231 branches, along with 872 ATMs & 60,084 Point-of-Sale to serve clients nationwide. Further, a distinctive Call center operates round the clock 7 days a week. To promote transparency in the banking sector QNB Group is committed to publicly disclose its sustainability performance annually, in accordance with the Global Reporting Initiative (GRI) Standards. At QNB ALAHLI, we define sustainability as the delivery of long-term value in financial, environmental, social and ethical terms, for the benefit of our customers, shareholders, employees and communities.

## Egypt Vision 2030



Egypt has developed its own Sustainable Development Strategy (SDS) 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. QNB ALAHLI's calculation of its CFP serves several 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, QNB ALAHLI has decided to conduct its first carbon footprint assessment for the year 2021 and theorize a decarbonization plan for a greener future.

## CBE Mandate

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

Organizational Boundaries

Operational Boundaries

Reporting Period & BY

## Inventory Boundaries

- Organizational Boundaries
- Operational Boundaries
- Reporting Period & BY

Sustainable  
development

Climate  
change

Environment

Energy  
saving

CO<sub>2</sub>

Industry



Recycle

Greenhouse  
gas

Emission

Business



Organizational Boundaries

Operational Boundaries

Reporting Period & BY

## Organizational Boundaries

For the purpose of accounting and reporting GHG emissions, the organizational boundary defines the businesses and operations that constitute the organization. Organizations 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). QNB ALAHLI's carbon footprint uses the operational control approach. As such, it included the head office located in Cairo, which has an area of 16,653 m<sup>2</sup> and 661 Full-time Equivalent (FTE), which include the bank's full-time employees and managers.



## Operational Boundaries

Operational boundaries determine the approach of incorporating the emitting activities of the reporting company's business 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).

The emissions fall under different scopes; Scope 1, resulting from owned or controlled equipment and assets, Scope 2, covering emissions from purchased electricity, heat, steam or cooling, and Scope 3 embracing significant indirect emissions not included in Scope 1 and 2.

In conformance with the GHG Protocol Corporate Standard, only Scope 1, direct emissions and Scope 2, indirect emissions are mandatory to report. Nevertheless, QNB ALAHLI has decided to conduct its carbon footprint assessment to include one of Scope 3 activities within its first CFP report, as a start towards covering all relevant Scope 3 activities in next years.

The operational boundaries for QNB ALAHLI's 2021 CFP report include the following:

### Scope 1: Direct Emissions

Emissions from sources that are owned or controlled by QNB ALAHLI (i.e., any owned or controlled activities that release emissions straight into the atmosphere). Scope 1 activities include the following:

#### Stationary Combustion



Fuel Burning: Diesel

#### Mobile Combustion



Fuel Burning: Owned Vehicles (Petrol 92 and 95)

### Scope 2: Indirect Emissions

Scope 2 emissions are associated with the consumption of purchased electricity, steam, heat, and cooling from a source that is not owned or controlled by QNB ALAHLI. For the banks this includes the following:

#### Purchased Energy



Purchased Electricity

### Scope 3: Indirect Emissions

Scope 3 emissions includes other indirect emissions resulting from QNB ALAHLI's operations that are not included in Scope 1 and 2. For the current reporting period, Scope 3 activities include the following:

#### Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)



Fuel Burning: Diesel (WTT)



Fuel Burning: Owned Vehicles (WTT)



Water Usage & Wastewater Treatment

## Reporting Period & BY

The reporting period of this assessment is from the 1st of January 2021 to the 31st of December 2021. Since it is the first carbon footprint assessment QNB ALAHLI has conducted, 2021 will be considered the base year on which all future years will be based on unless there is a significant alteration in the boundaries or methodology.

Protocols & Standards

Calculation Approach

Emission Factors

## Overall Methodology

- Followed Protocols & Standards
- Calculation Approach
- Emission Factors



CO<sub>2</sub>

## Followed Protocols & Standards

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



### The Greenhouse Gas Protocol Guidelines

- 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).

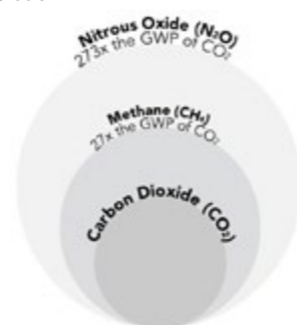
## Calculation Approach

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<sub>2</sub>e).

QNB ALAHLI applied 100-year GWPs to all emissions data in this inventory in order to calculate total emissions, in metric tons carbon dioxide equivalent (mtCO<sub>2</sub>e). 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 (or categories of GHGs) and their respective GWPs are listed in the table below.

Greenhouse Gas	Chemical Formula	100-Year GWP
Carbon Dioxide	CO <sub>2</sub>	1
Methane	CH <sub>4</sub>	27
Nitrous Oxide	N <sub>2</sub> O	273
Hydrofluorocarbons (HFCs)	Various	Various
Perfluorocarbons (PFCs)	Various	Various
Nitrogen Trifluoride	NF <sub>3</sub>	17,400
Sulphur Hexafluoride	SF <sub>6</sub>	25,200



Each activity falls under a certain scope according to the GHG Protocol Guidelines; Scope 1 (Direct emissions), Scope 2 (Indirect emissions associated with the consumption of purchased electricity) and Scope 3 (Indirect emissions that are a consequence of the operations of the organization but are not directly owned or controlled by the reporting company).

When calculating the CFP of QNB ALAHLI, the emissions of each activity under Scope 1 and 2 have been considered, including one activity under Scope 3. The general calculation approach for the emissions, counted in mtCO<sub>2</sub>e, 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<sub>2</sub>e. The general formula for calculating the emissions for each activity is according to the below equation.

$$[E = A \times EF]$$

GHG Emissions, **E** [mtCO<sub>2</sub>e] = Activity, **A** [unit] x Emission Factor, **EF** [mtCO<sub>2</sub>e/unit]

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.

## Emission Factors

Emission factors (EF) are representing 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<sub>2</sub>e) emissions generated by a unit such as weight, volume, and distance, e.g., CO<sub>2</sub>e/liter fuel consumed or CO<sub>2</sub>e/kWh of purchased electricity etc. Emission factors are retrieved from:

- **DEFRA:** Department for Environment, Food & Rural Affairs UK 2021.
- **2006 Intergovernmental Panel on Climate Change (IPCC):** Guidelines for Greenhouse Gas Inventories (with 2019 Refinements).
- **Country Specific Emission Factors:** Emission factor calculated specifically for Egypt.

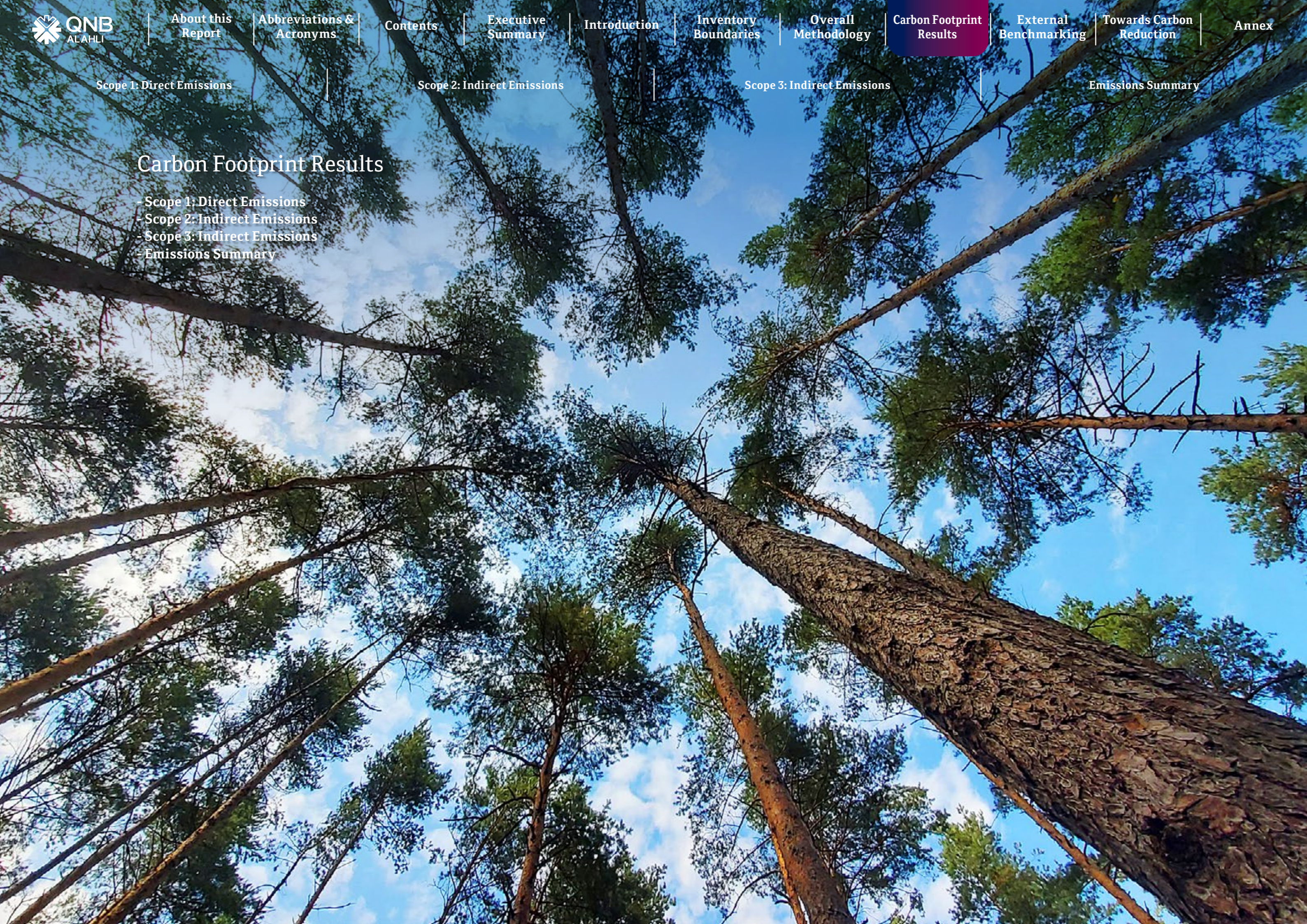
As regards to the country specific grid electricity emission factor, the emission factor is derived based on the Egyptian Electric Utility and Consumer Protection Regulatory Agency (Egypt ERA) published reports of monthly data of the grid electricity, where the emission factor is based on Egypt's actual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

The emission factor for water usage 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.

[Scope 1: Direct Emissions](#)[Scope 2: Indirect Emissions](#)[Scope 3: Indirect Emissions](#)[Emissions Summary](#)

## Carbon Footprint Results

- Scope 1: Direct Emissions
- Scope 2: Indirect Emissions
- Scope 3: Indirect Emissions
- Emissions Summary



## Scope 1: Direct Emissions

Emissions from sources that are owned or controlled by QNB ALAHLI (i.e., any owned or controlled activities that release emissions straight into the atmosphere). Scope 1 included stationary and mobile combustion.

### Stationary Combustion

#### Fuel Burning: Diesel

0.12 mtCO<sub>2</sub>e

Emissions resulting from diesel fuel burning on site. This mainly includes diesel generators. Generators at QNB ALAHLI's headquarters use diesel fuel to meet electrical demands in the event of a power outage. In the reporting period of 2021, QNB ALAHLI's headquarters consumed **45 liters** of diesel which resulted in **0.12 mtCO<sub>2</sub>e** of direct emissions

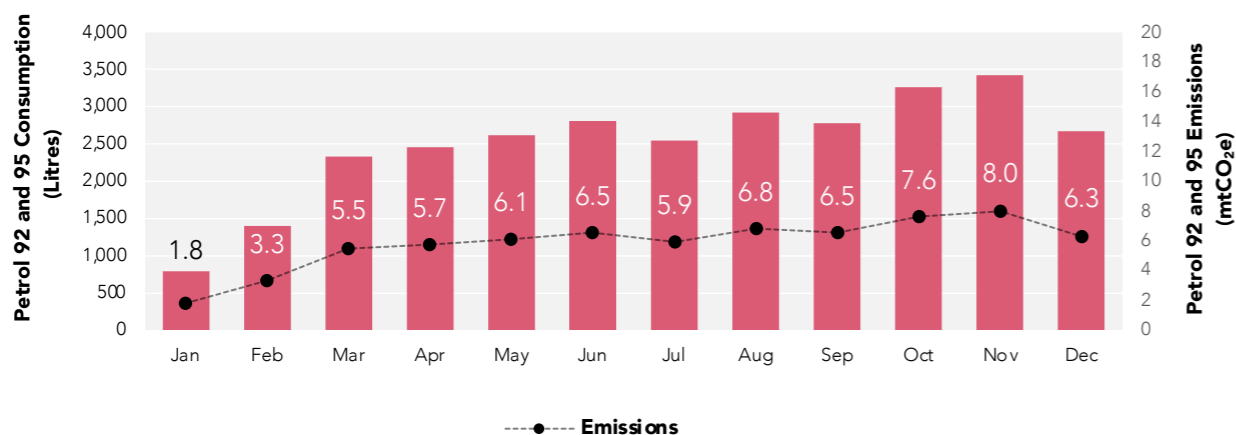
### Mobile Combustion

#### Fuel Burning: Owned Vehicles (Petrol 92 and 95)

70 mtCO<sub>2</sub>e

Scope 1 direct emissions include emissions from QNB ALAHLI's owned vehicles. In the year 2021, cars owned by QNB ALAHLI's headquarters consumed **29,953 liters** of Petrol 92 and 95, and resulted in **70 mtCO<sub>2</sub>e** of direct emissions.

Owned Vehicles Petrol 92 and 95 Consumption and Emissions - 2021



## Scope 2: Indirect Emissions

Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, steam, heat, or cooling. Although Scope 2 emissions physically occur at the facility where they are generated, they are accounted for in an organization's GHG inventory because they are a result of the organization's energy use.

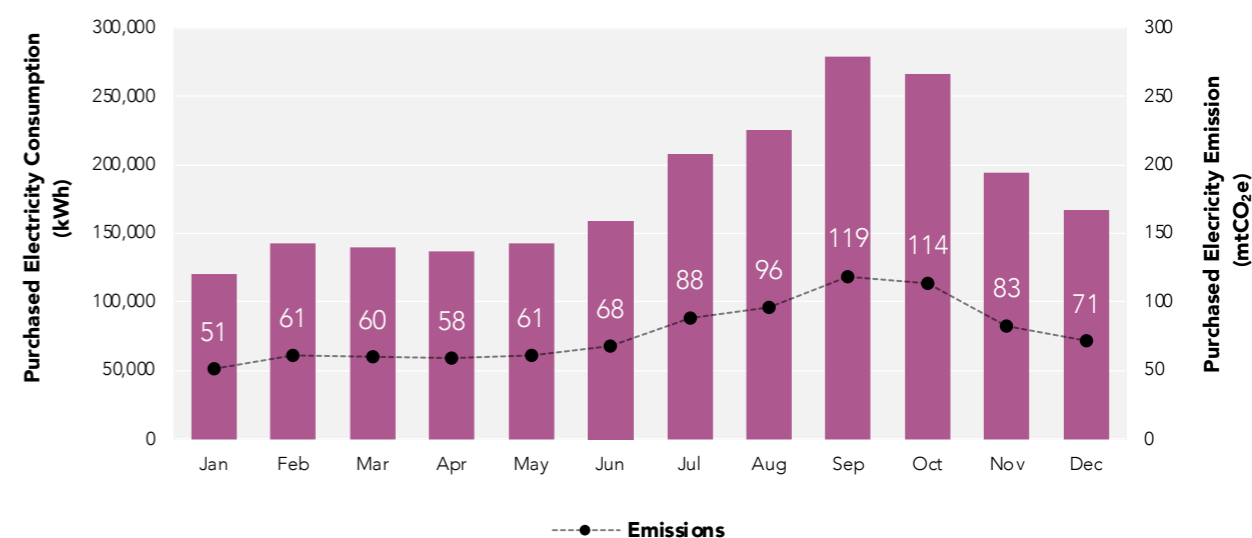
### Purchased Energy

#### Purchased Electricity

929 mtCO<sub>2</sub>e

For the reporting period of 2021, QNB ALAHLI's electricity consumption was **2,179,872 kWh** resulting in **929 mtCO<sub>2</sub>e**. This activity accounts for largest share of the carbon footprint emissions of QNB ALAHLI's activities, and it was the largest contributor to QNB ALAHLI's emissions, accounting for about 91% of total emissions in 2021.

Purchased Electricity Consumption and Emissions - 2021



## Scope 3: Indirect Emissions

Scope 3 emissions are the result of activities from assets not owned or controlled by the reporting organization, but that the organization indirectly impacts in its value chain.

### Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)

The boundaries of this activity included Well-to-tank emissions associated with the indirect fuel burning as well as water usage and wastewater treatment activities. WTT emissions account for GHG emissions released into the atmosphere from the production, processing and delivery of a fuel or energy vector. QNB ALAHLI accounted for WTT emissions to capture the maximum climate impacts from fuel burning activities. The emissions for 2021 were as follows:



#### Fuel Burning: Diesel (WTT)

WTT resulting emissions from diesel usage in generators was **0.03 mtCO<sub>2</sub>e**.



#### Fuel Burning: Owned Vehicles (Petrol 92 and 95)

For the reporting period of 2021, WTT emissions from QNB ALAHLI owned vehicles was **18 mtCO<sub>2</sub>e**, with the highest emissions in this category.



#### Water Usage & Wastewater Treatment

Scope 3 includes water consumption and wastewater treatment emissions. In the reporting period of 2021 QNB ALAHLI's HQ consumed **8,898 m<sup>3</sup>** of water, resulting in **1.3 mtCO<sub>2</sub>e** attributed to water usage. An additional **0.3 mtCO<sub>2</sub>e** were related to wastewater treatment. The total amount of emissions related to water usage and wastewater treatment was about **2 mtCO<sub>2</sub>e**.

## Emissions Summary

Scope 1: Direct Emissions – 2021		mtCO <sub>2</sub> e	7%
Stationary Combustion	Fuel Burning: Diesel	0.12	
Mobile Combustion	Fuel Burning: Owned Vehicles (Petrol 92 and 95)	70	
<b>Total Scope 1 Emissions</b>		<b>70</b>	

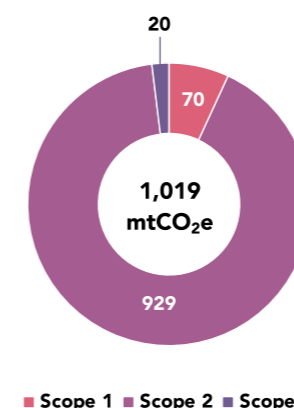
Scope 2: Indirect Emissions – 2021		mtCO <sub>2</sub> e	91%
Purchased Energy	Purchased Electricity	929	
<b>Total Scope 2 Emissions</b>		<b>929</b>	

Total Scope 1 & 2 Emissions – 2021	
Total Scope 1 & 2 Emissions	999 mtCO <sub>2</sub> e
Scope 1 & 2 Carbon Intensity (per FTE)	1.51 mtCO <sub>2</sub> e/FTE
Scope 1 & 2 Carbon Intensity (per Area)	0.06 mtCO <sub>2</sub> e/m <sup>2</sup>

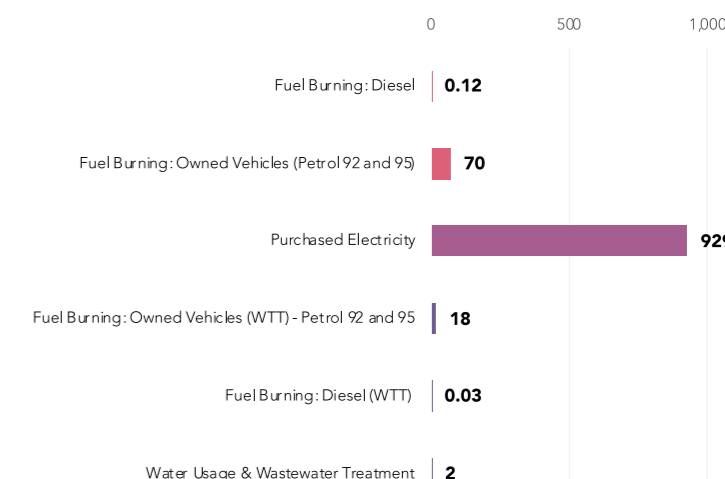
Scope 3: Indirect Emissions – 2021		mtCO <sub>2</sub> e	2%
Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)	Fuel Burning: Owned Vehicles (WTT) – Petrol 92 and 95	18	
	Fuel Burning: Diesel (WTT)	0.03	
	Water Usage & Wastewater Treatment	2	
<b>Total Scope 3 Emissions</b>		<b>20</b>	

Total Scope 1, 2 & 3 Emissions – 2021	
<b>1,019 mtCO<sub>2</sub>e</b>	

2021 Absolute Emissions per Scope (mtCO<sub>2</sub>e)



2021 Absolute Emissions per Activity (mtCO<sub>2</sub>e)



This chart illustrates the absolute emissions of each activity to make it easier to pinpoint the activities that have greater impacts than others. In 2021, purchased electricity was the primary GHG emitting activity as it accounted for 91% from total emissions.

National Benchmarking for Scope 1 & 2 Carbon Emissions

International Benchmarking for Electricity Performance

## External Benchmarking

- National Benchmarking for Scope 1 & 2 Carbon Emissions
- International Benchmarking for Electricity Performance



National Benchmarking for Scope 1 & 2 Carbon Emissions

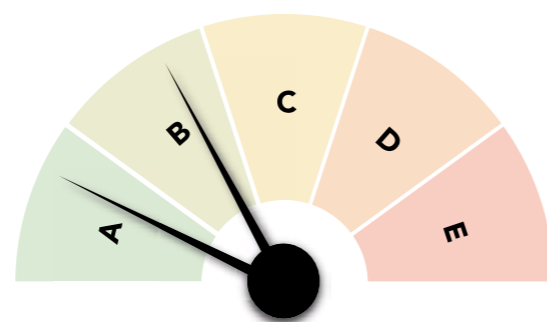
Benchmarking is used to assess the performance of a certain organization over time and compare it against others within the same industry. In addition, benchmarking allows organizations to determine industry best practices, and identify further opportunities for improvement.

Scope 1 & 2 carbon emission intensities (per FTE and per m2) are used herein to benchmark the performance of QNB ALAHLI nationally, while electricity intensity per m2 is used to assess it on a wider international level.

### National Benchmarking for Scope 1 & 2 Carbon Emissions

Published and unpublished data of a 20+ banks' headquarters were used to calculate the national average emission intensity (per FTE and m<sup>2</sup>). Accordingly, a methodology for the national rating has been developed. The table below shows QNB ALAHLI's national rate compared to other banks' headquarters in Egypt. For the year 2021, QNB ALAHLI had an emission intensity of 1.51 mtCO<sub>2</sub>e/FTE equivalent to 0.06 mtCO<sub>2</sub>e/m<sup>2</sup>, with a "B" and "A" score, respectively. This means that compared to other national banks' headquarters, QNB ALAHLI emits less emissions per FTE and per m<sup>2</sup> than the average. The bank should aim to maintain and further improve its emission intensities by implementing some decarbonization projects.

Score	Emissions Intensity (mtCO <sub>2</sub> e/FTE)	Emissions Intensity (mtCO <sub>2</sub> e/m <sup>2</sup> )
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



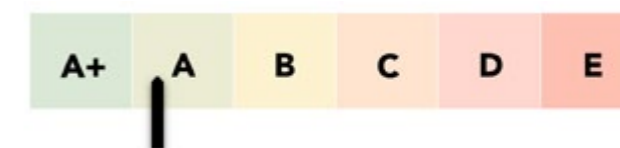
International Benchmarking for Electricity Performance

### International Benchmarking for Electricity Performance

One of the most common types 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.

QNB ALAHLI has an electricity intensity of **131 kWh/m<sup>2</sup>**, which corresponds to an "A" score. This implies that on an international level, the bank stands within the least electricity consuming buildings per area.

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





## Towards Carbon Reduction - Decarbonization Plan



Decarbonization Plan

## Towards Carbon Reduction

### 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 operations in pursuit of reducing its overall carbon footprint. To develop a customized decarbonization plan, a carbon audit 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 site visit. The below decarbonization list of projects 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
<b>Complete Carbon Footprint Assessment</b>	Assess the entirety of QNB ALAHLI’s banking operations & branches and Scope 3 emissions.	+ A fuller picture of QNB ALAHLI’s emissions and better opportunity to pinpoint areas for improvement.
<b>Green Building Guidelines</b>	Develop and adopt green building guidelines including refurbishment of building such as insulation and draught proofing.	+ Improved health and well-being of employees and customers + Improved customer satisfaction + Increased employee fulfillment + Enhanced building performance with longer lifetime and less maintenance
<b>Improve the Efficiency of Water System</b>	Install low flow and auto shut-off faucets.	+ Reduced water consumption
<b>Capacity Building</b>	Educating employees about climate change, decarbonization and climate resilience.	+ Enhanced capacity building of all employees and workers
<b>Reduction Targets</b>	Set specific carbon emission reduction targets with deadlines.	+ Reduced long-term and short-term carbon footprint

<b>Maintenance of Transport fleet</b>	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
<b>Waste Management</b>	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
<b>Carbon Offsets</b>	Invest in environmental projects to compensate for QNB ALAHLI’s share of consumption.	+ Reduced overall carbon footprint
<b>Energy Audit and Management System (EMS)</b>	Adopt an automatic energy system to assist in identifying opportunities to regularly monitor QNB ALAHLI energy use.	+ Increased building efficiency & performance
<b>Bank Cards</b>	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
<b>Green supply chain</b>	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
<b>Renewable Energy</b>	Utilize renewable energy sources (ie. solar PV).	+ Reduced indirect costs/Increased profit + Less dependence on grid electricity and diesel generators, with reduced risks of power outage
<b>Electric Vehicles</b>	Study the feasibility of electric and hybrid vehicles for QNB ALAHLI transport fleet.	+ Less pollution & enhanced air quality

■ High cost & time to implement     
 ■ Medium cost & time to implement     
 ■ Low cost & time to implement

## Annex

- Definitions & Terminology
- Data Sources and Quality
- Relevancy & Exclusions
- Quality Assurance Statement



## Definitions & Terminology

Base Year	A base year is a reference year in the past with which current emissions can be compared. 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.
CO2e	Carbon dioxide equivalent or CO2 equivalent, abbreviated as CO2e, 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.
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.
GHG Protocol	Greenhouse Gas Protocol – uniform methodology used to calculate the carbon footprint of an organization.
GWP	Global Warming Potential – 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; also heating, ventilation, 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.
Renewable Energy	Energy from a source that is not depleted when used, such as wind or solar power.
Scope 1	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	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	Emissions resulting from other activities. 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 QNB ALAHLI's database. The data quality has been evaluated and presented below, with data from each business sector evaluated independently to enable for better analysis and display of resolution and further explanations. 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.

CFP Data quality for the base year 2021:

	Scope	Activity	Data	Resolution
	1	Fuel Burning: Diesel	45 Liters	Data was received as an annual average value. Tracking system is recommended to record actual monthly consumption.
	1	Fuel Burning: Owned Vehicles (Petrol 92 and 95)	29,953 Liters	Data was received on a monthly basis.
	2	Purchased Electricity	2,179,872 kWh	Data was received on a monthly basis.
	3	Water Usage & Wastewater Treatment	8,898 m <sup>3</sup>	Data was received on a monthly basis.

Weak: Priority area for improvement
  Satisfactory: Could be improved
  Good: No changes recommended

## Relevancy & Exclusions

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

### Excluded Organizational Boundaries

Only QNB ALAHLI's headquarters building, located in Cairo, was assessed in this report. In future reports, the aim is to cover all QNB ALAHLI offices and branches to acquire the full picture of QNB ALAHLI's carbon footprint.

#	Activity	Description	Emissions	Status
1	Purchased Goods and Services	This includes office supplies such as paper, ink and envelopes. In addition to market materials, including flyers and printed forms.	N/A	Relevant, not yet calculated
2	Capital Goods	Emissions from embodied carbon in the properties owned by QNB ALAHLI, such as buildings, cars, etc.	N/A	Relevant, not yet calculated
3	Fuel and Energy-Related Activities (Not Included in Scope 1 and 2)	Emissions from the power used to process municipal wastewater and provide clean water, as well as WTT from fuel burning.	20 mtCO2e	Relevant, calculated
4	Upstream Transportation and Distribution	Emissions from QNB ALAHLI's internal courier shipment and 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.	N/A	Relevant, not yet 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 QNB ALAHLI).	N/A	Relevant, not yet calculated
8	Upstream Leased Assets	This category is not directly relevant to QNB ALAHLI's operations and has therefore been excluded.	N/A	Not relevant, explanation provided
9	Downstream Transportation	Emissions from QNB ALAHLI's external courier shipment in addition to the cash-in-transit related emissions.	N/A	Relevant, not yet calculated
	Processing of Sold Products	Includes emissions occurring due to bank issued cards and other products.	N/A	Relevant, not yet calculated
	Use of Sold Products	This should include emissions from the use of internet banking and other sold products.	N/A	Relevant, not yet calculated
	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
	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
	Franchises	This category is not relevant to QNB ALAHLI's business and has therefore been excluded.	N/A	Not relevant, explanation provided
	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

Diesel is consumed by the generators that supply QNB ALAHLI's headquarters' electricity demands in case of an electricity cutout or emergency. The total consumption of diesel for the HQ was recorded monthly in liters. Since it is directly used by QNB ALAHLI, the emissions resulting from the stationary consumption were accounted for under Scope 1.

$$\text{Fuel Burning: Diesel Emissions (mtCO}_2\text{e)} = \text{Fuel Consumption (L)} \times \text{EF (mtCO}_2\text{e/ L)}$$

#### Mobile Combustion

Owned vehicles fuel burning falls under Scope 1 direct emissions. As for the owned vehicles of QNB ALAHLI, fuel type and fuel consumption in liters were obtained from the database. These were utilized to calculate the emissions occurring from owned vehicles.

$$\text{Fuel Burning: Owned Vehicles Emissions (mtCO}_2\text{e)} = \text{Fuel Consumption (L)} \times \text{EF (mtCO}_2\text{e/ L)}$$

### Scope 2: Indirect Emissions

#### Purchased Energy

##### *Purchased Electricity*

Emissions from purchased electricity are the product of the national grid emission factor and the annual electricity consumption of the HQ. Purchased Electricity falls under Scope 2 (Indirect emissions). Therefore, the total yearly electricity emissions was calculated using the formula below:

$$\text{Purchased Electricity Emissions (mtCO}_2\text{e)} = \text{Electricity Consumption (kWh)} \times \text{EF (mtCO}_2\text{e/kWh)}$$

### Scope 3: Indirect Emissions

#### 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 to reflect the full range of climatic impacts from fuel-burning

## Carbon Footprint Equations

activities. All fuel burning activities, including Diesel & Petrol 92 and 95 consumed by QNB ALAHLI's HQ and owned vehicles were included in WTT emissions. For each amount and type of fuel burned, the general formula was applied to determine the relevant emissions.

$$\text{WTT Emissions (mtCO}_2\text{e)} = \text{Fuel Consumption (unit)} \times \text{WTT EF (mtCO}_2\text{e/unit)}$$

### *Water Usage and Wastewater Treatment*

The emission factor for water usage and wastewater treatment is calculated by using a conversion formula, provided by 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 usage 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.

$$\text{Energy Consumption (kWh)} = \text{Water Usage/ Wastewater (m}^3\text{)} \times \text{Conversion Formula (kWh/m}^3\text{)}$$

$$\text{Water Usage \& Treatment (mtCO}_2\text{e)} = \text{Energy Consumption (kWh)} \times \text{EF (mtCO}_2\text{e/kWh)}$$

## Quality Assurance Statement

To QNB ALAHLI's Board of Directors,

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

### **Auditor's 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.

### **Auditor's 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 QNB ALAHLI. 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.

## Quality Assurance Statement

### Conclusion

Based on the aforementioned procedures, nothing has come to our attention that would cause us to believe that QNB ALAHLI's raw data used in the carbon footprint calculations have not been thoroughly collected, verified and truly represent QNB ALAHLI'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 QNB ALAHLI for the provided assurance and conclusion.

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




## 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.

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