ELSEWEDY ELECTRIC

This study aims to layout and calculate the corporate carbon footprint of six of Elsewedy Electric organizations.

CARBON FOOTPRINT REPORT 2019

Elsewedy Electric Carbon Footprint assessment
April 2020

Study prepared by:
Carbon Footprint Center
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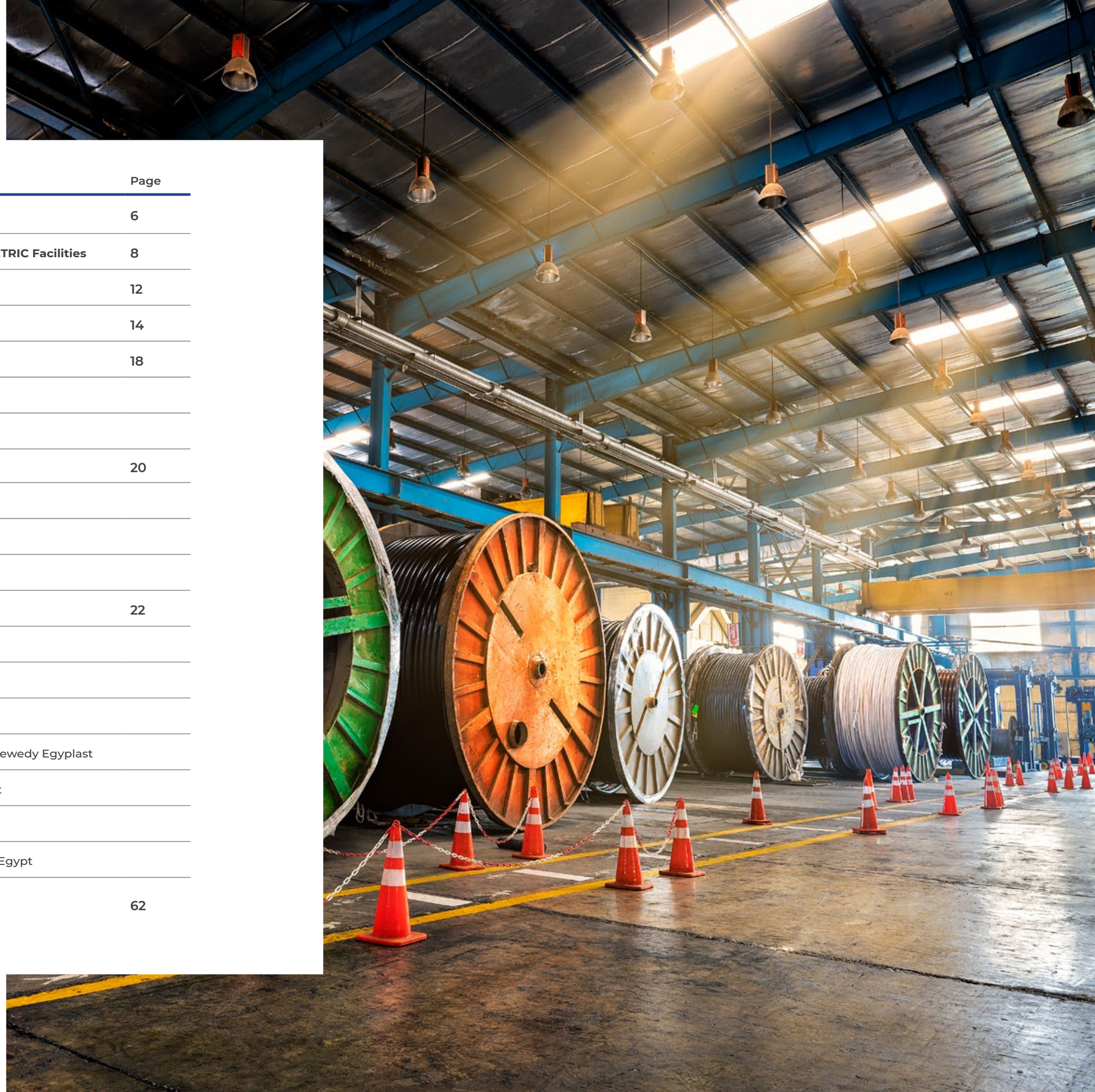
Content



1

SUMMARY

ELSEWEDY ELECTRIC | CARBON FOOTPRINT

This study aims to layout and calculate the corporate carbon footprint of six Elsewedy Electric organizations:

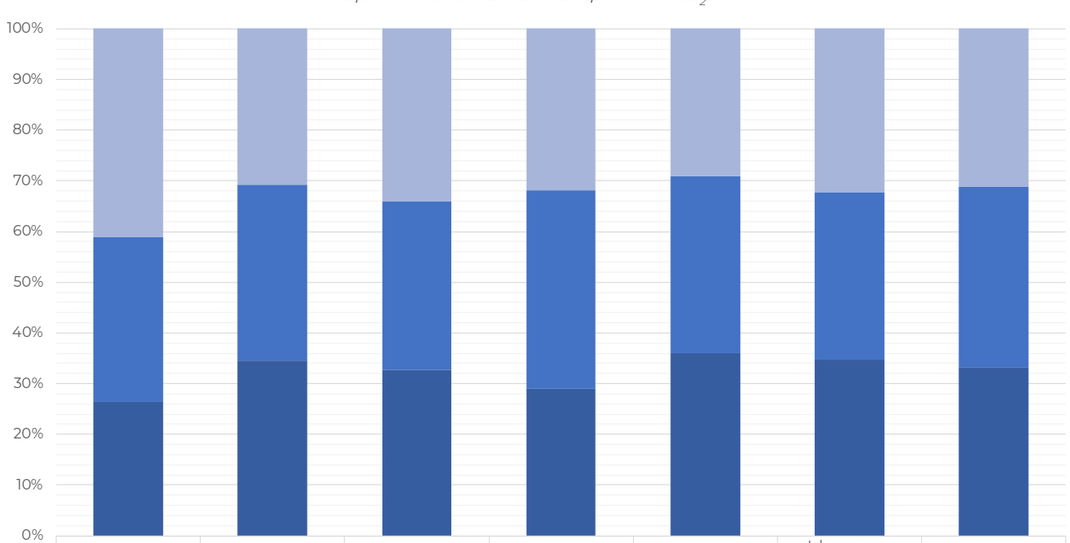
- **Iskraemeco Energy Measurement**
- **United industries company**
- **Egyptian Company For Plastic Industry - Elsewedy Egyplast**
- **Elsewedy Transformers**
- **Egytech Cables and Elsewedy Cables**
- **Iskraemeco, d.d. Slovenia**

Within the scope of this corporate carbon footprint, Elsewedy Electric organizations were assessed for its carbon emissions for years 2017, 2018, and 2019. Results of this footprint were identified:

- Per total footprint (emissions caused by the company).
- Per scope (term used to classify the different emissions sources into different categories, according to the Greenhouse Gas Protocol).
- Per level of activity (such as electricity and gas, travel-related emissions, commuting, business travel, waste management and disposal, and others, if applicable).

The results of the Elsewedy Electric Overview of total carbon footprint in tCO2e shown in Graphic 1: Total carbon footprint

Graphic 1: Total carbon footprint in tco_2e



	Iskraemeco	United	Transformers	Egyplast	Egytech	Iskraemeco Slovenia	Total
2019	2,615	13,588	5,652	14,909	19,139	2,811	58,714
2018	2,065	15,304	5,499	18,286	22,896	2,873	66,923
2017	1,683	15,218	5,409	13,536	23,650	3,033	62,529

Further relevant information, such as the methodology used to carry out this greenhouse gas inventory and the goals of a carbon footprint, is briefly summarized in this document.

[1] *Carbon dioxide equivalent (CO2e) Measures for describing how much global warming a given type and amount of greenhouse gas may cause, using the functionally equivalent amount or concentration of carbon dioxide (CO2) as the reference.*

2

BACKGROUND INFORMATION ON THE ELSEWEDY ELECTRIC ORGANIZATION

2.1 ISKRAEMECO ENERGY MEASUREMENT

Iskraemeco's vision and mission is to become the preferred global supplier of energy management solutions and to make efficient energy use easy.
The Iskraemeco factory in Egypt was established in 2008 in 10th of Ramadan City. The Iskraemeco Egypt factory produces different types of smart meters: standalone, prepaid, and others. The quality of Iskraemeco Egypt products is based on total management system determined in the

ISO 9001:2015,
ISO14001:2015,
OHSAS 18001:2007,
ISO/IEC 17025:2005,
MID/2014/32 EU (Measuring Instrument Directive)

Iskraemeco Slovenia is among the world's leading companies in metering products, systems, and services, and was acquired by Elsewedy Cables in June 2008.
The quality of Iskraemeco Slovenia's products is based on total business management system determined in the **ISO 9000:2000** standards.
It unites systems ranging from quality management, approach to the environment, and quality of laboratories to financial management, law, safety and health at work, as well as security of assets and data. The total business management system is based on a process model of constant improvement, enabling them to increase efficiency and the satisfaction of customers, employees, and the owner.
Iskraemeco provides the value for all energy market players:

- **Regulators,**
- **Energy suppliers,**
- **Utilities,**
- **Consumers.**

Iskraemeco products meet the requirements of applicable international standards and legislation. These include:
Automatic Meter Management (AMM) Systems, software programs for reading and parameter setting, data recorders, and communicators.

2.2 UNITED INDUSTRIES

United Industries is the branch of Elsewedy Cables that guarantees meeting tailored customer requirements. From the Domestic Appliance Cord to the extremely high-performance Category 7 Local Area Network cables required for the next generation of computers, and from the small pairs telephone cables required in the home and business premises to the complex instrumentation cables needed to monitor natural resources. United Industries' vision is to be the biggest brand name in the cables industry, providing local and foreign markets with defect-free products complying with international standards, satisfying customer needs, requirements, and expectations.

Putting the customer as the focus of interest is our first priority and will consequently lead to an increase in export and new market infiltration. United Industries' substantial annual investment aims to increase production capacity, thereby fulfilling the market needs with progressing cost reduction to ensure international competitiveness. Research, development, and innovation in processes, activities, and products are the most important factors to drive United Industries' superiority.
On top of that, adopting business automation of workflow is an uncompromised philosophy to reach a benchmark performance in United Industries' mission of reducing cycle times and maintaining continuous improvements.

All the company, from the top management to all the employees, responsibly commit to implementing the requirements of the **Quality Management system of ISO 9001-2000 and ISO/TS 16949-2002.**

2.3 ELSEWEDY TRANSFORMERS EGYPT

Elsewedy Transformers is one of the vital sectors of Elsewedy Electric Group, contributing to the vast experience in providing high standard solutions for power generation, transmission, and distribution. It covers the whole project cycle from engineering, design, and manufacture, to supplying, installing, testing, and finally, the commissioning and handover of the transformers.

Elsewedy Transformers' vision and mission is to be a world-class reliable brand in the field of transformer manufacturer and service provider by utilizing the most up-to-date technologies, skilled and well-trained people, and the legacy of our experiences to achieve the needs and exceed expectations of our customers.
All while following international standards, including

- **Quality Management System ISO 9001:2015**,
- **Environmental Management System**
- **ISO 14001:2015**,
- **Occupational Health**,
- **Safety Management System OHSAS 18001:2007**.

Elsewedy Transformers produces:

- Power Transformers up to **250 MVA; 220 kV**
- Distribution transformers (**Oil-immersed up to 5 MVA; 33 kV**) and (**Dry / Cast resin up to 10 MVA; 22kV**).

2.4 ELSEWEDY FOR PLASTIC INDUSTRY

Egyptian Company for Plastic Industry ELSEWEDY EGYPLAST was established in 1996 as a subsidiary of ELSEWEDY ELECTRIC Group. At EGYPLAST, we create and process polymer compounds.
for a sustainable future. We combine economic success with environmental protection and social responsibility. Approximately **700** employees contribute to the success of our customers in various sectors, locally and worldwide. Our portfolio is organized into five segments:

- **PVC Compound**
- **Masterbatch**
- **Special Compounds**
- **PP Fibers**
- **Fiberglass Poles**

EGYPLAST considered one of the largest manufacturers of plastic compounds in the Middle East and Africa.
These include: PVC Compounds, Special Cable Compounds, and Masterbatch, for various applications with an annual production capacity of 120000 tons.
In 2015, the company acquired two factories to add new products to its range. The first is the Fiberglass Poles factory, which was established in 1998 by German Technology and is equipped with two production lines with an annual production capacity of 24000 poles, supplying street lighting, decorative, and landscape applications.
The Second is the PP Fibers factory, which was also established in 1998 by German Technology. It is equipped with three production lines, with annual production capacity reaching 17000 tons, covering both industrial and agriculture applications.

EGYPLAST is ISO 9001, ISO 14001, and OH SAS 18001 certified, supplying materials according to RoHS and REACH regulations. State-of-the-art facilities in our production units and modern laboratories assure excellent quality control levels, providing a unique ability to offer specialized compounds tailored to customers' specific needs in compliance with the international standards of quality, safety, and environmental regulations. The product range includes:

- **PVC Compound, Soft PVC Compound, Rigid PVC Compound / Granules**
- **Masterbatch,**
- **Special Compounds,**

CERTIFIED
ISO 9001
ISO 14001
OH SAS 18001

2.5 EGYTECH CABLES AND ELSEWEDY CABLES-EGYPT

Egytech is a state-of-the-art power cable factory created by a fusion of technologies from all around the world, exporting products worldwide.
Egytech's mission is to share success with its clients by producing cables that meet their needs and exceed expectations.

Egytech is distinguished by a variety of products:

- **low voltage cables up to 1 kV**
- **medium voltage cables up to 36 kV**
- **high voltage cables up to 150 kV**
- **extra-high voltage cables up to 500 kV**
- **overhead transmission lines up to 750 kV**
- **optical ground wires up to 500 kV**
- **turnkey projects for underground cables**
- **optical ground wire projects**
- **steel and wooden drums**

Egytech's first priority is to preserve its workforce, so they have full commitment to implement Occupational Health, safety, environmental, legal, and other requirements.

Egytech has restrictions to limit environmental pollution and reduce injuries and occupational diseases, to preserve the health and safety of our human resources to make the work environment safer.

It has become obligatory for all departments to be committed to the requirements of the following systems, with frequently reviewing of QHSE objectives:

- **Quality management system (ISO 9001:2015),**
- **Environmental management system (ISO 14001:2004),**
- **Occupational Health and Safety Management Certification (OHSAS 18001:2007).**

3

INTRODUCTION

3 INTRODUCTION

Become climate-safe and achieve overall sustainable development; this is the challenge set when the world agreed on the Sustainable Development Goals. The Sustainable Development Goals (SDGs) are a collection of 17 global goals set by the United Nations General Assembly in September 2015, and then later in the Paris Climate Agreement in December 2015.

SDG 13 says control climate change – that's the global warming that we humans are causing to the planet. These agreements are so urgent that governments have scrambled to start putting them into effect and implement the Paris Climate Agreement.
The Paris Climate Agreement says that we should hold the increase of temperatures caused by human activity to well below 2 °C, and 196 UNFCCC members have signed the agreement. Under the Paris Agreement, each country must determine, plan, and regularly report on the contribution that it undertakes to mitigate global warming. The aim of the agreement is described in Article 2 as "enhancing the implementation" of the UNFCCC through:

(a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.
(b) Increasing the ability to adapt to the adverse impacts of climate change, and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production.
(c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

The Paris Agreement and Kyoto Protocol share the same goal. It is to restrict the global temperature rise below 2 °C. The Paris Agreement and Kyoto Protocol differ in their approach to achieving the ultimate goal of stabilizing greenhouse gases and keeping the temperature rise below 2 °C. The difference is in how these treaties make developed and developing countries commit to taking action to combat climate change. The Kyoto protocol does not bind developing countries to cut their GHG emissions. Thus, the Kyoto protocol maintains a strict difference between the developed and developing nations in terms of emission reduction targets.

The Paris Agreement on climate change attempts to blur the divide between the developed and developing nations.
It made all the nations under UNFCCC to voluntarily commit on their own domestic emission reduction targets.
Besides politicians, governmental authorities, and organizations, another influential group - the "consumer on the street" - increasingly pays attention to issues related to climate change, the environment, and sustainability. Consumers' expectations have changed. Nowadays, the customer will give preference to products offering more than just a single quality claim.

To meet these changing consumer expectations and to help mitigate climate change, many initiatives related to carbon footprinting and carbon labeling were – and are still being – developed worldwide.

One of the worldwide initiatives related to carbon footprinting and carbon labeling is the BSI Standards Solutions led development of PAS 2050 (Publicly Available Specification) at the request of Defra (the Department for Environment, Food, and Rural Affairs) and the Carbon Trust. PAS 2050 is a standard for carbon footprint assessment of goods and services, and until now, it is the most comprehensive standard that provides guidelines on how to assess the carbon footprint of products and services. Tesco, the British retail chain, was the largest test of the draft PAS 2050 product carbon footprinting method and the Carbon Trust Carbon Reduction Label.

4

CHALLENGES FACING EGYPT

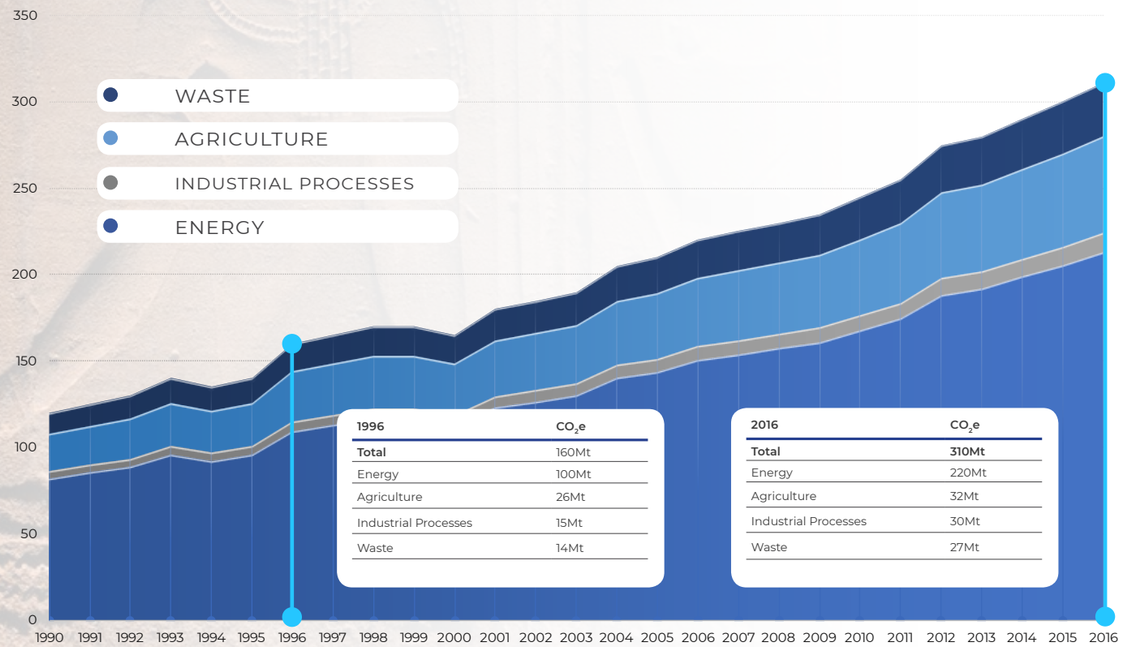
CHALLENGES FACING EGYPT

Climate change is likely to be the biggest challenge facing Egypt and the world for the foreseeable future. It is predicted to be associated with increasingly unstable weather patterns that pose many threats to Egypt and could have severe consequences on health, food availability, and the economy.
From 1901 until 2010, the global average sea level rose by 19 cm as oceans expanded due to global warming and melting ice. Given current concentrations and ongoing emissions, it is likely that by the end of the twenty-first century, the increase in global temperature will exceed 1.5°C compared to the average temperature during the years 1850 to 1900.

In Egypt, the impact of global warming is exacerbated by rapid population growth and the high density of inhabitants agglomerated in the area of the Nile Delta. The current population of approximately 100 million people is predicted to increase to 150 million by 2050.
Although the Nile Delta comprises only about 5.5% of Egypt's landmass, it currently constitutes over 90% of the residential and agricultural areas. Furthermore, the Delta is, in most parts, low-lying, and therefore prone to saltwater inundation, especially as seawater levels are likely to rise.

Increasing water use from the Nile, due to heightened water consumption of the growing population, will further aggravate the challenge.

There are a number of approaches to lessen the future impact of climate change that can be classed as either prevention or mitigation. On the one hand, mitigation concentrates on preparation for the predicted changes through improvements in technology, including dykes and barrages, improvements in irrigation efficiency, water reuse, and utilization of desert areas both for habitation and agriculture.
On the other hand, prevention focuses on the reduction of greenhouse gas (GHG) emissions (including CO2 and CH4 that make up more than 90% of all GHG). In 2016, Egypt released approximately 310 Mt, an increase of over 90% since 1996.
This far exceeds the worldwide growth of 44% from 32.4 Gt to 46.1 Gt. Significant sources of GHG emissions are agriculture, industrial processing, and waste management at similar levels, accounting for approximately 30% of the total release.
However, the energy sector is by far the biggest contributor, responsible for over 70% of Egypt's emissions, of which about just less than half is used for electricity generation and heating.



1996	CO_2e
Total	160Mt
Energy	100Mt
Agriculture	26Mt
Industrial Processes	15Mt
Waste	14Mt

2016	CO_2e
Total	**310Mt**
Energy	220Mt
Agriculture	32Mt
Industrial Processes	30Mt
Waste	27Mt

Source: CAIT Country Greenhouse Gas Emissions Data (1990-2016), excluding LUCF

CLIMATE CHANGE MITIGATION

According to the United Nations Development Program, special attention needs to be given to the areas of agriculture, health, water resources, human habitation, coastal zones, and aquaculture. These areas are particularly vulnerable to the impacts of climate change, and could potentially have exceptionally severe implications for society. Although Egypt has improved its ranking from **28th** to **24th** place out of 57 countries in the Climate Change Performance Index report for 2019, its geographic position makes it particularly susceptible to adverse events. Hence further efforts are warranted.

Agricultural development, and thus food security in Egypt, are closely linked to the River Nile and its management. Due to the constant increase of the population, and the already existing water shortages, reducing water demand is necessary through an increase in economic return per liter and rationalization of consumption.
With more than 95% of its water resources precipitated outside the country, Egypt cannot readily resort to renewable water resources, such as rain harvesting techniques, but needs to rely on Nile water irrigation, (fossil) groundwater extraction, water recycling, and desalination.
Although the latter is very promising, its sustainability is severely limited by the significant energy consumption, which is currently supplied by CO2 emitting power plants.
Many coastal cities, including Alexandria, are threatened to be (partially) submerged through increasing sea-levels due to climate change. Moreover, these changes also affect cities and towns within the Delta – Egypt's most populated and dense area. Therefore, in March 2019, the Ministry of Environment announced a national plan to protect coastal areas from sea-level rise through the construction of new dams in the North Delta.
This was linked to the banning of plastic bags to keep the environment clean and reduce the use of oil. Furthermore, many major cities also started to adopt electric alternatives for public transportation. Therefore, both mitigation and prevention activities were combined.

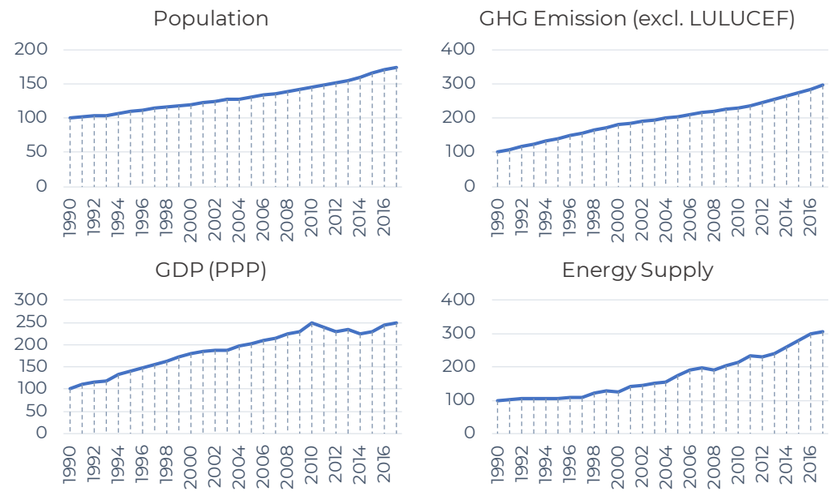
Key Indicators	2017
Population (million)	97.60
GDP per capita (PPP)[US$]	10332.99
GHG per capita (excl. ULUCF) [t]	3.18
CO_2 per GDP (PPP) [t/1000US$]	0.77
TPES per GDP (PPP) [MJ/US$]	3.85
CO_2 per TPES [t/TJ]	79.79
Share of Renewable Energy of TPES***	2.70%

GHG = Greenhouse Gases
TPES = Total Primary Energy Supply
PPP = Purchasing power Parity in Prices of 2005
LULUCF = Land use, Land-Use Change and Forestry

Sources: IEA2019, PRIMAP 2019

DEVELOPMENT KEY OF INDICATORS

Source CCPI, 2019



5 GENERAL INFORMATION

5.1 INTRODUCTION

This carbon footprint calculation was carried out at the request of the Elsewedy Electric Group and produced by the Carbon Footprint Center. The study aims to layout and calculate a corporate carbon footprint for six factories of the Elsewedy Electric Group. This report is based on the reported Elsewedy Electric emissions for the period of January 1st, 2017, until December 31st, 2019.

5.2 GOALS OF A CARBON FOOTPRINT

This assessment results in the carbon footprint of Elsewedy Electric. The goal is to identify sources of greenhouse gas emissions and calculate the amount of such gases emitted due to the operation of the assessed company over each determined year. The carbon footprint serves to identify the environmental performance of a specific company as to greenhouse gas emissions, thus assessing its impact on climate change.

Further goals of this carbon footprint are:

- **to collect information Elsewedy Electric needs in order to reduce GHG emissions**
- **to identify cost-saving opportunities for Elsewedy Electric**
- **to demonstrate Elsewedy Electric's environmental and corporate responsible leadership**
- **to receive recognition for early voluntary action**
- **to respond to changing consumer expectations**

6 METHODOLOGY

6.1 GENERAL METHODOLOGY

The methodology used for this assessment is based on the guidelines of the WRI/WBCSD Greenhouse Gas Protocol, PAS2050 and TÜV-Nord's Climate Neutral Company Standard. In the following paragraphs, the methodological choices regarding this particular assignment are summarized.

6.2 SYSTEM BOUNDARY AND SCOPES

In this chapter, the system boundary, as well as the scope of the assessed corporation will be described. The term boundary refers to the parameters that are accounted for in the carbon footprint of a specific corporation

In this assessment, the boundaries were set to cover all corporate facilities and staff related emissions in their corporate.

Once this boundary has been defined, the greenhouse gas emissions arising from the corporate's operations will be identified and assigned to three different scopes, as introduced in the Greenhouse Gas Protocol. In line with the approach of the Greenhouse Gas Protocol, the emissions identified within the system boundary and the different levels are assigned to three different scopes as follows:

Scope 1

emissions include the direct greenhouse gas emissions of a corporate. These emissions arise from sources that are owned or controlled by the corporate or employees.

Scope 2

emissions include indirect greenhouse gas emissions caused by the corporate. These are emissions from the generation of purchased electricity consumed by the corporate.

Scope 3

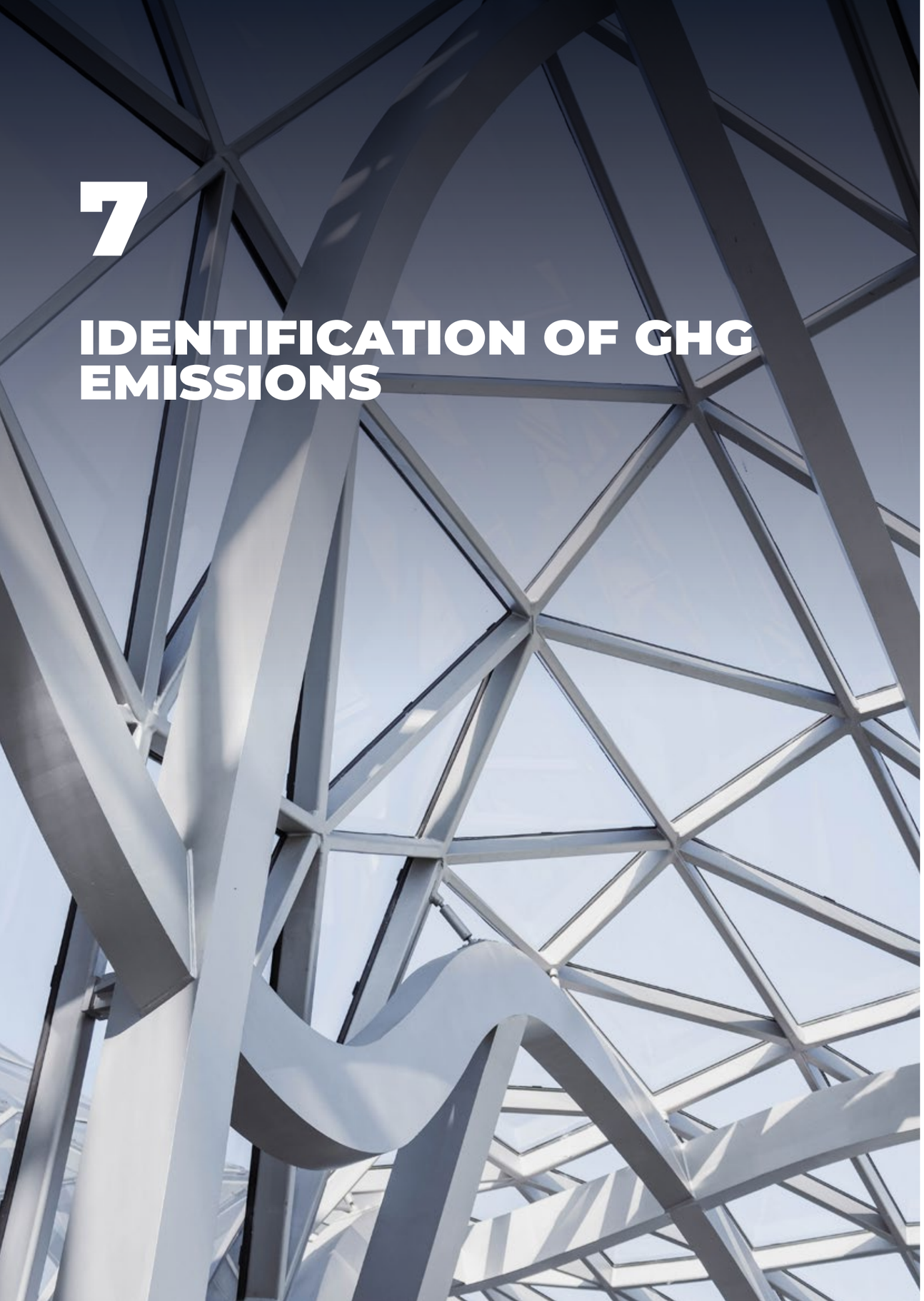
emissions include other indirect greenhouse gas emissions of the corporate. These emissions are a consequence of the activities of the corporate but (mostly) occur at sources owned or controlled by another entity.

6.3 DATA SOURCES

Different types of data may be taken to carry out a corporate carbon footprint. The most commonly used types of data are:

- ***Primary data:*** data taken from documents that are directly linked to the assessment questionnaire, 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.

[2] *WRI stands for World Resources Institute, and WBCSD stands for World Business Council for Sustainable Development*



7

IDENTIFICATION OF GHG EMISSIONS

7.1 ISKRAEMECO ENERGY MEASUREMENT EGYPT

7.1.1 Power related emissions

These emissions are linked to purchased electricity the corporate used, as well as its diesel and petrol consumption.

a) Diesel

Iskraemeco consumed 5,229 liters of diesel in 2017, 6,075 liters in 2018, and 7,325 liters in 2019. Diesel is a direct emission accounted for under scope 1. This is the amount used in forklifts and generators. The results are shown in Table 1.

Table1: Direct Emissions - scope 1 Diesel

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Diesel	5,229	L/Year	13,993
2018		6,075		16,220
2019		7,325		19,558

b) Company owned cars

Iskraemeco owned cars traveled 642,954 km in 2017, 660,728 km in 2018, and 809,000 in 2019. The company-owned car emissions are direct emissions accounted for under scope 1.
The results are shown in Table 2.

Table 2: Direct Emissions - scope 1 company owned car

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Company owned cars	642,954	km/year	128,803
2018		660,728		132,364
2019		809,000		162,067

c) Electricity

Electricity is an indirect emission under scope 2. Iskraemeco used electricity from the grid as an energy source for production, lighting, cooling, etc. Iskraemeco consumed 2,420,269 kWh in year 2017, 3,049,207 kWh in 2018, and 3,830,465 kWh in 2019. The results are shown in Table 3.

Table 3: Indirect Emissions - scope 2 Electricity

Scope 2		Consumption	UNIT	$KgCO_2e$
2017	Electricity	2,420,269	kWh/year	1,210,135
2018		3,049,207		1,524,604
2019		3,830,465		1,915,233

7.1.2 Travel related emissions

These emissions consist of the corporate's employees' daily travel, as well as their business travel.

a) Business Travel

In 2017 Iskraemeco total number of flights were 194 flights. 86 flights were long haul (flights longer than 3,700 km), 108 flights were short haul (flights up to 3,700km), in 2018 the total of flights were 292 flights, 132 flights were long haul and 160 flights were short haul.
In 2019 the total of flights were 410 flights, 130 flights were long haul and 280 flights were short haul.
The results are shown in Table 4. Business travel is indirect emission under scope 3.

Table 4: Indirect Emissions - scope 3 Travel related emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Business travel	1,016,900	kWh/year	187,534
2018		1,260,400		249,133
2019		1,888,300		361,826

b) Commuting related emissions

In 2017 the total Iskraemeco staff counts 366 employees. In 2018 the staff counts 392 employees and in 2019 the staff counts 534 employees. The staff community emission are shown in Table5.
Commuting emission is indirect emission under scope 3.

Table 5: Indirect Emissions - scope 3 Office staff commuting emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Staff commuting	1,376,890	km/year	139,823
2018		1,363,080		138,421
2019		1,488,480		151,155

7.1.3 Emissions due to paper consumption

In 2017 Iskraemeco used 215,000 sheets, in 2018 the paper consumption were 377,500 sheets and in 2019 the paper consumption were 482,500 sheets. The paper emission results are shown in Table 6.

Table 6: Indirect Emissions - scope 3 Emissions due to paper consumption

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Paper consumption	1,073	kg/year	1,545
2018		1,896		2,694
2019		2,445		3,413

7.1.4 Emissions due to waste management and disposal

Emissions at this section occur through the Iskraemeco waste management and waste disposal process, the total amount of waste occurring in 2017 were 76 ton.
In 2018 the total amount of waste were 73 tons and in 2019 total amount of waste were 86 tons. The emission results are shown in Table7.

Table 7: Waste management and disposal

Scope 3		Consumption	UNIT
2017	Waste management & transport	1,513	$KgCO_2e$
2018		1,319	
2019		1,541	

7.1.5 Results Iskraemeco Egypt

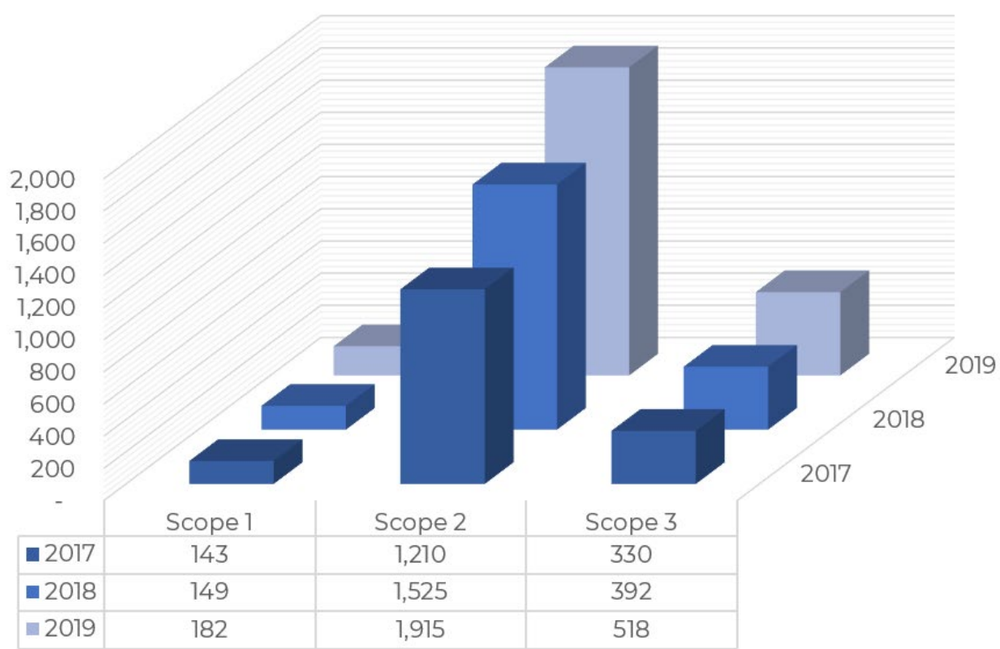
In 2017 the total carbon footprint for Iskraemeco Egypt amounts 1,683 tons of CO2e, 2,065 tons of CO2e in 2018 and 2,615 tons of CO2e in 2019.

a) Emissions per scope

Table 8: Emissions per scope

Per scope	2017 Emissions in tCO2e	2018 Emissions in tCO2e	2019 Emissions in tCO2e
Scope 1	143	149	182
Scope 2	1,210	1,525	1,915
Scope 3	330	392	518
TOTAL	**1,683**	**2,065**	**2,615**

Graphic 4: Emissions per scope



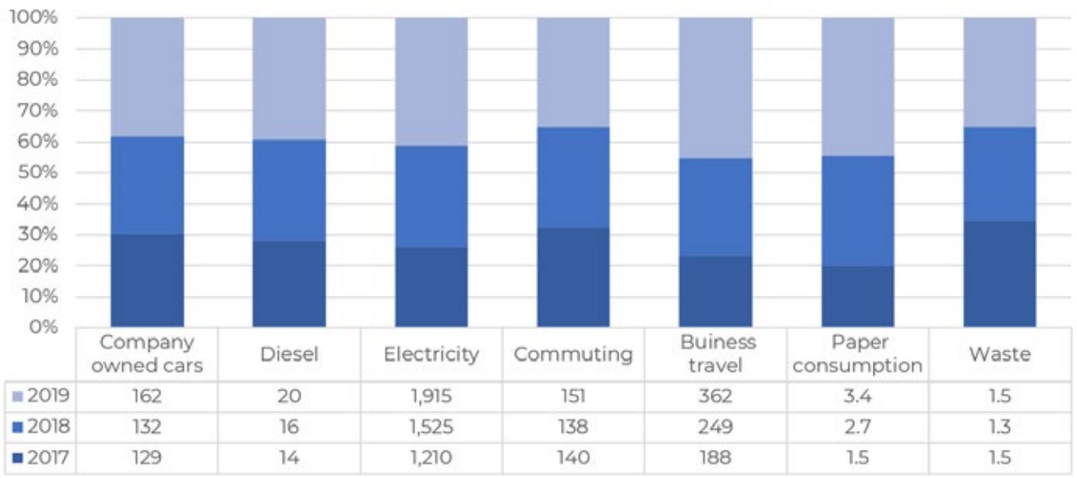
ELSEWEDY ELECTRIC | CARBON FOOTPRINT

b) Emissions per Category

Table 9: Emissions per category

	2017	2018	2019
Category	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Company owned cars	129	132	162
Diesel	14	16	20
ELECTRICITY	1,210	1,525	1,915
COMMUTING	140	138	151
BUINESS TRAVEL	188	249	362
PAPER CONSUMPTION	1.5	2.7	3.4
WASTE	1.5	1.3	1.5
TOTAL	**1,683**	**2,065**	**2,615**

Graphic 5: Emissions per category



c) Emissions per Employee

Table 10: Emissions per employee

Per employee	Emissions in tCO2e	tCO2e
2017	1,683	4.60
2018	2,065	5.27
2019	2,615	4.90

d) Emission per m²

Table 11: Emissions per m2

per m2 (office space)	Emissions in tCO2e	tCO2e
2017	1,683	0.03
2018	2,065	0.04
2019	2,615	0.05

7.2 | UNITED INDUSTRIES COMPANY

7.2.1 Power related emissions

These emissions are linked to purchased electricity the corporate used, as well as its diesel and petrol consumption.

a) Diesel

The United Industries consumed 144,000 liters of diesel annually. Diesel is a direct emission accounted for under scope 1. This amount was used in forklifts. The results are shown in Table 12.

Table 12: Direct Emissions - scope 1 Diesel

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Diesel	144,000	l/year	384,480
2018		144,000		384,480
2019		144,000		384,480

b) Natural Gas

United Industries consumed 715,476 m^3 of natural gas in 2017, 765,662 m3 in 2018, and 451,714 m3 in 2019. Natural as is direct emission accounted for under scope 1. This amount used in chillier.
The results are shown in Table 13.

Table 13: Direct Emissions - scope 1 Gas

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Gas	715,476	m^3/year	1,455,707
2018		765,662		1,557,816
2019		451,714		919,057

c) Company owned cars

United Industries owned cars travelled 683,309 km in 2017, 579,000 km in 2018, and 1,889,287 km in 2019. The company-owned car emissions are a direct emission accounted for under scope 1. The results are shown in Table 14.

Table 14: Direct Emissions - scope 1 company-owned cars

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Company owned cars (Petrol)	683,309	km/year	136,887
2018		579,000		115,991
2019		1,889,287		134,522

d) Electricity

Electricity is an indirect emission under scope 2. United Industries used electricity from the grid as an energy source for production, lighting, cooling, etc.
In 2017 United Industries consumed 25,954,800 kWh, 26,025,600kwh in 2018, and 23,803,200 kWh in 2019. The results are shown in Table 15.

Table 15: Indirect Emissions - scope 2 Electricity

Scope 2		Consumption	UNIT	$KgCO_2e$
2017	Electricity	25,954,800	kWh/year	12,977,400
2018		26,025,600		13,012,800
2019		23,803,200		11,901,600

7.2.2 Travel related emissions

These emissions consist of the corporate's employee's daily travel, as well as their business travel.

a) Business Travel

In 2017 United Industries' total number of flights was 28. All flights were short-haul (flights up to 3,700km), and 19,200 km were business travel – no flights. In 2018 the total number of flights was 58. Fifty-six flights were short-haul, and two flights were long-haul and 29,690 km were business travel – no flights. In 2019 the total number of fights was 62, all were short-haul, and 72,414 km were business travel – no flights.
The results are shown in Table 16. Business travel is indirect emission under scope 3

Table 16: Indirect Emissions - scope 3 Travel related emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Business travel	93,400	km/year	16,273
2018		177,390		31,415
2019		226,714		40,491

b) Commuting related emissions

The total United Industries staff count was 920 employees in 2017, 926 in 2018, and 960 employees in 2019. The staff commuting emission are shown in Table 17. Commuting emissions are indirect emissions under scope 3

Table 17: Indirect Emissions - scope 3 Office staff commuting emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Staff commuting	1,723,600	km/year	178,234
2018		1,522,512		154,611
2019		1,601,271		162,609

7.2.3 Emissions due to paper consumption

In 2017 United Industries used 750,000 sheets. In 2018 the total used sheets was 1,120,000, and in 2019, the total used sheets was 900,000. The emission results are shown in Table 18.

Table 18: Indirect Emissions - scope 3 Emissions due to paper consumption

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Paper consumption	3,742	kg/year	5,389
2018		5,588		8,047
2019		4,491		6,467

7.2.4 Emissions due to waste management and disposal

Emissions at this section occur through the United Industries waste management and waste disposal process. The total amount of waste in 2017 was 1,409 tons, 1,448 tons in 2018, and 1,449 tons in 2019. The emission results are shown in Table 19.

Table 19: waste management and disposal

Scope 3		Consumption	UNIT
2017	Waste management & transport	63,542	$KgCO_2e$
2018		38,825	
2019		39,117	

7.2.5 Results United Industries Egypt

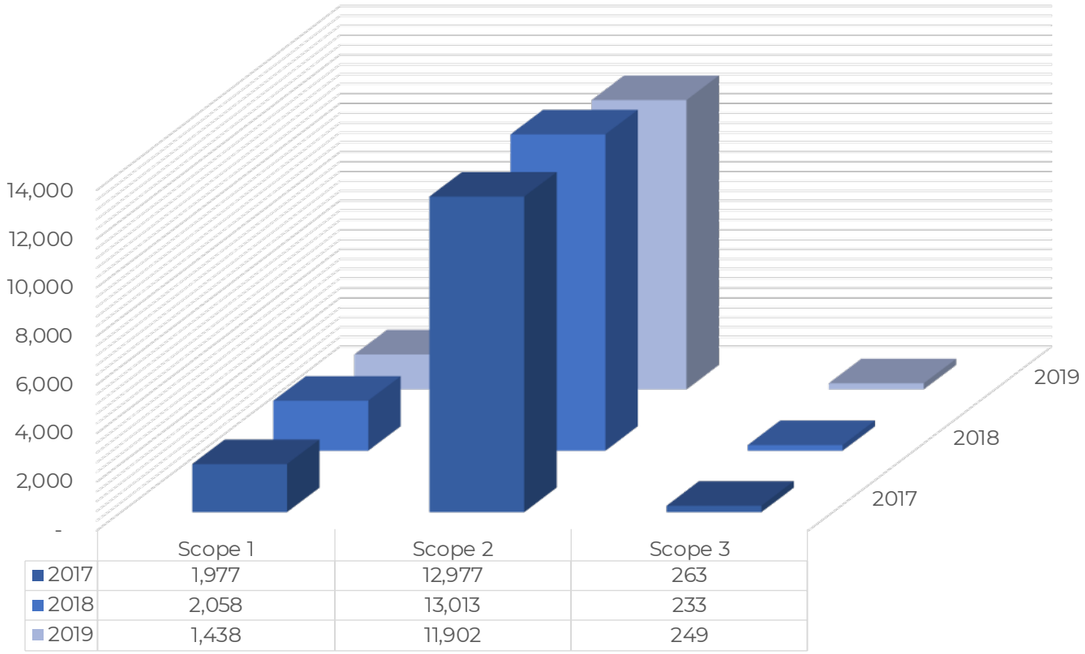
The total carbon footprint for United Industries amounts to 15,218 tons of CO2e in 2017, 15,304 tons of CO2e in 2018, and 13,832 tons of CO2e in 2019.

a) Emissions per scope

Table 20: Emissions per scope

	2017	2018	2019
Scope	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Scope 1	1,977	2,058	1,438
Scope 2	12,977	13,013	11,902
Scope 3	263	233	249
Total	**15,218**	**15,304**	**13,588**

Graphic 6: Emissions per scope



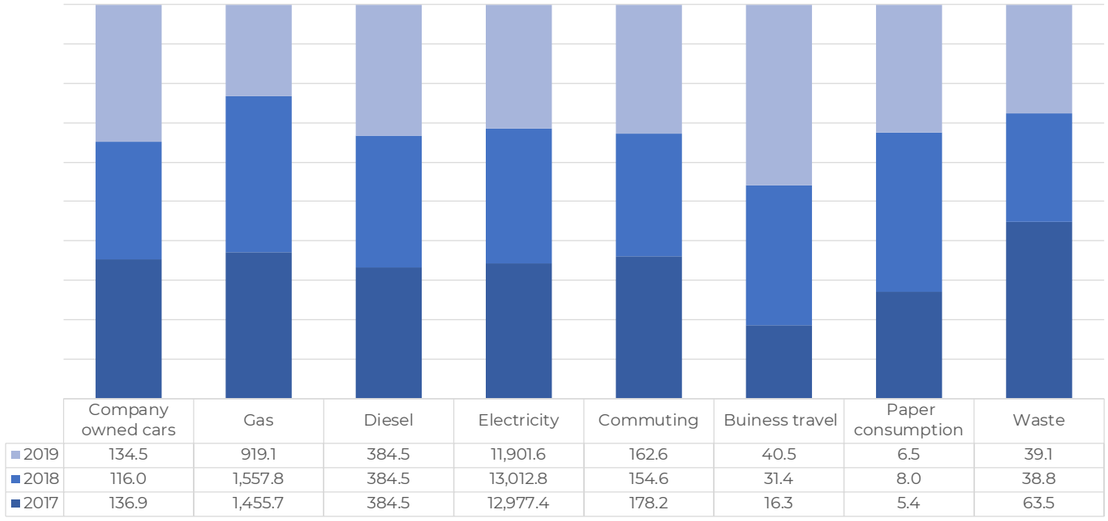
b) Emission per category

Table 21: Emissions per scope

	2017	**2018**	**2019**
Category	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Company owned cars	136.9	116.0	134.5
Gas	1,455.7	1,557.8	919.06
Diesel	384.5	384.5	384.48
Electricity	12,977.4	13,012.8	11,901.60
Commuting	178.2	154.6	162.61

	2017	2018	2019
Buiness travel	16.3	31.4	40.49
Paper consumption	5.4	8.0	6.47
Waste	63.5	38.8	39.12
TOTAL	**15,218**	**15,304**	**13,588**

Graphic 7: Emissions per category



C) Emission per employee

Table 22: Emissions per employee

Per employee	Emissions in tCO2e	tCO2e
2017	15,218	16.54
2018	15,304	16.53
2019	13,588	14.15

D) Emission per m²

Table 23: Emissions per m2

Per m2 (office space)	Emissions in tCO2e	tCO2e
2017	15,218	0.35
2018	15,304	0.22
2019	13,588	0.19

7.3 | ELSEWEDY TRANSFORMERS

7.3.1 Power related emissions

These emissions are linked to purchased electricity the corporate used, as well as its diesel and petrol consumption.

a) Diesel

Elsewedy Transformers consumed 300,000 liters diesel in 2017, 350,000 liters in 2018, and 375,000 liters in 2019. Diesel is a direct emission accounted for under scope 1. This amount was used in production and forklifts. The results are shown in Table 24.

Table 24: Direct Emissions - scope 1 Diesel

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Diesel	300,000	l/year	801,000
2018		350,000		934,500
2019		375,000		1,001,250

b) Company owned cars

Elsewedy Transformers owned cars traveled 281,760 km in 2017, 131,850 km in 2018, and 131,850 km in 2019. The company-owned car emissions are a direct emission accounted for under scope 1.
The results are shown in Table 25.

Table 25: Direct Emissions - scope 1 company owned car

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Company owned cars	281,760	Km/year	96,069
2018		131,850		72,151
2019		131,850		72,151

c) Electricity

Electricity is an indirect emission under scope 2. Elsewedy Transformers used electricity from the grid as an energy source for production, lighting, cooling, etc. Elsewedy Transformers consumed 7,567,000 kWh in 2017, 8,249,000 kWh in 2018, and in 8,303,000 2019. The results are shown in Table 26.

Table 26: Indirect Emissions - scope 2 Electricity

Scope 2		Consumption	UNIT	$KgCO_2e$
2017	Electricity	7,567,000	km/year	3,783,500
2018		8,249,000		4,124,500
2019		8,303,000		4,151,500

7.3.2 Travel related emissions

These emissions consist of the corporate's employee's daily travel, as well as their business travel.

a) Business Travel
In 2017, Elsewedy Transformers' total number of flights was 138. One hundred nineteen were short-haul (flights up to 3,700km), 19 were long-haul (flights longer than 3,700 km), and 1,346,660 km were Business travel – no flights. In 2018, the total number of flights was 354.

Three hundred eighteen were short-haul, 35 flights were long haul, 1 flight was domestic, and 69,763 km were Business travel – no flights.
In 2019 the total number of flights was 330; 252 flights were short-haul, 78 were long haul, and 154,225 km were Business travel – no flights.

Table 27: Indirect Emissions - scope 3 Travel related emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Business travel	1,658,424	Km/year	325,510
2018		858,713		161,742
2019		1,200,835		226,801

b) Commuting related emissions

The total Elsewedy Transformers staff count is 810 employees. Their accumulated commuting totals were 2,544,984 km in 2017, 1,480,119 km in 2018, and 1,413,550 km in 2019. Employees use cars, carpooling, and mini/microbuses.
The results are shown in Table 28. Commuting emissions are an indirect emission under scope 3

Table 28: Indirect Emissions - scope 3 Office staff commuting emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Staff Commuting	2,544,984	Km/year	388,683
2018		1,480,119		175,482
2019		1,413,550		170,027

7.3.3 Emissions due to paper consumption

In 2017, Elsewedy Transformers used 365,400 sheets, and in 2018 the total used was 1,040,000 sheets, while in 2019, the total used was 1,210,000.
The emission results are shown in Table 29.

Table 29: Indirect Emissions - scope 3 Emissions due to paper consumption

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Paper consumption	1,828	Kg/year	2,619
2018		5,264		7,365
2019		6,087		8,622

7.3.4 Emissions due to waste management and disposal

Emissions in this section occur through the Elsewedy Transformers waste management and waste disposal process. The total amount of waste was 774 tons in 2017, 1,447.24 tons in 2018, and 1,225.86 tons in 2019. All waste was 100% recycled.
The emission results are shown in Table 30.

Table 30: waste management and disposal

Scope 3		Consumption	UNIT
2017	Waste management & transport	11,555	$KgCo_2e$
2018		23,063	
2019		21,567	

7.3.5 Results Elsewedy Transformers Egypt

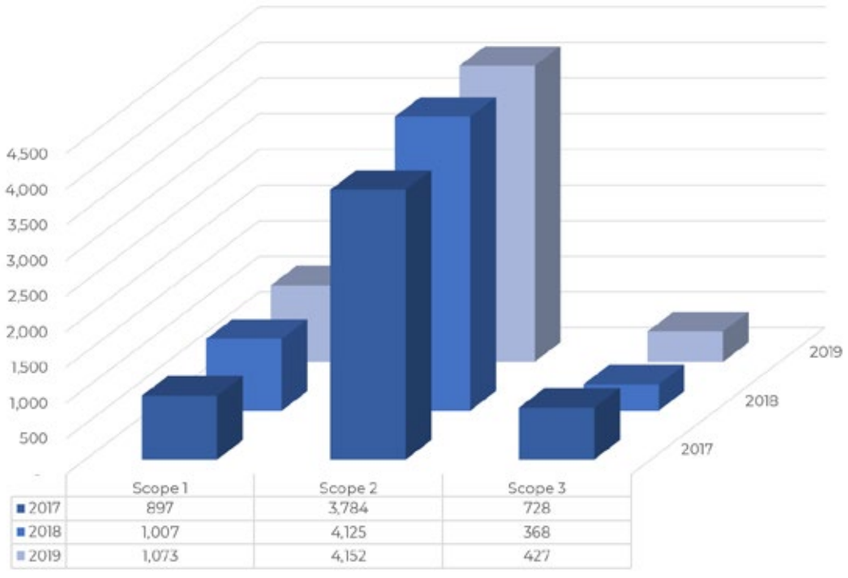
The total carbon footprint for Elsewedy Transformers amounts 5,409 tons of CO2e, 5,499 tons of CO2e in 2018 and 5,652 tons of CO_2e in 2019.

a) Emissions per scope

Table 31: Emissions per scope

	2017	2018	2019
Scope	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Scope 1	897	1,007	1,073
Scope 2	3,784	4,125	4,152
Scope 3	728	368	427
Total	**5,409**	**5,499**	**5,652**

Graphic 8: Emissions per scope

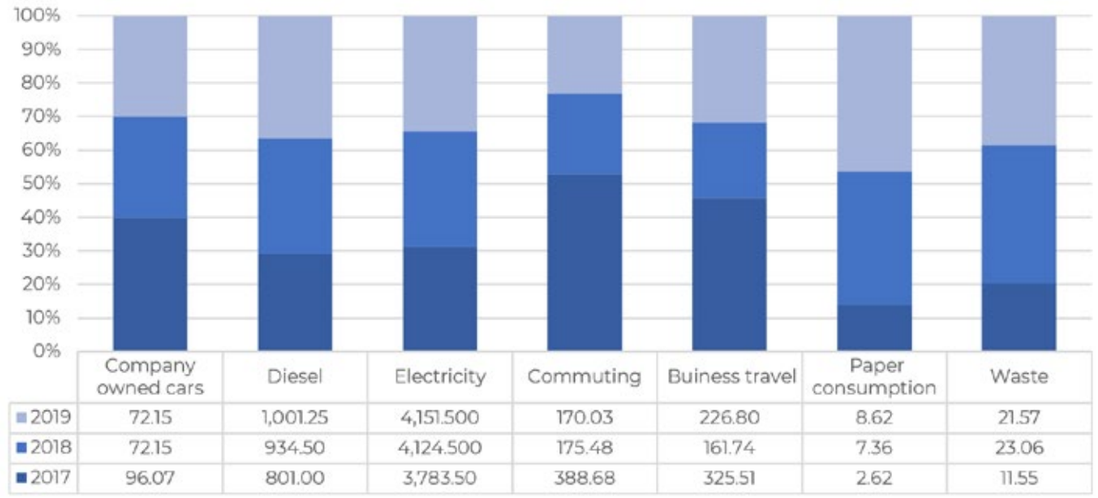


b) Emission per category

Table 32: Emissions per category

	2017	2018	2019
Category	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Company owned cars	96.07	72.15	72.15
Diesel	801.00	934.50	1,001.25
Electricity	3,783.50	4,124.50	4,151.50
Commuting	388.68	175.48	170.03
Buiness travel	325.51	161.74	226.80
Paper consumption	2.62	7.36	8.62
Waste	11.55	23.06	21.57
TOTAL	**5,409**	**5,499**	**5,652**

Graphic 9: Emissions per category



c) Emission per employee

Table 33: Emissions per employee

Per Employee	Emissions in tCO_2e	tCO_2e
2017	5,409	6.68
2018	5,499	6.79
2019	5,652	6.98

d) Emission per m²

Table 34: Emissions per m2

Per m2 (office space)	Emissions in tCO_2e	tCO_2e
2017	5,409	0.04
2018	5,499	0.04
2019	5,652	0.04

7.4 | EGYPTIAN COMPANY FOR PLASTIC INDUSTRY - ELSEWEDY EGYPLAST

7.4.1 Power related emissions

These emissions are linked to purchase electricity the corporate used, as well as its diesel and petrol consumption.

a) Diesel

Elsewedy Egyplast consumed 78,482 liters of diesel in 2017, 89,412 liters in 2018, and 80,000 liters in 2019. Diesel is direct emission accounted under scope 1. This amount was used in forklifts.
The results are shown in Table 35.

Table 35: Direct Emissions - scope 1 Diesel

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Diesel	78,482	L/year	209,547
2018		89,412		238,730
2019		80,000		213,600

b) Company owned cars

Elsewedy Egyplast owned cars consumed 10,086 liters of petrol in 2017, 13,650 liters in 2018, and 13,500 liters in 2019 used for employee commuting. Egyplast owned trucks consumed 236,331 liters of diesel in 2017, 188,276 liters in 2018, and 176,000 liters in 2019. The company-owned car emissions are direct emissions accounted for under scope 1.
The results are shown in Table 36.

Table 36: Direct Emissions - scope 1 company owned car

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Company owned cars (Petrol & Diesel)	246,417	km/year	653,496
2018		201,926		533,136
2019		189,500		500,025

c) Electricity

Electricity is an indirect emission under scope 2. Elsewedy Egyplast used electricity from the grid as an energy source for production, lighting, cooling, etc. Elsewedy Egyplast consumed 25,265,916 kWh in 2017, 34,822,654 kWh in 2018, and 28,274,297kWh in 2019.
The results are shown in Table 37.

Table 37: Indirect Emissions - scope 2 Electricity

Scope 2		Consumption	UNIT	$KgCO_2e$
2017	Electricity	25,265,916	km/year	12,632,958
2018		34,822,654		17,411,327
2019		28,274,297		14,137,148

7.4.2 Travel related emissions

These emissions consist of the corporate's employee's daily travel, as well as their business travel.

a) Business Travel

In 2017, Elsewedy Egyplast's total number of flights was 36. Six flights were long-haul (flights over 3,700km), 30 were short-haul (flights up to 3,700km). In 2018 the total was 87 flights. Twenty-four flights were long-haul, 63 were short-haul. In 2019 the total was 61 flights. Fourteen were long-haul, 47 flights were short-haul. Business travel is an indirect emission under scope 3.
The results are shown in Table 38.

Table 38: Indirect Emissions - scope 3 Travel related emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Business travel	59,500	Km/year	9,995
2018		365,450		70,450
2019		218,650		41,041

b) Commuting related emissions

The Elsewedy Egyplast staff used company owned car which mentioned on table37.

7.4.3 Emissions due to paper consumption

In 2017 Elsewedy Egyplast used 948,500 sheets. In 2018 the total sheets used was 985,000, and in 2019, the total was 645,500 sheets.
The emission results are shown in Table 39.

Table 39: Indirect Emissions - scope 3 Emissions due to paper consumption

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Paper consumption	4,735	Kg/year	6,819
2018		4,940		7,113
2019		3,221		4,638

7.4.4 Emissions due to waste management and disposal

Emissions in this section occur through the Elsewedy Egyplast waste management and waste disposal process. In 2017 the total amount of waste was 827.95 tons, 1,032.75 tons in 2018, and 406.16 tons in 2019. The emission results are shown in Table 40.

Table 40: waste management and disposal

Scope 3		Consumption	UNIT
2017	Waste management & transport	23,398	$KgCo_2e$
2018		25,515	
2019		12,410	

7.4.5 Results Elsewedy Egyplast Egypt

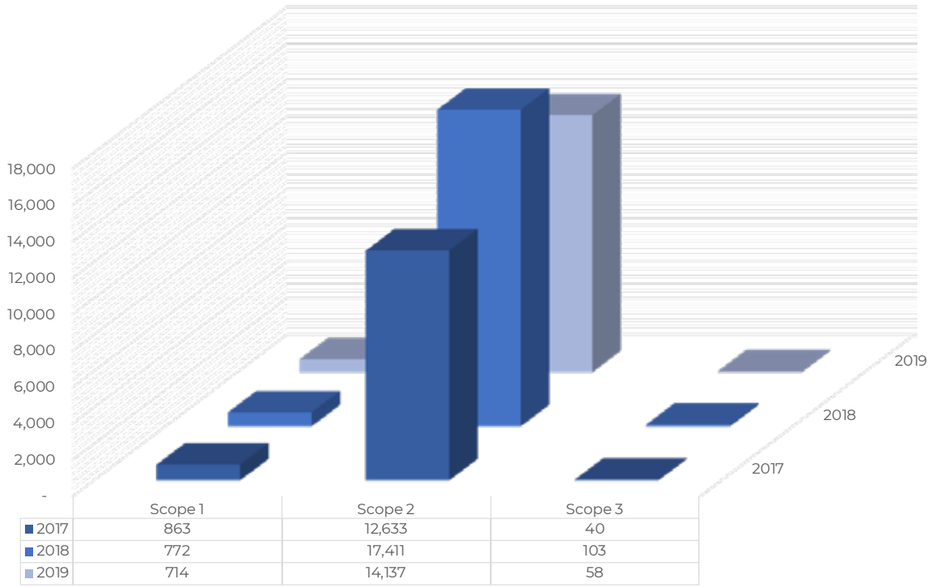
The total carbon footprint for Elsewedy Egyplast 2017 amounts 13,536 tons of CO2e, 18,261 tons of CO2e in 2018 and 14,922 tons of CO2e in 2019.

b) Emission per scope

Table 41: Emissions per scope

	2017 Emissions in tCO2e	2018 Emissions in tCO2e	2019 Emissions in tCO2e
Scope 1	863	772	714
Scope 2	12,633	17,411	14,137
Scope 3	40	103	58
Total	**13,536**	**18,286**	**14,909**

Graphic 11: Emissions per scope

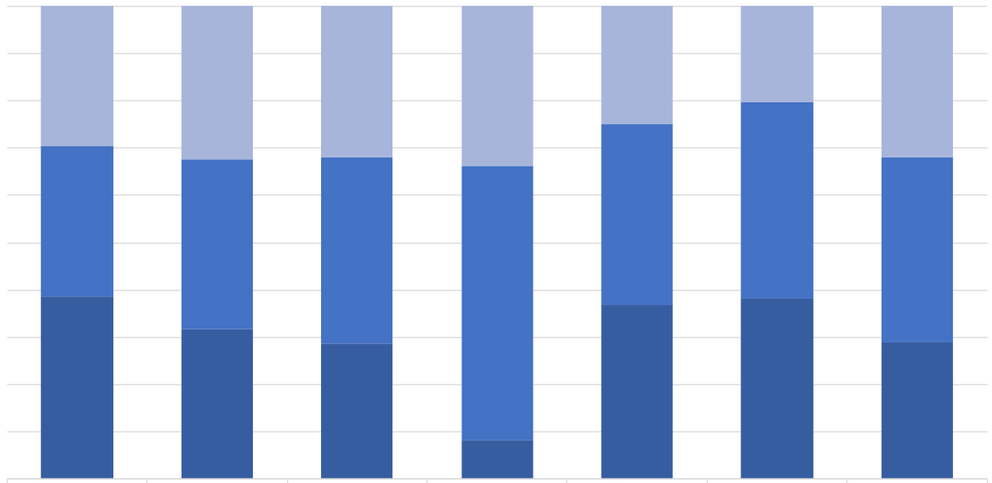


b) Emission per Category

Table 42: Emissions per category

Category	2017 Emissions in tCO2e	2018 Emissions in tCO2e	2019 Emissions in tCO2e
Company owned cars	653.50	533.14	500.03
Diesel	209.55	238.73	213.60
Electricity	12,633	17,411	14,137
Buiness travel	9.99	70.45	41.04
Paper consumption	6.82	7.11	4.64
Waste	23.40	25.52	12.41
TOTAL	**13,536**	**18,286**	**14,909**

Graphic 12: Emissions per category



	Company-owned cars	Diesel	Electricity	Buiness travel	Paper consumption	Waste	Total
2019	500.03	213.6	14,137	41.04	4.64	12.41	14,909
2018	533.14	238.73	17,411	70.45	7.11	25.52	18,286
2017	653.5	209.55	12,633	9.99	6.82	23.4	13,536

c) Emission per employee

Table 43: Emissions per employee

Per employee	Emissions in tCO_2e	tCO_2e
2017	13,536	19.04
2018	18,286	24.88
2019	14,909	20.28

d) Emission per m²

Table 44: Emissions per m^2

Per m^2 (office space)	Emissions in tCO_2e	tCO_2e
2017	13,536	0.23
2018	18,286	0.30
2019	14,909	0.25

7.5 | EGYTECH CABLES AND ELSEWEDY CABLES - EGYPT

7.5.1 Power related emissions

These emissions are linked to purchase electricity the corporate used, as well as its diesel and petrol consumption.

a) Diesel
Egytech consumed 288,323 litter diesel in 2017, 256,491 litter in 2018 and 381,312 litter in 2019. Diesel is direct emission accounted under scope1. This amount used in forklift, trucks and boilers.
The results are shown in Table 45.

Table 45: Direct Emissions - scope 1 Diesel

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Diesel	288,323	L/year	769,822
2018		256,491		684,830
2019		381,312		1,018,102

b) Company owned cars
Egytech owned cars were travelled 640,000 km in year 2017, 746,882 km in 2018 and 1,347,246 km in 2019. The company owned car emissions are direct emission accounted under scope1.
The results are shown in Table 46.

Table 46: Direct Emissions - scope 1 company owned car

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Company owned cars	640,000	km/year	128,803
2018		746,882		150,034
2019		1,347,246		270,635

c) Electricity
Electricity is indirect emission under scope 2. Egytech used electricity from the grid as energy source for Production, lighting, cooling, etc. Egytech consumed 44,882,843 kWh in 2017, 43,357,680 Kwh in 2018 and 34,985,640 kWh in 2019.
The results are shown in Table 47.

Table 47: Indirect Emissions - scope 2 Electricity

Scope 2		Consumption	UNIT	$KgCO_2e$
2017	Electricity	44,882,843	kWh/year	22,441,421
2018		43,357,680		21,678,840
2019		34,985,640		17,492,820

7.5.2 Travel related emissions
These emissions consist of the corporate's employee's daily travel, as well as their business travel.

a) Business Travel

In 2017 Egytech total number of flights are 36 flights. All flights were short haul (flights up to 3,700km) and 20,000 km were Business travel_no flights. In 2018 the total number of flights are 242 flights, 32 flights were long haul and 210 flights were short haul and 100,053 km were Business travel_no flights. In 2019 the total flights were 68 flights. 16 flights were long haul.
52 flights were short haul and 40,000 km were Business travel_no flights. The results are shown in Table52. Business travel is indirect emission under scope

Table 48: Indirect Emissions - scope 3 Travel related emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Business travel	104,101	Km/year	18,102
2018		461,713		148,250
2019		150,599		48,362

b) Commuting related emissions

In 2017 Egytech used 9,850,000 sheets,in 2018 Egytech used 1,502,500 sheets and in 2019 used 11,350,000 sheets. the emission results are shown in Table 49.

Table 49: Indirect Emissions - scope 3 Office staff commuting emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Staff commuting	1,698,000	Km/year	205,807
2018		1,892,340		211,757
2019		1,673,200		217,393

7.5.3 Emissions due to paper consumption

In 2017 Egytech used 9,850,000 sheets,in 2018 Egytech used 1,502,500 sheets and in 2019 used 11,350,000 sheets. the emission results are shown in Table 50.

Table 50: Indirect Emissions - scope 3 Emissions due to paper consumption

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Paper consumption	49,148	Kg/year	70,772
2018		7,497		10,796
2019		56,632		81,550

7.5.4 Emissions due to waste management and disposal

Emissions at this section occur through the Egytech waste management and waste disposal process, the total amount of waste in 2017 was 402.37 ton, 4,877 ton in 2018 and 4,730 ton 2019.
The emission results re shown in Table 51.

Table 51: Indirect Emissions - scope 3 Emissions due to waste

Scope 3		Consumption	UNIT
2017	Waste management & transport	15,513	$KgCo_2e$
2018		10,407	
2019		10,123	

7.5.5 Results Egytech Egypt

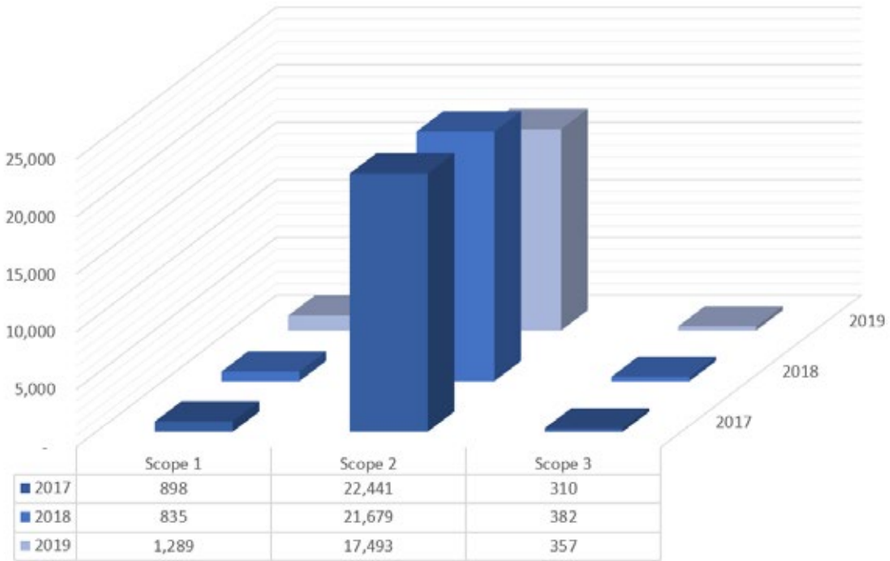
The total carbon footprint for ELSEWEDY ELECTRIC Egypt 2017 amounts 23,650 tons of CO2e, 22,896 tons of CO2e in 2018 and 19,139 tons of CO2e in 2019

b) Emission per scope

Table 52: Emissions per scope

	2017 Emissions in tCO2e	2018 Emissions in tCO2e	2019 Emissions in tCO2e
Scope 1	898	835	1,289
Scope 2	22,441	21,679	17,493
Scope 3	310	382	357
Total	**23,650**	**22,896**	**19,139**

Graphic 13: Emissions per scope



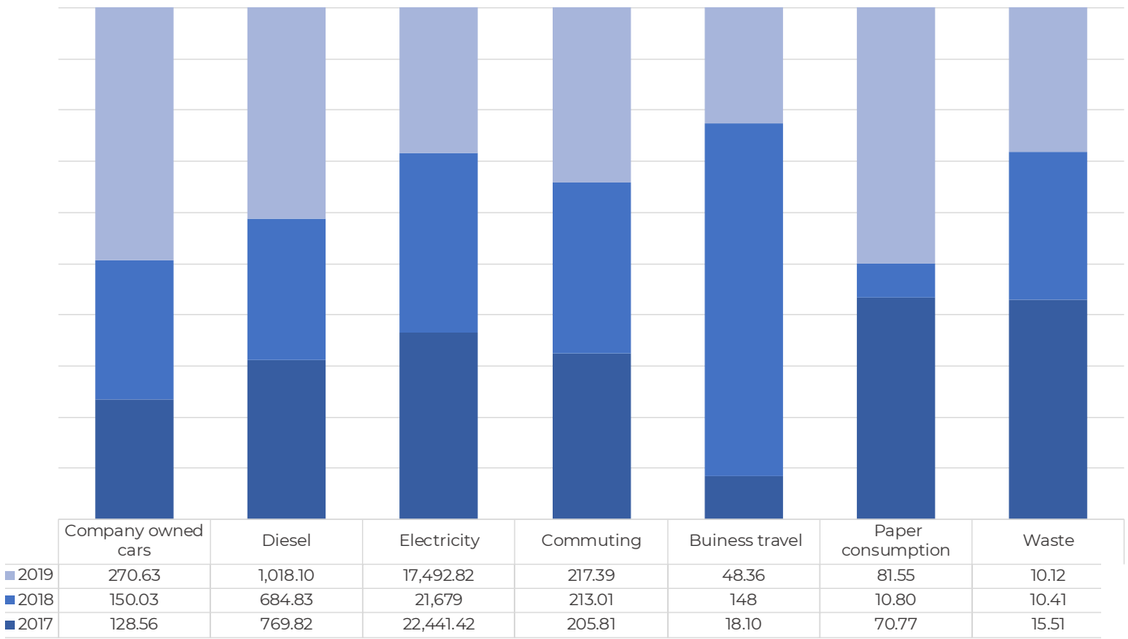
b) Emission per Category

Table 53: Emissions per category

	2017	2018	2019
Category	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Company owned cars	128.56	150.03	270.63
Diesel	769.82	684.83	1,018.10
Electricity	22,441.42	21,679	17,492.82
Commuting	205.81	213.01	217.39

Buiness travel	18.10	148	48.36
Paper consumption	70.77	10.80	81.55
Waste	15.51	10.41	10.12
TOTAL	**23,650**	**22,896**	**19,139**

Graphic 14: Emissions per category



c) Emission per employee

Table 54: Emissions per employee

Per employee	Emissions in tCO_2e	tCO_2e
2017	23,650	21.40
2018	22,896	20.72
2019	19,139	16.86

d) Emission per m²

Table 55: Emissions per m^2

Per m2 (office space)	Emissions in tCO_2e	tCO_2e
2017	23,650	0.26
2018	22,896	0.25
2019	19,139	0.21

7.6 | ISKRAEMECO, D.D. - SLOVENIA

7.6.1 Power related emissions

These emissions are linked to purchase electricity the corporate used, as well as its diesel and petrol consumption.

a) Natural Gas

Iskraemeco Slovenia consumed 409,922 cubic meter of Natural Gas in 2017, 317,044 m3 in 2018 and 269,888 m3 in 2019. Natural Gas is direct emission accounted under scope1. This amount used for heating and preparation of hot sanitary water.
The results are shown in Table 56.

Table 56: Direct Emissions - scope 1 GAS

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	GAS	409,922	m3/year	834,027
2018		317,044		645,058
2019		269,888		549,114

b) Company owned cars

Iskraemeco Slovenia owned cars were consumed 15,003 litter diesel in year 2017, 18,240 litter in 2018 and 14,832 litter in 2019. The company owned car emissions are direct emission accounted under scope1. The results are shown in Table 57.

Table 57: Direct Emissions - scope 1 company owned car

Scope 1		Consumption	UNIT	$KgCO_2e$
2017	Company owned cars	15,003	km/year	40,058
2018		18,240		48,701
2019		14,832		39,601

c) Electricity

Electricity is indirect emission under scope 2. Iskraemeco Slovenia used electricity from the grid as energy source for Production, lighting, etc. Iskraemeco Slovenia consumed 5,003,960 kWh in 2017. 5,050,080kwh in 2018 and 5,089,277 kWh in 2019,
The results are shown in Table 58.

Table 58: Indirect Emissions - scope 2 Electricity

Scope 2		Consumption	UNIT	$KgCO_2e$
2017	Electricity	5,003,960	kWh/year	1,931,578
2018		5,050,080		1,949,331
2019		5,089,277		1,964,461

7.6.2 Travel related emissions

These emissions consist of the corporate's employee's daily travel, as well as their business travel. The total Iskraemeco Slovenia's staff commuting Data and business travel data for 2017, 2018 and 2019 are not available. Their plan in 2020 is to prepare survey regarding to business travel.

a) Business Travel

In **2017** Iskraemeco Slovenia total km of flights was 1,060,700 km. In **2018** the total number of flights were 259. 95 flights were long haul (flights over than 3,700km). 164 flights were short haul (flights up to 3,700km). In **2018** total km of flights was 1,024,200 km. In **2019** the total number of flights were 310. 118 flights were long haul. 192 flights were short haul. In **2019** the total km of flights 1,215,300 km. Business travel is indirect emission under scope3. The results are shown in Table 59.
The total Iskraemeco Slovenia's business travel_no flights data for 2017, 2018 and 2019 are not available.

Table 59: Indirect Emissions - scope 3 Travel related emission

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Business travel flights	1,060,700	Kg/year	208,000
2018		1,024,200		210,000
2019		1,215,300		230,000

b) Commuting related emissions

The total Iskraemeco Slovenia's staff commuting data for 2017, 2018 and 2019 are not available.
Their plan in 2020 is to prepare survey regarding to daily travel.

7.6.3 Emissions due to paper consumption

In 2017 Iskraemeco Slovenia used 1,283,500 sheets. In 2018 the total used sheets were 1,260,000 sheets and in 2019 the total used sheets were 1,471,000 sheets. The emission results are shown in Table 60.

Table 60: Indirect Emissions - scope 3 Emissions due to paper consumption

Scope 3		Consumption	UNIT	$KgCO_2e$
2017	Paper consumption	6,299	Kg/year	9,071
2018		6,175		8,892
2019		7,292		10,501

7.6.4 Emissions due to waste management and disposal

Emissions at this section occur through Iskraemeco Slovenia waste management and waste disposal process, the total amount of waste in 2017 was 263.33ton, 330.099 ton in 2018 and 1,040 ton in 2019. The emission results are shown in Table 61.

Table 61: Indirect Emissions - scope 3 Emissions due waste

Scope 3		Consumption	UNIT
2017	Waste management & transport	9,896	$KgCo_2e$
2018		11,136	
2019		17,280	

7.6.5 Results Iskraemeco Slovenia

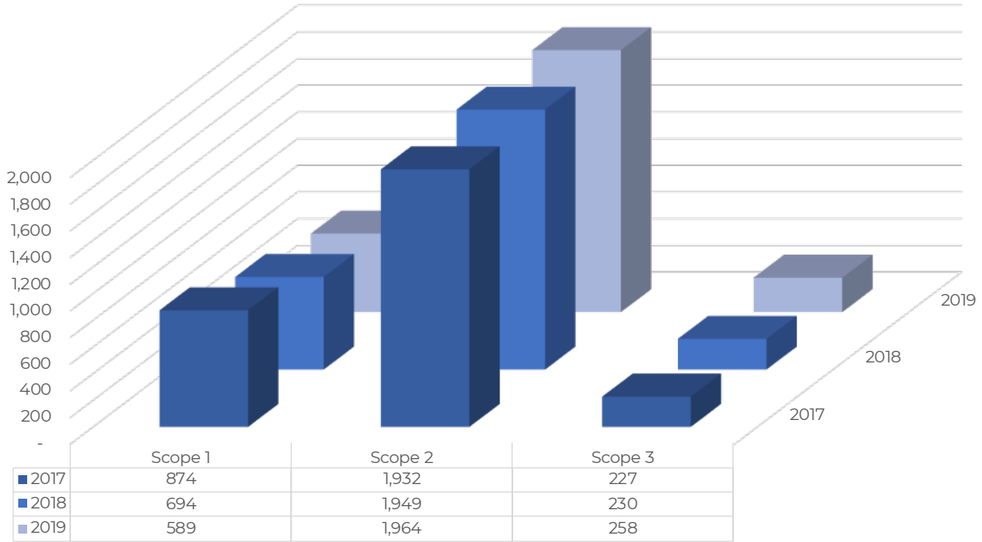
The total carbon footprint for Iskraemeco Slovenia amounts 2,825 tons of CO2e in 2017, 2,663 tons of CO2e in 2018 and 2,581 tons of CO2e in 2019

b) Emissions per scope

Table 62: Emissions per scope

	2017	2018	2019
Category	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Scope 1	874	694	589
Scope 2	1,932	1,949	1,964
Scope 3	227	230	258
Total	**3,033**	**2,873**	**2,811**

Graphic 15: Emissions per scope



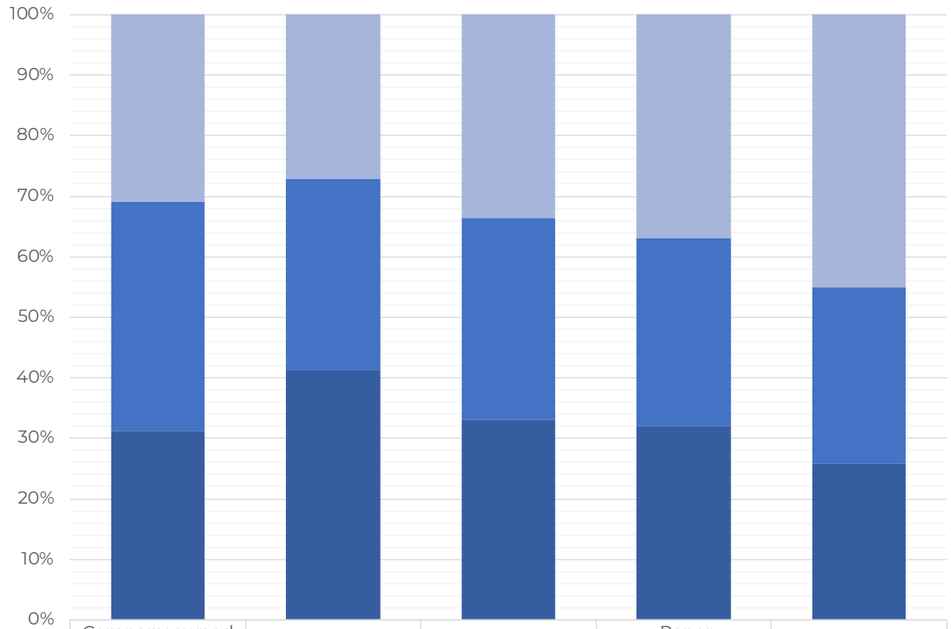
	Scope 1	Scope 2	Scope 3
2017	874	1,932	227
2018	694	1,949	230
2019	589	1,964	258

b) Emission per Category

Table 63: Emissions per category

	2017	2018	2019
Category	Emissions in tCO2e	Emissions in tCO2e	Emissions in tCO2e
Company owned cars	40	49	40
GAS	834	645	549
Electricity	1,932	1,949	1,964
Paper consumption	9.1	8.9	10.5
Waste	9.9	11.1	17.3
TOTAL	**2,825**	**2,663**	**2,581**

Graphic 16: Emissions per category



	Company owned cars	GAS	Electricity	Paper consumption	Waste
2019	40	549	1,964	10.5	17.3
2018	49	645	1,949	8.9	11.1
2017	40	834	1,932	9.1	9.9

c) Emission per employee

Table 64: Emissions per employee

Per employee	Emissions in tCO_2e	tCO_2e
2017	3,033	3.31
2018	2,873	2.94
2019	2,811	2.71

d) Emission per m²

Table 65: Emissions per m2

per m2 (office space)	Emissions in tCO_2e	tCO_2e
2017	3,033	0.08
2018	2,873	0.08
2019	2,811	0.08


ISKRAEMECO

7.7 SUMMARY OF RESULTS

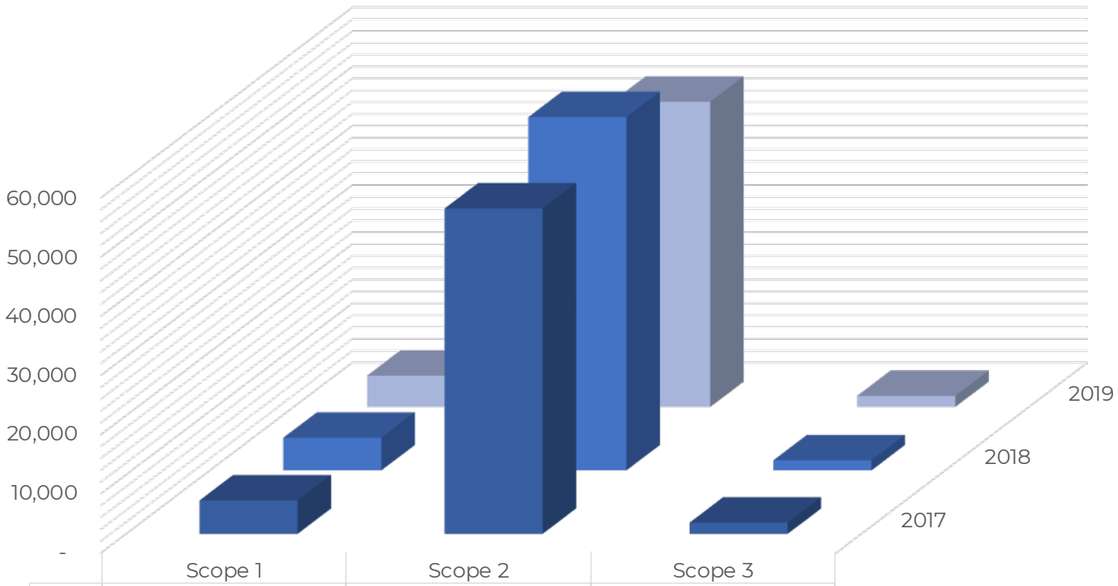
The total carbon footprint for Elsewedy Electric entities amounts to 62,529 tons of CO2e in 2017, 66,923 tons of CO2e in 2018, and 58,714 tons of CO2e in 2019

a) Emission per Scope

Table 66: Emissions per scope

	2017	2018	2019
Scope	Emissions in tCO_2e	Emissions in tCO_2e	Emissions in tCO_2e
Scope 1	5,652	5,514	5,284
Scope 2	54,977	59,701	51,563
Scope 3	1,899	1,708	1,867
TOTAL	**62,529**	**66,923**	**58,714**

Graphic 17: Emissions per Scope



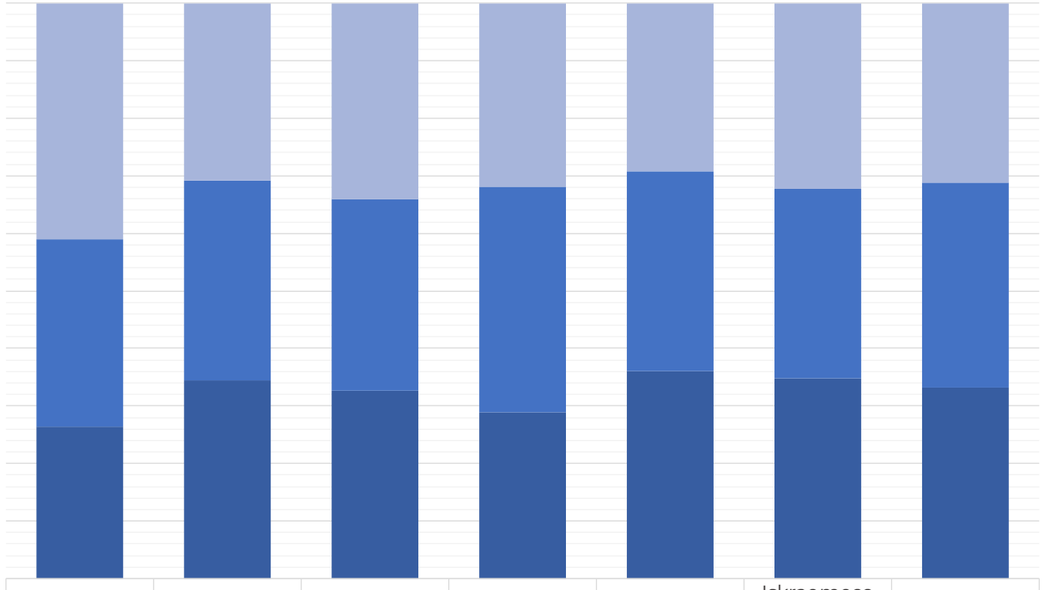
	Scope 1	Scope 2	Scope 3
2017	5,652	54,977	1,899
2018	5,514	59,701	1,708
2019	5,284	51,563	1,867

b) Emission per company

Table 67: Emissions per category

	2017	2018	2019
Category	Emissions in tCO_2e	Emissions in tCO_2e	Emissions in tCO_2e
Iskraemeco	1,683	2,065	2,615
United	15,218	15,304	13,588
Transformers	5,409	5,499	5,652
Egyplast	13,536	18,286	14,909
Egytech	23,650	22,896	19,139
Iskr Slovenia	3,033	2,873	2,811
TOTAL	**62,529**	**66,923**	**58,714**

Graphic 18: Emissions per company



	Iskraemeco	United	Transformers	Egyplast	Egytech	Iskraemeco Slovenia	Total
2019	2,615	13,588	5,652	14,909	19,139	2,811	58,714
2018	2,065	15,304	5,499	18,286	22,896	2,873	66,923
2017	1,683	15,218	5,409	13,536	23,650	3,033	62,529

8

ELSEWEDY ELECTRIC FACING CLIMATE CHANGE

8 ELSEWEDY ELECTRIC FACING CLIMATE CHANGE

The energy sector is pivotal to Egypt's economic development, representing about 13.1% of the overall gross domestic product (GDP).

The Egyptian government has developed the Integrated Sustainable Energy Strategy (ISES), a diversification strategy for the period until 2035, to ensure continuous security and stability in energy supply. The most effective way to prevent climate change is to reduce GHG emissions and sequester CO2 from the atmosphere.

Numerous strategies have been devised to achieve both, including sustained improvements in energy efficiency and the use of renewable energy as well as land use, land-use change, and forestry (LUCF).

Since the energy sector (electricity and heat) is responsible for approximately 30% of Egypt's GHG emissions, due to the burning of fossil fuels, it is pivotal for the country's climate change prevention strategies.

The Integrated Sustainable Energy Strategy, ISES 2035, for example, aims to increase the use of renewables and improve energy efficiency with a target of 42% of the country's electricity mix by 2035 through renewables.
According to the Ministry of Electricity and Energy, 36.487 kilotons of fossil fuel were burned during 2016/2017, correlated to the production of 189.55 GWh, with natural gas being the primary energy source (yearly average of about 77%).

Currently, Egypt is on target to produce about 15 – 20% of its electricity from renewable energy sources in 2022, with hydropower, wind energy, and photovoltaic being prime areas for development and growth.
They have been stimulated by a number of incentives provided by the government to the private sector, ranging from an easing of the licensing process to identifying logistically suitable areas for potential projects to facilitate their connection to the national grid.

Hydro Power:

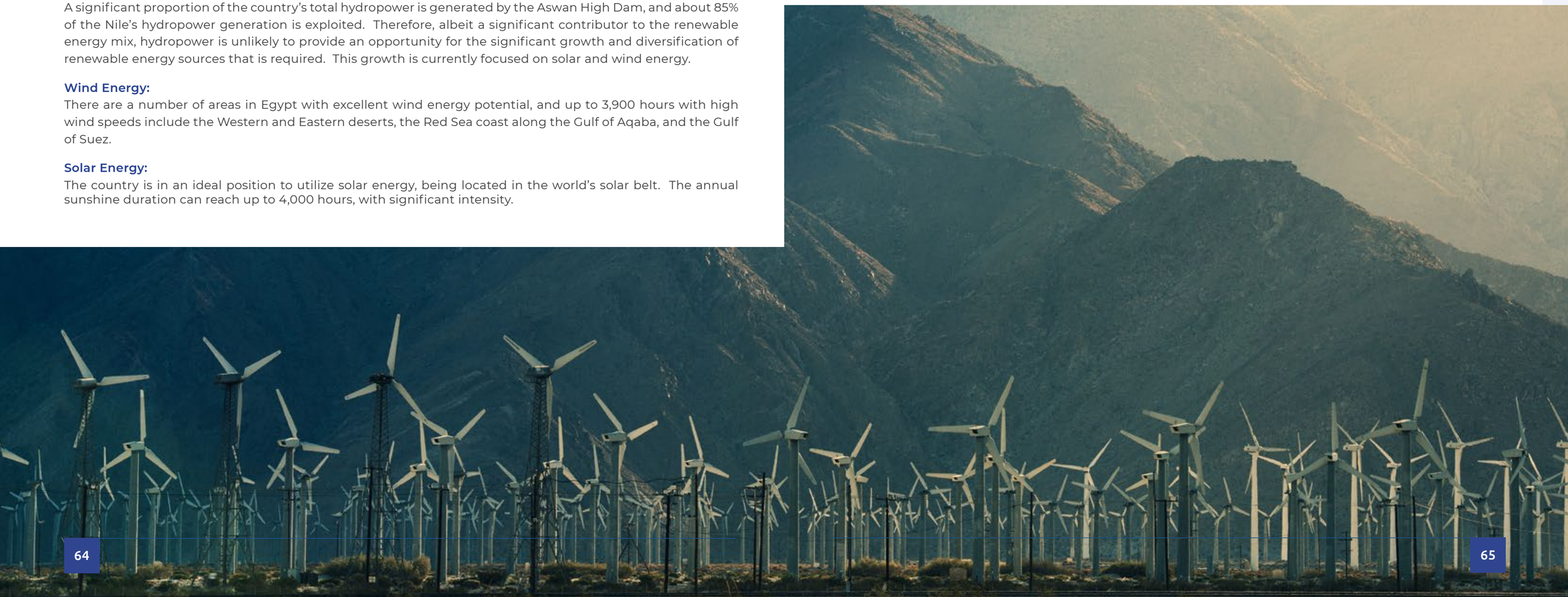
A significant proportion of the country's total hydropower is generated by the Aswan High Dam, and about 85% of the Nile's hydropower generation is exploited. Therefore, albeit a significant contributor to the renewable energy mix, hydropower is unlikely to provide an opportunity for the significant growth and diversification of renewable energy sources that is required. This growth is currently focused on solar and wind energy.

Wind Energy:

There are a number of areas in Egypt with excellent wind energy potential, and up to 3,900 hours with high wind speeds include the Western and Eastern deserts, the Red Sea coast along the Gulf of Aqaba, and the Gulf of Suez.

Solar Energy:

The country is in an ideal position to utilize solar energy, being located in the world's solar belt. The annual sunshine duration can reach up to 4,000 hours, with significant intensity.



The second necessary approach is the sustained improvements in energy efficiency to reduce overall consumption.
Through contracts with the Ministries of Finance, and Electricity & Renewable Energy, and in coordination with the Ministry of Local Development with international organizations like the Arab Organization of Industrialization, Egypt has installed nearly a million high-pressure sodium efficient lamps (HPS) for street lighting, with the potential to save **150 MW** annually.

Similarly, the installation of smart meters in the Cairo area, the promotion of clean and energy-efficient cooking stoves, and the phasing out energy subsidies within the next years is predicted to make a significant contribution to the reduction of energy use by over **8%** in 2022 compared to the base year of 2006/07.

This will be augmented by the potential introduction of a national carbon market with the aim of using renewables and the establishment of nuclear power sources.
Energy efficiency gains can also be made through the use of biomass for power generation.
Currently, this is quite limited in Egypt, apart from the use of co-generation systems to produce electricity from bagasse in sugarcane mills.
However, there is an abundance of availability of agricultural residue, which is currently burnt in the field or unutilized. This constitutes a significant potential for growth in its energy-efficient use. In particular, improvements in the energy efficiency of sugar mills and the use of rice residues (husks and straw) are envisaged to make a contribution through co-generation based bioenergy power.

Elsewedy Electric aims to align their sustainability initiatives with the UN's Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development by minimizing our environmental impact through efficient use of material and energy and by encouraging the culture of commitment towards the environment amongst our employees.

Now with the focus on SDG 13 for climate change. Elsewedy Electric has launched several projects aiming to solve the associated challenges.
Elsewedy collaborates with the Carbon Footprint Center CFC and Heliopolis University for Sustainable Development to obtain an annual carbon footprint assessment report, in which Elsewedy factories' carbon footprint is calculated.

SESA BENBAN 1.8GW PV SOLAR PARK

Elsewedy Electric successfully reached the full commercial operation for its two solar photovoltaic (“PV”) power plants, developed as part of Egypt’s Round II of the Renewable Energies Feed-in-Tariff (“FiT”) program for solar and wind energy projects launched by the Government of Egypt.

As a contribution to solving the climate change challenge, Elsewedy and Électricite de France’s EDF Renewables have developed and are operating two projects located in Benban, Kom Ombo, Aswan Province, approximately 830km south of Cairo.

The projects produce an estimated 290 GWh of electricity, powering more than 140,000 households, with a CO2 emissions reduction of over 120,000 tons per year.

Having these two projects successfully reach commercial operation extends the IPPs- Portfolio under Elsewedy Electric to include solar photovoltaic in addition to the existing wind and hydro IPPs.

The Benban project has already played three significant roles in helping solar energy claim a greater share of Egypt’s electricity supply. First, the project drove down the cost of PV systems in Egypt. Second, it proved that solar energy could be a viable source there. And lastly, it granted valuable experience in installing PV systems to more than 3,000 Egyptians who worked at the site.

290
GWh

+140,000
Households

+120,000
tons of Co^2 reduction

+3000
work opportunities

ELSEWEDY ELECTRIC S.A.E 64MW OF WIND AND HYDRO ASSETS

Elsewedy Electric S.A.E. (EGX: SWDY.CA), the leading Integrated Energy and Infrastructure Solution Provider in the Middle East and Africa, announces entering into a definitive agreement with RF Energy SA for the acquisition of wind and hydro electrical energy assets under operation in Greece.

The total consideration of €55 million will be funded by a ring financed project finance facility from National Bank of Greece (NBG) covering 75% of the value and the balance to be paid in equity.

The 4 assets have an aggregate capacity of 64 MW, three wind parks;

- **“Aioliki Kilindrias SA” (10MW),**
- **“Kallisti Energeiaki SA” (15MW),**
- **“Aioliki Aderes SA” (35.4 MW)**
- **“Hydroelectriki Achaias SA” (3.615 MW).**

The assets generate enough energy to power 25,000 homes per annum with a carbon dioxide saving of 39 thousand tons.

The assets benefit from a fixed tariff for 100% of the generated capacity and have a remaining tenor under the Power Purchase Agreement (PPA) that varies between 15-18 years. The PPA stipulates that the public utility off taker “LAGIE” (**www.lagie.gr**) guarantees the purchase of all the energy produced at the parks.

The parks are located at Ermioni in Argolida, Tsouka in Arcadia, Kilkis in Macedonia and Achaia.
The assets benefit from existing infrastructure and interconnections.
All the wind parks use Vestas Wind Turbine Generators (WTG) and are under Operation & Maintenance contract with Vestas Hellas Wind Technology S.A.

The total offsetting emission from SESA Benban 1.8GW PV Solar Park and Elsewedy Electric S.A.E 64MW of wind and hydro assets are shown in Table 68.

Table 68: total offsetting emission tCO_2e

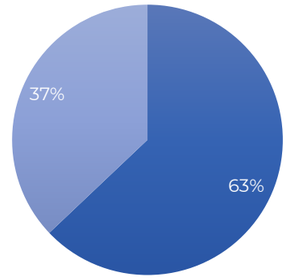
Offsetting Project	Offsetting tCO_2e
SESA Benban 1.8GW PV Solar Park	120,000
RE Energy 64MW of Wind and Hydro assets	39,000
Total Offset yearly (2019)	**159,000**

For 2019, the total carbon footprint assessment for Elsewedy Electric was 58,958 tCO2e, which represented 270% from the total offsetting emission. The results are shown in Table 62.

Table 69: Share of offsetting emissions tCO_2e

Total Carbon Footprint Assessment 2019 tCO2e	**58,958**
Total Offset yearly (2019) tCO2e	**159,000**
Share of offsetting emissions	**270 %**

Elsewedy Electric Carbon Offsetting Potential



Based on the above findings, in 2019, Elsewedy successfully offset **269.7 %** of its carbon emissions, and hence, is carbon positive.
Its annual CO^2 emission currently amounts to only **37%** of its total from the entire potential release, for which the renewable energy sources are compensating.

Thanks to the high number of offset, Elsewedy is CO^2 positive.

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